GT Advanced Technologies Inc. (GTAT)

10-K

Annual report pursuant to section 13 and 15(d)
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended March 31, 2012

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period to
Commission file number: 001-34133

GT Advanced Technologies Inc.
(Exact name of registrant as specified in its charter)

Delaware	**03-0606749**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

20 Trafalgar Square
Nashua, New Hampshire 03063
(Address of principal executive offices, including zip code)

(603) 883-5200
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the act:

Title of each class	Name of each exchange on which registered
Common Stock, $0.01 par value	The NASDAQ Global Select Market

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes ☐ No ☒

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☒	Accelerated filer ☐	Non-accelerated filer ☐ (Do not check if a smaller reporting company)	Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the registrant's common stock, $0.01 par value per share, held by non-affiliates of the registrant on October 1, 2011, the last business day of the registrant's most recently completed second fiscal quarter, was approximately $890.0 million (based on the closing sales price of the registrant's common stock on September 30, 2011). As of May 18, 2012, 118,342,021 shares of the registrant's common stock, $0.01 par value per share, were issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

The information required by Part III of this Annual Report on Form 10-K, to the extent not set forth herein, is incorporated by reference from the registrant's definitive proxy statement relating to the Annual Meeting of Shareholders to be held in 2012, which will be filed with the Securities and Exchange Commission within 120 days after the end of the fiscal year to which this Annual Report on Form 10-K relates.

GT ADVANCED TECHNOLOGIES INC.

Form 10-K

Year Ended March 31, 2012

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Cautionary Statements Concerning Forward-Looking Statements

This Annual Report on Form 10-K contains "forward-looking statements" that involve risks and uncertainties, as well as assumptions that, if they never materialize or prove incorrect, could cause our results to differ materially from those expressed or implied by such forward-looking statements. The statements contained in this Annual Report on Form 10-K that are not purely historical are "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements are identified by the use of words such as, but not limited to, "anticipate," "believe," 'continue," "could," "estimate," "prospects," "forecasts," "expect," "intend," "may," "will," "plan," "target," and similar expressions or variations intended to identify forward-looking statements and include statements about our expectations of future periods with respect to, among other things:

- *expected increased demand for renewable energy sources such as photovoltaic systems (and the factors causing such increase);*
- *the difference in electricity costs generated from photovoltaic (PV) and traditional energy sources are decreasing and will continue to decrease (and the factors contributing to that decrease in difference);*
- *anticipated decrease, and subsequent elimination of, governmental incentives for renewable energy usage (and the reasons therefore), including solar energy and PV installations, and that the loss of these incentives may hamper the growth of the solar industry (and reduce demand for PV equipment);*
- *expected recovery of solar industry (and that this will be driven by new technology adoptions);*
- *expectation that the Company will offer MonoCast on DSS products in the future (in addition to the DSS450);*
- *the HiCz equipment offering will be commercially available during the first half of calendar 2013;*
- *the HiCz equipment offering is expected to lower the cost of monocrystalline ingot technology and produce high efficiency monocrystalline solar ingots, both of which are expected to make it more competitive with wafers produced using the traditional batch Cz technology;*
- *the Company's relationships with leading Chinese companies and expanded base of operations in China will enhance our ability to compete against the lower cost Chinese capital equipment companies in each of our served markets;*
- *the large installed base of DSS units, the scalable architecture of our DSS design and other PV equipment may promote higher sales of equipment upgrades, parts and service in the future if our customers elect to upgrade their equipment to next generation technology and as their equipment ages;*
- *the growth strategies in our PV, polysilicon and sapphire businesses;*
- *a future product release that creates polysilicon pieces (and its use in a number of polysilicon crystallization techniques);*
- *our goal to lower the cost of producing high quality polysilicon for our customers by providing more efficient plant designs and increasing the throughput and efficiency of each new generation of our SDR reactors;*
- *positioned to successfully compete for future market expansions in polysilicon;*
- *sapphire manufacturing trends (including the expectation that demand for large area sapphire material is expected to grow);*

- *sales to customers in Asia will continue to be a significant portion of total sales over the next several years (and the reasons therefore);*
- *timing of delivery of our equipment products;*
- *expected conversion of backlog into revenue;*
- *expectation that our customers will substantially perform on their contracts;*
- *oversupply or decreased demand in the end-markets served by our equipment customers will have an adverse impact on our business (and may require we sell equipment at prices below our historical price);*
- *the Company expects to make acquisitions of businesses or technologies that will result in the diversification of our business (but intends to continue principally as an equipment supplier) and the impact of such diversification;*
- *likelihood of customers going to other equipment suppliers is increasing;*
- *dependence on a limited number of customers will continue for the foreseeable future;*
- *anticipated future decreased demand for DSS multicrystalline furnaces and the reasons therefore;*
- *expect to increase the sapphire equipment business (and the expected impact on price and availability of components and materials used on the ASF system) and similar consequences may arise when and if we commercialize a HiCz equipment product;*
- *we expect to grow our business;*
- *we expect to increase product portfolio and increase revenue as a result of more product offerings;*
- *DSS MonoCast product will be a bridge to the HiCz equipment product and both products will improve ingot performance compared to multicrystalline silicon materials (and HiCz will, over an extended period of time, supersede the DSS MonoCast product);*
- *expectation to recognize revenue from sales to customers in Asia and Europe in the future;*
- *Company expects to continue to increase presence in China;*
- *purchasers of ASF systems will use the systems principally for LED and LED-related purposes;*
- *UBS is expected to enter into hedging arrangements in connection with their mandatorily exchangeable notes (and the impact on our stock price);*
- *Company does not anticipate paying dividends in the foreseeable future;*
- *Company will continue to sell sapphire and HiCz material into selected markets from its pilot facilities in Massachusetts and Missouri;*
- *information identified under the heading "Factors Affecting the Results of Our Operations;"*
- *the polysilicon business will account for the majority of our revenue, and that no one customer will account for 25% of total revenue, for the twelve month period ending March 30, 2013;*
- *margins for DSS multicrystalline furnaces may decrease (and the reasons for such decrease);*
- *continued investment in new products and increase rate of R&D spending;*
- *income from foreign jurisdictions will continue to increase (and the reason for such increase);*
- *we will maintain cash held by foreign subsidiaries outside of the U.S. (and the intended use of these funds);*

- *total capital expenditures in the twelve month period ending March 30, 2013 (and the uses thereof);*
- *we will have sufficient cash to satisfy working capital requirements for foreseeable future;*
- *adoption of accounting pronouncements and the impact on the Company;*
- *resolution of the derivative lawsuit against the Company will not have a material effect on the financial statements; and*
- *material amounts not expected to be paid by Company under indemnification provisions.*

These statements are based on the beliefs and assumptions of our management based on information currently available to management. Such forward-looking statements are subject to risks, uncertainties and other important factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, factors discussed in Part I, Item 1A "Risk Factors" and included elsewhere in this Annual Report on Form 10-K.

Forward-looking statements speak only as of the date of this Annual Report on Form 10-K (or other date as specified in this Annual Report on Form 10-K) or, as of the date given if provided in another filing with the SEC. We undertake no obligation, and disclaim any obligation, to publicly update or review any forward-looking statements to reflect events or circumstances after the date of such statements.

PART I

Item 1. *Business*

Our Company

GT Advanced Technologies Inc., through its subsidiaries (referred to collectively herein as "we," "us," "our" and the "Company"), is a global provider of polysilicon production technology and crystalline ingot growth systems and related photovoltaic manufacturing services for the solar industry, and sapphire growth systems and material for the LED and other specialty markets. Our customers include several of the world's largest solar companies as well as companies in the photonics and LED industries. We report revenue in three business segments; Photovoltaic (or PV), Polysilicon and Sapphire.

Our principal products are:

- Silicon Deposition Reactors (SDR™) and related equipment used to produce polysilicon, the key raw material used in silicon-based solar wafers and cells;
- Directional solidification (DSS™) furnaces and related equipment used to cast multicrystalline and MonoCast™ crystalline silicon ingots. These ingots are used to make photovoltaic (PV) solar wafers and cells; and
- Sapphire crystallization furnaces (ASF™) which are used to crystallize sapphire boules. These sapphire boules are used to make sapphire wafers, one of the preferred substrates for manufacturing light emitting diodes (LEDs).

We also produce sapphire material at our pilot production facility in Massachusetts which is sold directly to customers and used to make a variety of products such as epitaxial-ready wafers for use in the LED and other specialty markets. In addition, we produce, on a limited basis, HiCz™ monocrystalline material that is manufactured at our HiCz pilot production facility in Missouri.

GT Advanced Technologies Inc. was originally incorporated as GT Solar International, Inc. in Delaware in September 2006, and in July 2008, we completed our initial public offering. In August 2011, we changed the name of the Company to GT Advanced Technologies Inc., and such change was effected pursuant to Section 253 of the Delaware General Corporation Law of the State of Delaware by the merger of a wholly-owned subsidiary of the Company into the Company. At the same time, we changed our NASDAQ stock ticker symbol to GTAT.

On July 29, 2010, we acquired privately-held Crystal Systems, Inc., which we refer to as GT Crystal Systems, a crystal growth technology company that produces sapphire material used for LED applications, as well as other specialty markets. On August 24, 2011, we acquired privately-held Confluence Solar, Inc., a crystal growth company that is developing a continuously-fed Czochralski (Cz) growth technology that is designed to enable the production of high efficiency monocrystalline solar cells.

We operate through three business segments: our polysilicon business, our photovoltaic, or PV, business and our sapphire business.

PV Industry Overview

Today, the majority of the world's electricity supply is generated by fossil fuels such as oil, coal and natural gas. Fluctuating global energy prices, increasing demand for electricity, particularly in developing economies, growing awareness of the environmental consequences of fossil fuel-based energy sources and the desire for energy security are, we believe, driving the demand for renewable energy sources such as solar photovoltaic (PV) systems. PV systems are used in industrial, commercial and residential applications to convert sunlight directly into electricity. Electricity costs generated from solar PV energy are higher than electricity generated by traditional energy sources, although the difference is decreasing as solar PV manufacturing becomes less costly and solar cells become more efficient in converting sunlight into electricity.

To offset the higher costs associated with solar energy and to encourage the adoption of alternative energy supplies, certain countries implemented various tax credits and other incentives in connection with the use of renewable energy. The growth of PV installations has historically been driven by these incentive programs such as feed-in-tariffs (or FITs), most notably in Germany. Governmental support for continued financial incentive programs, however, is waning as governments are now focused on recovering from the global economic downturn. Further reduction in governmental incentive programs to the solar industry, or the elimination of these incentive programs by governments in their entirety (which we believe may take place in the future) may hamper the development of the solar industry resulting in reduced demand for PV equipment.

In 2011, in spite of a weak global economy and lower end user demand, solar PV installations grew year over year, though not at the same rates the industry experienced in preceding years. PV installations in calendar 2011 accounted for an aggregate of 27.4 gigawatts output, a 40% increase from 2010 compared with a 157% increase in gigawatt output from 2009 to 2010.

Excess manufacturing production and increased inventories caused module prices to fall from an estimated $2.17 per watt in the fourth quarter of 2010 to $1.56 in the fourth quarter of 2011. Quarterly spot prices for multicrystalline wafers fell from $0.88 per watt at the beginning of 2011 to $0.37 per watt by December 2011. The impact of these decreasing prices on PV manufacturers and equipment suppliers resulted in lower factory utilization rates and lower equipment sales compared to 2010. In spite of this slowdown, overall PV industry revenues for 2011 were $93.1 billion compared to $82.1 billion in 2010, a 13% year over year increase.

PV Manufacturing Trends

In 2011, China's share of total global PV silicon cell production was 59.3%. Access to low cost capital, economic incentives offered by the Chinese government and the availability of low cost labor have, we believe, accelerated the expansion of PV manufacturing capacity within the country. Together with Taiwan, the two countries represented 74% of the world's total PV cell production. In the fiscal year ended March 31, 2012, 95% of our revenue was from existing or new customers in Asia, with 52% of total revenue generated from customers in China.

PV manufacturers and equipment suppliers are focused on lowering costs and improving manufacturing productivity. The recovery of the solar industry, we believe, will be driven by new technology adoption, not manufacturing capacity additions, that is aimed at producing a new generation of lower cost, higher efficient wafers and cells that will continue to narrow the cost gap between traditional sources of energy and solar PV technology.

Our PV Business

The primary focus of our PV business is the development, manufacture and sales of crystallization furnaces to cast silicon ingots used in the production of solar wafers. Our principal product line is the DSS family of casting furnaces that can be used to produce multicrystalline ingots and ingots with a high percentage of monocrystalline material. We believe we have established a leading position in the market for specialized furnace technology for the production of multicrystalline solar wafers. From April 1, 2003 through March 31, 2012, we shipped approximately 3,200 DSS crystallization furnaces.

The acquisition of Confluence Solar in 2012 expanded our crystalline growth technology portfolio to include a continuous Czochralski growth process, known as HiCz™, that produces monocrystalline ingots that are designed to be more efficient than traditional batch Cz ingots. We sell, in limited quantities, monocrystalline material generated using the HiCz™ growth process. We are in the process of developing our HiCz™ equipment offering, but it will not be commercially available until the first half of calendar year 2013.

DSS Multicrystalline casting furnaces—Our DSS furnace is a specialized furnace used to melt polysilicon and cast multicrystalline ingots. Polysilicon is placed into a crucible which is then loaded into the chamber of the DSS furnace where it is cast into a multicrystalline ingot under precise heating and cooling conditions. Multicrystalline ingots are used to produce solar wafers, which ultimately become solar cells. Solar cells made from multicrystalline wafers represented approximately 58% of all solar cells produced in 2011 according to Solarbuzz, a solar market research and analysis publication. Our DSS crystallization furnaces are capable of applying precise incremental temperature changes, which is important to forming quality ingots required for use as solar cells. We have developed proprietary control software systems to automate the operation of the DSS furnace during all stages of the crystal growth process. Our various DSS furnaces share a common architecture, which are designed to allow customers to efficiently upgrade systems to generate greater throughput with an existing furnace. We currently market our DSS crystallization furnaces under the names DSS450HP and DSS650. Our largest capacity DSS furnace, the DSS650, is capable of producing ingots that weigh up to 650 kilograms using standard silicon feedstock.

DSS MonoCast casting furnaces—In January 2012, we commercially introduced our new MonoCast silicon casting technology that uses the DSS furnace architecture to produce ingots comprised of a high percentage of monocrystalline material. Our DSS MonoCast technology includes an auto-seed retention capability that eliminates operator intervention at the end of the melt cycle and the beginning of the growth cycle. Solar cells produced from MonoCast wafers have been shown to deliver higher efficiencies than cells made from traditional multicrystalline wafers. We are initially offering this enhanced casting technology on our DSS450 furnace and expect to offer MonoCast technology on other DSS product offerings in the future. Currently, we are marketing MonoCast technology under the name DSS450 MonoCast and recently announced our first order from a Taiwan-based solar wafer manufacturer.

All of the components and assemblies for our DSS furnaces are manufactured by third parties using our designs. Our manufacturing personnel focus on final assembly, integration and testing of the DSS furnace. We also provide engineering and product design, quality control, process engineering and engineering services related to the operation of our DSS furnaces.

Ancillary equipment—Our ancillary equipment provides operators with material handling assistance during the preparation of the crucible before it is loaded with silicon and during the loading and unloading of the crucible into the DSS furnace chamber at the start of the growth process and out of the DSS furnace chamber at the conclusion of the ingot growth process. Our ancillary equipment includes crucible coating stations, crucible manipulators, loaders/ unloaders, extraction tools and other material handling systems required to safely transport material during the ingot growth process.

In 2011, we introduced Acuity performance software, a DSS furnace performance monitoring software product that is designed to allow production managers to improve the performance of their DSS crystal growth furnaces.

Monocrystalline furnaces—We entered the HiCz™ business with the acquisition of Confluence Solar on August 24, 2011. Confluence Solar uses a continuous monocrystalline growth technology based on the Czochralski, or Cz, crystal growth method. Cz furnaces "pull" an ingot out of a molten crucible of silicon in a controlled process which is designed to produce a long and uniformly cylindrical ingot. We refer to this growth process as HiCz™. The traditional batch Cz method is the most common technology used in the semiconductor industry to produce semiconductor-grade wafers and has been adopted for the solar industry. Solar cells made from monocrystalline wafers typically have higher solar conversion efficiencies than multicrystalline wafers. Traditional batch Cz technology is a more expensive technology than multicrystalline ingot growth technology and is one of the reasons why there are more multicrystalline wafers used to produce solar cells than monocrystalline wafers. The HiCz™ growth technology allows operators to feed raw silicon into the growth process more quickly than the batch process, making it more productive and reducing production costs, and, we believe it produces materials offering higher yields than the batch process.

We intend to commercialize the HiCz™ furnace technology and sell furnaces to companies producing monocrystalline wafers. We believe that this technology, when fully commercialized, will lower the cost of monocrystalline ingot technology to make it more competitive with wafers produced using the traditional batch Cz technology. We expect to introduce our first HiCz™ equipment technology in the first half of calendar 2013. We do sell, on a limited basis, HiCz™ material that is manufactured at our HiCz pilot production facility in Missouri.

Photovoltaic parts and services—The use of our products requires substantial technical know-how and many of our customers rely on us to design and optimize their production processes as well as train their employees in the use of our equipment. We sell replacement parts and consumables used in our DSS furnaces and other PV equipment. We typically charge for these services and parts separately from the price of our equipment.

PV Business Competitive Strengths

We believe that our competitive strengths include:

- *Key equipment supplier to many of the world's leading solar companies*—We have been providing manufacturing equipment to the solar industry for over a decade and have supplied equipment to many of the world's leading polysilicon, solar wafer, cell and module manufacturers, including LDK Solar Co., Ltd., (or LDK), Nexolon Co., Ltd., Green Energy Technology, Baoding Tianwei Yingli New Energy Resources Co., Ltd. (or Yingli), Changzhou Trina Solar Energy Co., Ltd. (or Trina) AG, and GCL-Poly Energy Holdings Limited.

- *Large and growing business presence in China,*—Today, many of the world's leading solar manufacturing companies are based in China and Taiwan, which according to Solarbuzz, accounted for approximately 73% of the world's solar wafer manufacturing capacity in 2011. We have supplied equipment to four of the top five leading PV wafer manufacturers in China based on wafer manufacturing capacity, according to Solarbuzz data.

  We have been doing business in China since 2002 and in fiscal year 2011 continued to expand our base of operations in an effort to better serve the increased number of our China-based customers. In September 2009, we opened our Shanghai production facility to provide spare parts inventory, certain limited manufacturing services, a demonstration and training center and other customer service capabilities for our Asia-based customers. In October 2010, we transitioned our global operations center to Hong Kong. We believe that our relationships with leading Chinese solar companies and our expanded base of operations in China will enhance our ability to compete against the lower cost Chinese PV capital equipment companies in our served markets.

- *Leading market position in crystal growth equipment for the solar industry*—We believe our DSS crystallization furnaces are the most widely used furnaces for casting multicrystalline ingots in the solar industry. Since the introduction of our DSS240 in 2003, we have shipped approximately 3,200 furnaces to customers worldwide, the majority of which were to manufacturers in China. Our DSS furnaces produce high quality crystalline ingots with reliability and low cost of ownership. We believe our large installed base of DSS units, the scalable architecture of our DSS design and other PV equipment may promote higher sales of equipment upgrades, parts and service in the future if our customers elect to upgrade their equipment to next generation technology and as their equipment ages.

- *Rapid commercialization of technology to enable the growth of new markets*—We have been successful in commercializing crystal growth technology that enables new entrants to capitalize on expected market growth opportunities. We established a leading multicrystalline growth technology in the PV industry with our DSS furnace in 2003. We believe that currently our DSS furnace is the most widely used crystal growth furnace in the PV industry. The scalable architecture of our DSS furnace enables customers to leverage the existing investment of their DSS furnaces to upgrade to new levels of performance and technology improvements as we introduce them into the market. The operational experience we have gained in successfully building and managing a high quality, global supply chain to support the growth of our DSS furnaces has allowed us to quickly commercialize other crystalline growth equipment to support our other business segments.

- *Outsourced manufacturing model*—Our manufacturing model is different from many capital equipment manufacturers in that we outsource the manufacture of the components used in our PV equipment. All of the components of our DSS crystallization furnaces are shipped to our Hong Kong consolidation warehouse where they are crated for ultimate shipment to the DSS customers. This model results in a highly flexible cost structure, modest working capital and physical plant requirements and a relatively small number of manufacturing employees. This model also improves our competitive position by keeping our cost of operations low to better compete with low-cost Chinese equipment suppliers.

PV Business Growth Strategies

Our PV growth strategies include:

- maintaining technology leadership in our PV product line through continued innovation and new product development that preserves our market share and lowers our customers' cost of manufacturing and improves the quality of the material produced in our furnaces;

- developing or acquiring complementary technologies or businesses that strengthen and leverage our crystal growth expertise and provide expected future revenue growth opportunities such as our investment in and development of our HiCz™ technology; and

- better serving our customers and lowering our costs by further expanding our operations in Asia.

PV Business Competition

We compete on the basis of reputation, technology, delivery, service (both installation and aftermarket) and price. We principally compete with both well established and new, low-cost equipment manufacturers, primarily located in China, for DSS furnaces for the production of multicrystalline ingots. These competitors include ALD Vacuum Technologies AG, JYT Corporation, Ferrotec Corporation, PVA TePla AG, Centrotherm Elektrische Anlagen GmbH & Co., Jing Gong Technology, Zhejiang Jingsheng Mechanical & Electrical Co., Ltd., as well as a number of other furnace manufacturers. Several of these competitors, such as Centrotherm and Ferrotec, are large integrated manufacturers with significant resources capable of competing for business globally. We believe we compete favorably based on the reliability of our technology, our strong service and support capabilities and the cost of ownership of our equipment.

In addition, we experience competition from new entrants, many of whom have significant resources and advanced technology, as well as competition from certain companies who formerly purchased materials from our DSS equipment customers and have decided to manufacture their own silicon ingots by means of creating and building their own equipment.

Our Polysilicon Business

Polysilicon is a purified form of silicon that is a key raw material used to produce photovoltaic and semiconductor wafers. Our polysilicon business offers CVD reactors and related TCS technology and equipment along with engineering services to existing polysilicon producers and new market entrants.

SDR reactors—We began offering SDR reactors commercially in April 2006. Our SDR reactors have demonstrated production at levels greater than their nameplate capacity. We market our SDR reactors under the names SDR300, SDR400, SDR 500 and SDR 600.

Hydrochlorination for the production of TCS and Silane—In addition to SDR reactors for polysilicon manufacturing, we also provide equipment, technology and engineering services for the production and purification of trichlorosilane (TCS) and silane. In 2008, we began offering hydrochlorination technology which is designed to lower the capital costs and power consumption of polysilicon production. Hydrochlorination technology eliminates the need for silicon tetrachloride converters which are required when using certain other polysilicon production technology.

Polysilicon services, parts and other—In addition to supplying SDR reactors and TCS production equipment, we also provide engineering services for the commissioning, start-up and optimization of our equipment and technology. We typically charge for these services and parts separately from the price of our equipment.

We also provide ancillary equipment and technologies for producing seed rods used in our SDR reactors and for handling and processing the polysilicon rods into a finished product. In addition, we are developing a technology that creates polysilicon pieces in precisely-sized nuggets. When fully commercialized this technology is expected to have applicability in a number of polysilicon crystallization techniques.

Our polysilicon business focuses on product design, quality control, engineering services, project management and process development related to the production of polysilicon. One of our goals is to lower the cost of producing high quality polysilicon for our customers by providing more efficient plant designs and increasing the throughput and efficiency of each new generation of our SDR reactors.

Polysilicon Business Competitive Strengths

We believe that our competitive strengths include:

- *Key equipment supplier to many of the world's leading polysilicon companies*—We have been providing polysilicon production equipment since 2007 and have supplied equipment to many of the world's leading polysilicon manufacturers, including OCI Company, Ltd,, LDK Solar Co., Ltd., (LDK) and GCL-Poly Energy Holdings Limited.

- *Established supplier of technology to new entrants to the polysilicon industry*—Our polysilicon production technology is recognized for its ability to produce quality polysilicon at a low cost per kilogram. Our first commissioned new polysilicon production facility was for OCI Company, Ltd., a South Korean chemical company. As one of a small number of companies providing CVD reactors commercially, we believe we are well positioned to successfully compete for future market expansion opportunities.

- *Large and growing presence in Asia, a major growth market for solar manufacturing*—Many of the world's leading polysilicon producers are based in Asia where we have supplied production equipment to 7 of the top 9 leading polysilicon manufacturers in the region based on polysilicon production capacity, according to Solarbuzz data.

- *Rapid technology development and deep domain expertise in polysilicon production*—We have been successful in rapidly developing SDR polysilicon production technology that enables higher levels of productivity and lower power consumption with each new generation of product. Our polysilicon team has decades of combined experience in engineering and product development and in operating high volume polysilicon production facilities. This expertise provides us with a competitive advantage when it comes to understanding our customers' production needs and in developing products that meet these needs.

- *Outsourced manufacturing model*—As is the case in our PV segment, our manufacturing model is different from many capital equipment manufacturers in that we outsource the components used in our polysilicon equipment. All of the components of our polysilicon products are shipped directly from our qualified vendors to the customer installation site. This model results in a highly flexible cost structure, modest working capital and physical plant requirements and a relatively small number of manufacturing employees. This model also improves our competitive position by keeping our cost of operations low.

Polysilicon Business Growth Strategies

Our growth strategies include:

- maintaining polysilicon technology leadership through innovation and new product development or acquiring complementary technologies or businesses to continually enhance our polysilicon product offerings; and

- protecting our customers' investments in capital equipment by providing technical improvements for existing products that enhance their productivity and efficiency.

Polysilicon Business Competition

We compete on the basis of reputation, technology, delivery, service (both installation and aftermarket), cost of ownership and price. We principally compete with equipment manufacturers in the PV market for SDR reactors for the production of polysilicon.

Our CVD reactor products and other related services face direct competition from a small number of entities to the polysilicon production market. These competitors include MSA Apparatus Construction for Chemical Equipment Ltd, Centrotherm Elektrische Anlagen GmbH & Co., Morimatsu Industry Co. Ltd. and Poly Plant Project, Inc. We also face indirect competition from large, well-established companies that produce polysilicon primarily for the semiconductor industry. These companies have developed polysilicon production technology for their own use which they do not market to third parties. These indirect competitors include Hemlock Semiconductor Corporation, Wacker Chemie AG, MEMC Electronic Materials, Inc. and Renewable Energy Corporation ASA. We believe we compete favorably based on the reliability of our technology, our strong service and support capabilities and the cost of ownership of our equipment.

Sapphire Industry Overview

Sapphire is one of the hardest materials on earth and is recognized for its durability, chemical resistivity and optical transmission qualities. Synthetic or industrially-produced sapphire has been used in photonics applications for decades. Sapphire gained wider market adoption in the 1960s when the semiconductor industry developed the first silicon-on-sapphire applications for certain electronic components. Sapphire usage has grown significantly since the adoption of nitride-based light-emitting diodes, or LEDs, began use in the 1990s and today LED applications represent the largest market segment for synthetic sapphire.

LED Applications

Sapphire is a widely-used substrate material for high brightness (or HB) white, blue and green LED devices, currently representing approximately 80% of all substrate material used in LED applications. Common applications for LEDs include: color displays for mobile phones and other portable electronics such as GPS systems, MP3 players and digital camera flashes; backlighting units for LCD flat panel televisions, notebook computers and desktop monitors; car and truck headlights, turning and tail light functions as well as interior lighting; as the light sources on large signs, and outdoor displays such as jumbo screens used in sporting arenas and electronic billboards; general illumination for replacement lamps, architectural lighting, retail displays, commercial and industrial lights, residential lighting, street lights and off grid lighting for developing countries.

Optical and Mechanical Applications

The characteristics of sapphire make it an effective material for a variety of applications that require demanding optical and mechanical performance in industries such as aerospace and defense, oil and gas, and medical devices. Sapphire material is also used in a number of optical and mechanical applications including semiconductor wafer carriers, nozzles, bearings, blades, tubes, jewel bearings, high powered lasers and windows. Other applications include liquid chromatography which requires well-annealed and low stressed material.

Sapphire Manufacturing Trends

Cost reduction for end use applications is causing sapphire crystal growers to find ways to increase yields of material and grow larger size boules. As production costs come down, sapphire becomes more competitive with other materials in a broader range of market opportunities. The single largest market opportunity for sapphire is, we believe, in the LED industry. The value chain for producing LED substrates consists of the following key steps: crystal growth, coring, slicing, lapping and polishing. LED device manufacturers are, we believe, seeking large diameter sapphire wafers to allow them to achieve economies of scale. As downstream processing technologies such as MOCVD tools, which are used to grow compound semiconductor materials at the atomic scale, increase the capability to process larger wafers diameters such as 4-inch and 6-inch substrates, the demand for large area sapphire material is expected to grow.

The design of our Advanced Sapphire Furnace (or ASF) has benefited from over 40 years of sapphire material process developments at Crystal Systems. We have leveraged this experience to create a furnace design that is, we believe, easy to operate, scalable and is capable of producing quality sapphire boules. The ASF production process includes a seeding, charging, melting, growing, and cooling cycle to create the sapphire boule. Each boule is inspected by using our optical homogeneity technique which is designed to ensure that no sub-optimized material enters the downstream processing steps. The simplicity and reliability of our ASF design will, we believe, allow customers to operate high volume production environments to produce sapphire material with a lower capital investment compared to other competing crystal growth technologies.

Our Sapphire Business

On July 29, 2010, we acquired privately-held Crystal Systems, Inc., a company that specialized in the manufacture of high-quality sapphire material used in the LED industry and other specialty industries. This acquisition brought us 40 years of sapphire crystal growing experience. The Crystal Systems acquisition serves as the basis for our sapphire business segment. Our sapphire segment currently: (i) markets and sells of our ASF systems to customers to enable them to produce their own sapphire material, and (ii) produces sapphire material, on a limited basis, for the LED and other specialty markets at our pilot production facility in Massachusetts.

ASF Systems—Our ASF systems produce monocrystalline sapphire material, commonly referred to as sapphire boules. Our ASF technology is based on the heat exchanger method, or HEM, which is a directional solidification technique which crystallizes the sapphire meltstock material during the growth process. We began entering into contracts to sell our ASF systems in the fall of 2010 to, we believe, customers primarily in the LED market. The design of our ASF system has benefited from the sapphire crystal growing experience at Crystal Systems. We believe our sapphire material operation in Massachusetts gives us a competitive advantage in the sapphire equipment market place because our facility allows us to demonstrate to potential ASF system customers the operation of a sapphire manufacturing facility. We currently market and sell our ASF systems under the names ASF85 and ASF100.

Certain of the components and assemblies for our ASF furnaces are manufactured to our specifications by third parties using our designs. Our manufacturing personnel focus on final assembly, integration and testing of the ASF systems. We also provide engineering and product design, quality control, process engineering, engineering services and field services related to the operation of our ASF furnaces.

Target customers for our ASF furnaces include manufacturers from the solar and LED industries, as well as other diversified manufacturers.

We delivered the first ASF furnaces to customers in May 2011 and, during fiscal year 2012, we began to recognize revenue as we installed and met contractual acceptance criteria under several customer contracts.

Sapphire Materials—On a limited scale, we produce sapphire material at our pilot production facility in Salem, Massachusetts. We sell this material to customers in the LED and other markets, such as the aerospace, defense and medical device.

We manufacture and sell two principal types of sapphire materials.

HEM Sapphire Material: Using the material derived from the sapphire boule generated with our ASF furnaces, we cut the sapphire material in a number of different dimensions and crystal orientations, in form factors such as cores, rods, blanks, windows and tubes.

Titanium-doped Sapphire (Ti:Sapphire) Material: Utilizing a proprietary production technique, we generate sapphire boules that are doped with titanium. Titanium-doped sapphire has optical qualities and other performance characteristics that make it useful in applications such as tunable lasers and photonics products. Similar to our standard HEM sapphire material, we provide certain finishing and polishing for our Ti:Sapphire material.

Sapphire Business Competitive Strengths

We believe that our competitive strengths include:

- *Rapid technology development and deep domain expertise in sapphire crystal production*—We have been successful in rapidly commercializing our ASF systems. Our sapphire engineering, product design, and support team has decades of combined experience in engineering and product development and in operating sapphire production facilities. This expertise provides us with a competitive advantage when it comes to understanding our customers' production needs and in developing products that meet these needs.

- *Large and growing presence in Asia, a major growth market for LED manufacturing*—Many of the world's leading LED manufacturers are based in Asia. We have been doing business in Asia since 2002 and have continued to expand our base of operations to better serve our Asia-based customers. Many of our earliest customers for our ASF systems were also the Asia-based customers of our other business segments. We believe that our relationships with leading Asia-based companies and our expanded base of operations in the region will enhance our service capabilities and competitiveness in the sapphire equipment industry.

- *Outsourced manufacturing model*—Our sapphire equipment manufacturing model is similar to that of our DSS and polysilicon businesses in that we outsource the manufacture of components used in our ASF system to qualified suppliers. For most of fiscal year ended March 31, 2012, we utilized our facility in Merrimack, New Hampshire to integrate and test some of our ASF systems prior to shipping the systems to our customers. Currently, our ASF systems are crated and shipped to our customer's installation sites from our Hong Kong facility, which already serves a similar function for our DSS furnaces. We believe that this model results in a highly flexible cost structure, modest working capital and physical plant requirements and a relatively small number of manufacturing employees. This model also improves our competitive position by keeping our cost of operations low.

- *Supplier of quality sapphire material for the LED and other industrial markets*—GT Crystal Systems, utilizing 40 years of sapphire crystal growing experience, has made ongoing improvement in sapphire production and today is recognized for its ability to produce material that meets stringent technical requirements for applications such as LEDs, high power lasers, windows for the aerospace and defense industry, and other industries such as medical device and oil and gas. The production environment of our sapphire materials business provides insights on potential technology advances for our ASF systems, and enables us to help our ASF customers ramp their sapphire production processes.

Sapphire Business Growth Strategies

Our growth strategies include:

- maintaining technology leadership in our core sapphire product areas through innovation and new product development;

- leveraging our strengths in sapphire crystal growth expertise by pursuing new opportunities in industrial markets that require the optical and mechanical performance characteristics offered by sapphire;

- protecting our customers' investments in capital equipment by providing technical improvements for existing products that enhance their productivity and efficiency;

- leveraging our sapphire materials capabilities to become a supplier of crystal growth and other production equipment to the sapphire industry; and

- developing or acquiring complementary technologies or businesses.

Sapphire Business Competition

We compete on the basis of technology, reputation, delivery, service (both installation and aftermarket) and price.

We face competition for the sale of our ASF systems from companies offering alternative technologies including Thermal Technology LLC, Advanced RenewableEnergy Company, LLC, and several suppliers of Kyropoulos-based sapphire growth equipment. We face competition for the sale of our sapphire material from a number of well established companies. These material competitors include Rubicon Technology, Inc., Sapphire Technology Co. Ltd. (Korea), Kyocera International Inc., Saint-Gobain, Gavish Inc, and Monocrystal as well as a number of other sapphire material suppliers. We believe we compete favorably based on the reliability of our technology, our strong service and support capabilities and the cost of ownership of our equipment.

Photovoltaic, Polysilicon and Sapphire Customers

We sell our equipment products and services globally to polysilicon producers, solar wafer manufacturers, and sapphire producers. Our customers include, or are suppliers to, some of the world's leading solar wafer and cell manufacturers and LED manufacturers. On a limited basis, we also sell sapphire material and HiCz^{TM} material.

In any one year, we typically have a small number of customers within our business segments, with a very limited number of customers representing a significant percentage of our total revenue. However, the number of our customers and their contribution to our revenue typically change from year to year, as different customers replace equipment and undertake projects to add manufacturing capacity or as we add new customers. For our fiscal year ended March 31, 2012, we had only one customer, OCI Company, Ltd., that represented greater than 10 percent of our total revenue for the fiscal year. The following customers comprised 10% or more of our total net revenues for the fiscal years ended March 31, 2012, April 2, 2011, and April 3, 2010:

	Fiscal Year Ended					
	March 31, 2012		April 2, 2011		April 3, 2010	
	Revenue	% of Total	Revenue	% of Total	Revenue	% of Total
	(dollars in thousands)					
OCI Company Ltd (formerly DC Chemical Co. Ltd)	$223,723	23%	*	*	*	*
LDK Solar Co., Ltd	*	*	*	*	$185,249	34%
Jiangsu GCL Silicon Material Technology Development Co. Ltd.	*	*	$ 172,627	19%	*	*

* Revenue from these customers was either zero or less than 10% of the total net revenue during the period.

We believe that our sales to customers in Asia will continue to be a significant portion of total sales over the next several years as we will continue to focus our polysilicon, PV and sapphire equipment sales efforts in that region. For more information about our revenue and long-lived assets by geographic region and our revenue, gross profit and assets by segment, please refer to Note 17 in our Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K.

Sales, Marketing and Customer Support

We market our products principally through a direct sales force, and with respect to our equipment products we also utilize regional indirect sales representatives who solicit orders and identify potential sales opportunities in markets where our business is less established. All sales are made directly by us to the customer and our indirect sales representatives are not authorized to enter into sales contracts on our behalf.

Sales terms

We have established standard terms and conditions of sale for our products; however, sales contracts and prices can vary and are generally negotiated on a case-by-case basis.

Payments for our polysilicon reactors, PV equipment and ASF systems are made by the customer in installments. Typically these installment payments include: (i) a deposit that must be paid via wire transfer promptly following execution of the contract, (ii) additional amounts payable during the period leading up to and/or at the time of delivery of the equipment and (iii) the balance of the amount for the equipment and services delivered at the time that the equipment meets certain contractual acceptance criteria or performance guarantees. The installment payments are typically made by drawing the applicable amounts from letters of credit (as described further in the following paragraph).

Our equipment contracts usually require that the customer deliver to us one or more irrevocable letters of credit in an amount that is typically equal to the contract amount less the amount of the initial deposit. In very limited circumstances, a customer may not be required to deliver letters of credit if it has a sufficient operating history and an established and strong credit history. Where a letter of credit is required, the failure to provide it within the time permitted under the contract is a material breach of the agreement that gives us the right to terminate the contract. As payments become due under the contract, we draw that amount from the letter of credit that was established by the customer.

Our equipment customers do not have the contractual right to receive a refund in the event that the equipment does not function in accordance with specifications unless we determine that such equipment cannot be repaired or replaced, which to date has not occurred. As noted above, in certain cases our polysilicon and ASF equipment contracts contain certain negotiated performance guarantees regarding the performance and output of the equipment. In the case of polysilicon equipment sales, failure to meet the performance guarantees results in us not receiving a portion of the purchase price. In the case of ASF systems, failure to meet the performance guarantees, generally results in that piece of equipment not being accepted and we do not receive any payment for that system.

All of our equipment contracts provide that payments from customers are non-refundable and orders are non-cancellable. However, our contracts generally include termination provisions. Either we or the customer may terminate the agreement upon the other's material failure to perform its obligations under the agreement (if not cured in an agreed upon time following notice) or if the other party becomes insolvent or is subject to bankruptcy proceedings. Upon termination, all obligations of both parties under the contract terminate, other than provisions specified to survive termination (primarily relating to confidentiality and use of technology) and subject to the right to pursue claims for any breach triggering such termination.

In addition to the terms and conditions set forth above (which are standard for most of our contracts), the contracts also contain customary representations and warranties from both us and the customer, indemnification provisions and limitations on liability.

We have granted only one customer exclusivity rights in connection with such customer's purchase of our equipment. Pursuant to the exclusivity provisions, we agreed not to sell the same equipment as sold to such customer in the home country of that customer for a defined period of time. The remaining contractual terms with this customer are similar to the terms with our other polysilicon customers set forth above.

We also sell limited quantities of sapphire material and HiCz™ material. These materials are generally sold pursuant to our standard purchase orders.

Product warranty

Our polysilicon products are generally sold with a standard warranty typically for a period not exceeding twenty-four months from delivery. Our PV and sapphire equipment are generally sold with a standard warranty for technical defects for a period equal to the shorter of: (i) twelve months from the date of acceptance by the customer; or (ii) fifteen months from the date of shipment. The warranty is typically provided on a repair or replacement basis and includes both products we manufacture and products that we supply our customers from other manufacturers.

Our sapphire and HiCz^{TM} material products are generally sold with a standard warranty for a period not greater than 30 days, but in certain limited circumstances this warranty period has been extended to greater than 30 days.

Our total warranty accruals for new warranties issued was $6.0 million for the fiscal year ended March 31, 2012, $11.0 million for the fiscal year ended April 2, 2011, and $1.1 million for the fiscal year ended April 3, 2010.

Customer support

Our polysilicon production equipment and DSS and ASF crystallization furnaces are critical to the operation of our customers' manufacturing operations. Prior to an order being placed, a customer service representative advises the customer with respect to its facilities requirements and undertakes modeling of expected operating costs. Following delivery, our engineers assist with installation and integration of equipment at the customer's facility. After the sale is complete we often provide support services for a fee. As the number of our product installations increases, we will continue to offer our service and support.

Manufacturing and Suppliers

Our manufacturing model is based upon outsourcing most of the components used in our PV and ASF systems. The limited manufacturing we perform focuses on assembly operations and the production of limited proprietary components. Nearly all of the components of our polysilicon products are shipped directly from our qualified vendors to the customer installation site. The majority of components for our DSS furnaces and ASF systems are shipped to our consolidation warehouse in Hong Kong for ultimate shipment to the customer. In the case of new products or when certain sub assembly work is needed, the components are shipped to our facilities in Merrimack, New Hampshire or Shanghai, China before being sent to the Hong Kong consolidation warehouse, or in the case of new products to the final customer installation site. This model results, we believe, in a flexible cost structure, modest working capital and physical plant requirements and a relatively small number of manufacturing employees.

Our DSS and ASF operation uses a "forecast manufacturing" methodology which attempts to project our raw material needs sufficiently in advance of manufacturing lead times, in an attempt to diminish the threat of spot price volatility and generally minimizing the effect of supply shortages and disruptions. We believe this approach is designed in an effort to reduce product delivery times and increase scalability, however, if customers were to delay delivery of, or cancel order for, DSS and ASF equipment, then we the benefits of our "forecast manufacturing" would be limited. Our polysilicon operations procure materials when customer orders are received.

We purchase a range of materials and components for use in our products from other manufacturers. Many component parts purchased by us are made to our specifications and under appropriate confidentiality arrangements. Purchased components represented approximately 87%, 82%, and 87% of cost of goods sold in the fiscal years ended March 31, 2012, April 2, 2011, and April 3, 2010, respectively. We attempt to secure multiple suppliers of our components to reduce our concentration risk and ensure adequate supply, but, in some cases, components and parts are obtained from a single vendor. In addition, we do not use any single supplier to produce all of the components for any single product in order to reduce the risk that a supplier could replicate our products. In many cases, but not all, we believe that these materials and components are available from multiple sources and that we are not dependent on any single supplier. We have well-established relationships with various domestic and foreign suppliers of the components used in our products. We generally are required to make a series of pre-payments to these vendors, which we fund from our working capital.

We manufacture sapphire material and HiCz™ material at our pilot production plants in Salem, Massachusetts and Hazelwood, Missouri, respectively. These facilities are utilized by us for limited materials sales and to demonstrate to potential equipment customers the operation of a manufacturing operation as well as for our research and development efforts.

Research, Development and Engineering

Our research and development activities are focused on advancing, developing and improving technologies for the markets we serve. We also have cooperative research and development agreements with certain universities, customers and suppliers. Our research and development expense was $49.9 million in the fiscal year ended March 31, 2012, $23.8 million in the fiscal year ended April 2, 2011 and $21.4 million in the fiscal year ended April 3, 2010.

Intellectual Property

We believe that our competitive position depends, in part, on our ability to protect our intellectual property resulting from our research, development, engineering, manufacturing, marketing, technical and customer service activities and the intellectual property obtained in connection with acquisitions. Under our intellectual property strategy we protect our proprietary technology through a combination of patents, trademarks, copyrights, know-how and trade secrets, as well as employee and third party confidentiality and assignment of rights agreements. We focus on developing, identifying and protecting our technology and resulting intellectual property in a manner that supports our overall business and technology objectives. Although we rely on intellectual property that is primarily developed in-house for our solar, polysilicon and sapphire equipment and related products, we also enter into patent and/or technology licenses with other parties when we believe such licenses would advance or complement our products and technology or would otherwise be in our best interest.

One of the principal means of protecting our proprietary technology, including technical processes and equipment designs, is through trade secret protection and confidentiality agreements. Our personnel, including our research and development personnel, enter into confidentiality agreements and non-competition agreements with us. These agreements further address intellectual property protection issues and require our employees to assign to us, among other things, all of the inventions, designs and technologies they develop during the course of their employment with us. We also generally require our customers and business partners to enter into confidentiality agreements before we disclose any sensitive aspects of our technology or business plans. These agreements, however, may be difficult to enforce in certain jurisdictions and, therefore, may be of limited value in protecting our intellectual property.

We seek patent protection in various countries when it is consistent with our strategy and the protection afforded justifies the required disclosure costs associated with the filing. We own, or have applied for, various patents and patent applications in the United States and other countries relating to our products, product uses and manufacturing processes. The patents and patent applications vary in scope and duration. As of May 1, 2012, we own twenty issued patents in the PV and semiconductor and sapphire fields in the United States, which will expire at various times between 2012 and 2029. We also held, as of May 1, 2012, ten patents in other jurisdictions which expire at various times between 2018 and 2026. Although the products made, sold or used under our patents or technology licenses are important to us, we believe at this time that our business as a whole is not materially dependent on any particular patent or technology license, or on the licensing of our patents or technology to third parties, other than our customers.

We have not been subject to any material claims for infringement, misappropriation or other violation of intellectual property rights, claims for compensation by employee inventors or claims disputing ownership of our proprietary technologies. We have instituted claims and actions against others for what we believe are infringement or misappropriation of our intellectual property rights.

Order Backlog

Our order backlog primarily consists of amounts due under written contractual commitments and signed purchase orders for PV, polysilicon and sapphire equipment not yet shipped to customers, deferred revenue (which represents amounts for equipment that has been shipped to customers but not yet recognized as revenue) and short-term contracts or sales orders for sapphire materials. Substantially all of the contracts in our order backlog for PV, polysilicon and sapphire equipment require the customer to either post a standby letter of credit in our favor and/or make advance payment prior to shipment of equipment.

From the date of a written commitment, we generally would expect to deliver PV and sapphire equipment products over a period ranging from three to nine months and polysilicon products over a period ranging from twelve to eighteen months, however, in certain cases revenue may be recognized over longer periods. Disregarding the effect of any contract terminations or modifications, we would expect to convert approximately 33% of our March 31, 2012 order backlog into revenue during the next twelve months and approximately 67% thereafter. Although most of our orders require substantial non-refundable deposits, our order backlog as of any particular date should not be relied upon as indicative of our revenues for any future period.

If a customer fails to perform its outstanding contractual obligations on a timely basis, and such failure continues after notice of breach and a cure period, we may terminate the contract. Our contracts generally do not contain cancellation provisions and in the event of a customer breach, the customer may be liable for contractual damages. During the fiscal year ended March 31, 2012, we terminated or modified contracts resulting in a $135.9 million reduction in our order backlog (74% of the reduction was attributable to six contracts). During the fiscal year ended April 2, 2011, we terminated or modified contracts resulting in a $10.7 million reduction in our order backlog (82% of the reduction was from three contracts). During the fiscal year ended March 31, 2012, we recorded revenues of $35.5 million from terminated contracts and during the fiscal year ended April 2, 2011, we recorded revenues of $44.4 million from terminated contracts.

Although we have a reasonable expectation that most of our customers will substantially perform on their contractual obligations, we attempt to monitor those contracts that we believe to be at risk, which include contracts with customers to whom we have sent notices of breach for failure to provide letters of credit or to make payments when due. We conduct negotiations with certain customers who have requested that we extend their delivery schedules or make other contract modifications, or who have not provided letters of credit or made payments in accordance with the terms of their contracts. We engage in a certain level of these negotiations in the ordinary course. We monitor the effect, if any, that these negotiations may have on our future revenue recognition. If we cannot come to an agreement with these customers, our order backlog could be reduced. Other customers with contracts in our order backlog that are not currently under negotiation may approach us with similar requests in the future, or may fail to provide letters of credit or to make payments when due. If we cannot come to an agreement with these customers, our order backlog could be further reduced. If we do come to an agreement with customers on extending delivery schedules, the timing of expected revenue recognition could be pushed into periods later than we had anticipated.

The table below sets forth our order backlog as of March 31, 2012 and April 2, 2011 by business segment:

Product Category	March 31, 2012			April 2, 2011		
	Amount		% of Backlog	Amount		% of Backlog
	(dollars in millions)					
Photovoltaic business	$	138	8%	$	468	39%
Polysilicon business		880	49%		537	45%
Sapphire business		761	43%		184	16%
Total	$	1,779	100%	$	1,189	100%

Our order backlog attributable to our PV, polysilicon and sapphire businesses as of March 31, 2012, included deferred revenue of $196.2 million, of which $4.2 million related to our PV business, $183.9 million related to our polysilicon business and $8.1 million related to our sapphire business. Cash received in deposits related to our order backlog where deliveries have not yet occurred was $332.1 million as of March 31, 2012.

As of March 31, 2012, our order backlog consisted of contracts with 16 PV customers, contracts with 16 polysilicon customers, and contracts with several sapphire customers. Our order backlog as of March 31, 2012, included $434.2 million, $390.4 million and $178.4 million attributed to three different customers, each of which individually represents 24%, 22%, and 10%, respectively, of our order backlog.

Employees

As of March 31, 2012, we employed 663 full-time employee equivalents and contract personnel, consisting of 193 engineering and research and development employees; 101 customer service representatives; 8 executives; 44 sales and marketing employees; 174 finance, general and administrative employees; 127 manufacturing staff; and 16 information technology employees. As of March 31, 2012, 257 employees were located at our Merrimack and Nashua, New Hampshire facilities, 98 employees were located at our Salem, Massachusetts facility, 61 employees were located at our Montana facility, 44 employees were located at our Missouri facility, 39 employees were located at our Hong Kong facility, 19 employees were located at our Taiwan facility, and 145 employees were located at our Shanghai and Beijing facilities. None of our employees are currently represented by labor unions or covered by a collective bargaining agreement. We believe that relations with our employees are satisfactory.

Environmental Matters

Our Merrimack, New Hampshire and Salem, Massachusetts facilities are subject to an industrial user discharge permit governing the discharge of wastewater to the Merrimack and South Essex Sewerage District sewer systems. Our Salem, Massachusetts facility is subject to a permit related to the installation and storage of diesel sub-based fuel tanks and generators. There are no further environmental related permits required by us that are material to our business. We are not aware of any environmental issues that would have a material adverse effect on our operations.

Available Information

Our internet website address is http://www.gtat.com. Through our website, we make available, free of charge, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports, as soon as reasonably practicable after such materials are electronically filed, or furnished to, the Securities and Exchange Commission, or the SEC. These

SEC reports can be accessed through the investor relations section of our website. The information found on our website, or information that may be accessed through links on our website, is not part of this or any other report we file with or furnish to the SEC.

The charters of our Audit Committee, Compensation Committee, Nominating and Corporate Governance Committee, as well as our Code of Conduct and Code of Ethics for Senior Financial Officers, and Corporate Governance Guidelines are available on our website at www.gtat.com under "Corporate Governance". These items are also available in print to any stockholder who requests them by calling (603) 883-5200. This information is also available by writing to us, attention: Corporate Secretary, at the address on the cover of this Annual Report on Form 10-K.

Item 1A. Risk Factors

Our business, operating results and cash flows can be impacted by a number of factors, any one of which could cause our actual results to vary materially from recent results or from our anticipated future results. You should carefully consider the risks described below and the other information in this Annual Report on Form 10-K. These are the risks and uncertainties we believe are most important for our business as of the date of this Annual Report on Form 10-K. Additional risks and uncertainties not presently known to us, which we currently deem immaterial or which are similar to those faced by other companies in our industry or business in general, may also impair our business operations. If any of the following risks or uncertainties actually occurs, our business, financial condition and operating results would likely suffer. In that event, the market price of our common stock could decline and an investor in our common stock could lose all or part of their investment.

Risks Related to Our Business Generally

Oversupply of polysilicon, solar panels and sapphire material, including LED quality material, may have an adverse impact on our business and, unless such oversupplies are reduced in the near future due to expansion in demand, development of new technologies or otherwise, the negative impact on our business could last for an extended period.

We principally sell equipment that is utilized in the manufacture of polysilicon (which is a key component to making solar cells), silicon ingots (which are, through various cutting and finishing processes, used to make solar cells) and sapphire boules (which are, through various cutting and finishing processes, used to make, among other things, LED wafers). Each of the polysilicon, solar cell and LED wafer market is currently experiencing significant oversupply. The consequence of this oversupply is that those who sell into these markets (many of whom are customers for our equipment) are either required to sell at very low prices (sometimes selling at a loss) or are unable to sell at all. As a consequence of these conditions, demand for our equipment, particularly our polysilicon reactors and DSS furnaces, has dropped significantly in the past six months. In addition, certain customers have requested that we delay delivery of equipment that is to be delivered under existing contracts (and we expect that we may receive similar requests in the future). This has had an adverse impact on our business and will continue to have such an effect, including requiring that we sell products at prices below what we usually charge or resulting in the absence of any meaningful new sales. If the existing inventories of polysilicon, solar cells and LED/sapphire materials are not reduced in the near future, as a result of increased demand, new solar or sapphire technologies that increase demand for end-products incorporating polysilicon, solar cells or sapphire material or due to other reasons, we expect that our business and results of operations will be significantly and materially impacted.

General economic conditions may have an adverse impact on demand for our products.

Purchasing our products requires significant capital expenditures, and demand for such products is affected by general economic conditions. A downturn in the global construction market has reduced demand for solar panels in new residential and commercial buildings, which in turn reduces demand for our products that are used in the manufacture of PV wafers, cells and modules and polysilicon for the solar power industry (including our DSS units and CVD reactors). In addition, a downturn in the sapphire material market, and the sapphire-based LED and general illumination markets in particular, has resulted in reduced demand for our sapphire material and our ASF systems. Uncertainties about economic conditions, negative financial news, potential defaults by or rating downgrades of debt issued by governmental entities and corporate entities, tighter credit markets and declines in asset values have, in the recent past, caused our customers to postpone or cancel making purchases of capital equipment and materials. We believe that increasing governmental budgetary pressures will likely result in reduced, or the elimination of, government subsidies and economic incentives for on-grid solar electricity applications. A prolonged downturn in the global economy, combined with decreased governmental incentives for solar power usage, would have a material adverse effect on our business in a number of ways, including decreased demand for our products, which would result in lower sales, reduced backlog and contract terminations.

Uncertainty about future economic conditions makes it challenging for us to: forecast demand for our products and our operating results, make business decisions and identify the risks that may affect our business. For example, our inventory balances have increased substantially recently and, if such inventory is unable to be deployed in our products sold to customers and becomes obsolete, we could be required to take a write down and the amount of such write down may be material. If we are not able to timely and appropriately adapt to changes resulting from the difficult macroeconomic environment, our business, results of operations and financial condition may be materially and adversely affected.

Current or future credit and financial market conditions could materially and adversely affect our business and results of operations in several ways.

Financial markets in the United States, Europe and Asia experienced extreme disruption in recent years, including, among other things, extreme volatility in security prices, tightened liquidity and credit availability, rating downgrades of certain investments and declining valuations of others and increased bankruptcy filings by companies in a number of industries (including the solar industry). These economic developments adversely affect businesses such as ours in a number of ways. The tightening of credit in financial markets has resulted in reduced funding worldwide, including China (where many of our customers are located), and a higher level of uncertainty for solar module manufacturers and manufacturers incorporating sapphire material into their products. As a result, some of our customers have been delayed in securing, or prevented from securing, funding adequate to honor their existing contracts with us or to enter into new contracts to purchase our products. We believe a reduction in the availability of funding for new manufacturing facilities and facility expansions in the solar and sapphire industries, or reduction in demand for solar equipment panels or sapphire material, could cause a decrease in orders for certain of our products.

We currently require most of our equipment customers to prepay a portion of the purchase price of their orders. We use these customer deposits to prepay our suppliers to reduce the need to borrow to cover our cash needs for working capital. This practice may not be sustainable if the recent market disruptions continue or grow worse. Some of our customers who have become financially distressed have failed to provide letters of credit or make payments in accordance with the terms of their existing contracts. If customers fail to post letters of credit or make payments, and we do not agree to revised contract terms, it could have a significant impact on our business, results of operations and financial condition. The impact of these disruptions are increasingly being felt in China, and by certain of our customers which are located in China, and accounts in part for the decline in the rate of increase of our total revenue and order backlog (as compared to the quarter ended December 31, 2011) for the fiscal year ended March 31, 2012.

We may experience further revenue rate and backlog reductions in the future similar to or greater than those reductions we experienced in fiscal year ended March 31, 2012. Credit and financial market conditions may similarly affect our suppliers. We may lose advances we make to our suppliers in the event they become insolvent because our advances are not secured or backed by letters of credit. The inability of our suppliers to obtain credit to finance development or manufacture our products could result in delivery delays or prevent us from delivering our products to our customers.

Trade tensions with China have recently increased markedly and any further retaliatory actions by either side could harm our business and our stock price.

Recently, trade tensions between China and the U.S. have escalated. On May 17, 2012, the U.S. Department of Commerce announced its preliminary determination that China had violated fair trade policies by "dumping" into the U.S. certain solar products at prices that were intended to advantage Chinese manufacturers. In connection with this ruling, certain Chinese solar cell and wafer manufacturers (including some of our equipment customers) had preliminary duties levied against them of approximately 31%. The Chinese government responded by saying the preliminary determination was deliberately provoking trade friction between the two nations. This follows a March 2012 action by the United States to impose preliminary punitive duties, in the single digits, on solar panels imported from China. The Department of Commerce is expected to issue final rulings on these matters later in the year. In addition, Congress has considered legislation targeting China's currency practices, which would, among other things, impose trade sanctions against Chinese companies that ship finished goods into the U.S. at artificially low prices caused by Chinese currency manipulation. The Chinese government has indicated that passage of this legislation or similar actions could lead to retaliatory tariffs. Retaliatory tariffs and trade tensions with China would have a material adverse impact on our business since we sell into China and our equipment customers sell end products into the U.S. In addition, if the U.S. government were to issue final determinations consistent with the preliminary determinations in 2012 or impose other duties on solar products from China, it would have a direct and negative effect on several of our PV customers who purchase our PV equipment and polysilicon equipment. Our business and results of operations would be negatively affected if anti-dumping or other duties were imposed or a trade war was to occur with China. In addition, we expect that any further announcements about imposition of duties by the U.S. government on solar cells imported from China could negatively impact our stock price and may have a material adverse effect on our business and results of operations.

If our customers delay or cancel equipment purchases, we may be required to modify or cancel contractual arrangements with our suppliers which may result in the loss of deposits or pre-paid advances, which losses have been significant in the past.

As a result of our customer delays or contract terminations, we reschedule or cancel, from time to time, purchase orders with our vendors to procure materials and, in certain cases, we are required to reimburse the vendor for costs incurred to the date of termination plus predetermined profits. In addition, certain of the vendors from whom we purchased materials were unable to deliver the ordered components because economic conditions had an adverse impact on their ability to operate their businesses and we were unable to recover advances paid to those vendors for components that were not delivered. We have, in prior fiscal years, recorded significant losses resulting from rescheduled and/or canceled commitments to our vendors as a result of customer delays, contract modifications and terminations relating to expected forfeitures of vendor advances and reserves against advances on inventory purchases with vendors that had become financially distressed. In cases where we are not able to cancel or modify vendor purchase orders due to customer delays or terminations, our purchase commitments may exceed our order backlog requirements and we may be unable to redeploy the undelivered equipment. In addition, we expect that we may be required to pay advances to vendors in the future without being able to recover that advance if the vendor is placed in bankruptcy, becomes insolvent or otherwise experiences financial distress.

Delays in deliveries, or cancellations of orders, for products of all of our segments could cause us to have inventories in excess of our short-term needs and may delay our ability to recognize, or prevent us from recognizing, revenue on contracts in our order backlog. We have recently experienced significant increases in the amount of inventory that we hold in order to meet certain anticipated demands for our products including our ASF systems. Contract breaches or cancellation of orders may require us to reschedule and/or cancel additional commitments to vendors in the future and require that we write-down any inventory purchased that we are unable to deploy or require that we sell products at prices that are below our historical prices, which would also have a negative impact on our gross margins.

Amounts included in our order backlog may not result in actual revenue or translate into profits.

Our order backlog is primarily based on signed purchase orders or other written contractual commitments. We cannot guarantee that our order backlog will result in actual revenue in the originally anticipated period, or at all. For example, during the fiscal year ended March 31, 2012, our backlog was reduced by $135.9 million as a result of contract terminations that did not result in revenue. In addition, the contracts included in our order backlog may not generate margins equal to our historical operating margins. Our customers may experience project delays or default on the terms of their contracts with us as a result of external market factors and economic or other factors beyond our or their control. If a customer fails to perform its contractual obligations and we do not reasonably expect such customer to perform its obligations, we may terminate the contract, which would result in a decrease in our backlog. In addition, our backlog is at risk to varying degrees to the extent customers request that we extend the delivery schedules and make other modifications under their contracts in our order backlog. Any contract modifications that we negotiate could likely include an extension of delivery dates, and could result in lower pricing or in a reduction in the number of units deliverable under the contract, thereby reducing our order backlog and not resulting in any revenue recognized. Our order backlog includes contracts with customers to whom we have sent notices of breach for failure to provide letters of credit or to make payments when due. If we cannot come to an agreement with these customers, it could result in a further reduction of our order backlog. Other customers with contracts, however, may approach us with requests for delays in the future, or may fail to make payments when due, which could further reduce our order backlog. If our order backlog fails to result in revenue in a timely manner, or at all, we could experience a reduction in revenue, profitability and liquidity.

We intend to pursue business and technology acquisition opportunities in the future as part of our business plan to grow and diversify our business and we expect that one or more of these acquisitions will expand our product offerings into markets we have not previously served.

Our business plan is focused on growing and diversifying our product and technology offerings. Acquiring Crystal Systems, a sapphire manufacturer, was part of this business plan to extend our offerings beyond polysilicon and PV markets. We expect that achieving these goals of growth and diversification will include the acquisition of businesses and technologies from third parties and expect that in the future we will continue to engage in negotiations for such acquisitions. In order to achieve our objective of diversifying our business to technologies outside of polysilicon, photovoltaic and sapphire, we expect that some of these acquisitions will be in markets or industries that may be unrelated to those markets we currently serve. We are, however, an equipment company and we currently expect that future acquisitions will continue to be for the purpose of accessing technologies that will enable us to provide equipment to our customers.

This business diversification plan involves risks. Our stock may be valued differently depending on what markets we serve in the future. Diversification may also require significant time and resource commitments from our senior management, which will limit the amount of time these individuals will have available to devote to our existing operations. This diversification may also involve the complexities in managing an employee base that is already located in several different locations and in effectively deploying, operating and utilizing our internal systems, including those related to financial reporting, and other systems we depend on. We may also have very little experience in dealing with these new markets and products. Any failure or any inability to effectively manage and integrate the growth and diversification could have a material adverse effect on its business, financial condition and results of operations.

Finally, we may not be successful in acquiring any new businesses or technologies, despite our efforts to do so, and there can be no certainty that we will acquire any other companies or technologies that allow us to diversify. If we do not close acquisitions in accordance with our business plan, we may not be able to diversify revenue and our performance will be tied directly to the PV and sapphire markets, and if one or both experience difficulties, our business, financial condition and results of operations would be negatively impacted.

We face competition in each of our business segments, and if our competitors are able to manufacture products that employ newer technologies or are otherwise more widely used than our products, and if we are unable to modify our products to adapt to such future changes, we may be unable to attract or retain customers.

The PV energy and sapphire industries are both highly competitive and continually evolving as participants strive to increase their market share and new entrants strive to capture market share. In addition, the PV energy industry also has to compete with the larger conventional electric power industry.

The PV and sapphire industries are also rapidly evolving and are highly competitive. Particularly with respect to the solar cell industry, new technologies are leading to rapid improvements in cell efficiencies and performance. Technological advances are, we believe, also resulting in lower manufacturing costs for these products. These developments may render existing products and/or product manufacturing equipment of our PV and sapphire businesses obsolete. We will therefore need to keep pace with technological advances in these industries in order to compete effectively in the future, which may require significant expenditures on research and development or investments in acquisition of other businesses and technologies. For example, our success in (i) the sapphire market depends on our ability to expand into new applications that are based on continued advancement in the design and manufacture of sapphire and LEDs (including sapphire and non-sapphire-based LEDs) and lighting technology by others, as well as the continued demand for sapphire in the LED market (while we believe sapphire is currently one of the preferred substrate materials for certain LED applications, which is the market our ASF customers sell into, research is ongoing for the use of silicon substrates and substrates incorporating other materials in LED applications) and (ii) in the PV market will depend to a large extent in our success in commercializing our monocrystallization technology offerings. Our failure to further refine our technologies and/or develop and introduce new solar power and sapphire products could cause our products to become uncompetitive or obsolete, which could adversely affect demand for our products, and our financial condition, results of operations, business and/or prospects.

Many of our competitors, in each of our business segments, have, and future competitors may also have, substantially greater financial, technical, manufacturing and other resources than we do. These resources may provide our competitors with an advantage because they can realize economies of scale, synergies and purchase certain raw materials, commodities and key components at lower prices. Current and potential competitors of ours may also have greater brand name recognition, more established distribution networks and larger customer bases, and may be able to devote more resources to the research, development, promotion and sale of their products or to respond more quickly to evolving industry standards and changes in market conditions. In addition, given the ability of other parties to access equipment technology in each of our segments, we also face low-cost competitors who may be able to offer similar products at very competitive prices. We may not be able to maintain our current share of the market in our respective business segments as competitive intensity increases and particularly as our customers are targeted by local low-cost competitors in China and other countries. We believe that certain customers have already begun purchasing our competitors' equipment and installing them in their facilities. Our efforts to capitalize on technological developments in the markets in which we operate, such as the HiCz and MonoCast growth technology, may not result in increased market share and require that we make substantial capital investments without any corresponding increase in revenues. In addition, customers may place orders to supply equipment for new facilities or future expansions with our competitors, and we believe the likelihood that our customers and others will go to competitors has increased over time. Our failure to adapt to changing market conditions and to compete successfully with existing or new competitors and/or new technological developments may have a material adverse effect on our financial condition, results of operations, business and/or prospects.

In relation to our polysilicon business, we are not the only provider of polysilicon production equipment to the market based on a Siemens-type CVD reactor design. Although we believe our SDR reactor to be re-designed and distinct from the competing products offered by our competitors, there can be no assurance that our SDR reactor will compete successfully with their products which would have a material adverse effect on our financial condition, results of operations, business and/or prospects. In addition, alternative technologies for producing polysilicon exist and, to the extent that they become more widely available, the demand for our SDR reactor may also be adversely effected. Furthermore, we believe that companies that currently produce polysilicon for their own internal use and consumption compete indirectly with our polysilicon business, as any increase in the supply of polysilicon may have an adverse effect of the demand for our SDR reactor.

We currently depend on a small number of customers in any given fiscal year for a substantial part of our sales and revenue.

In each fiscal year, we depend on a small number of customers for a substantial part of our sales and revenue. For example, in the fiscal year ended March 31, 2012, one customer accounted for 23% of our revenue and in the fiscal year ended April 2, 2011, one customer accounted for 19% of our revenue. In addition, as of March 31, 2012, we had a $1.8 billion order backlog of which $1.0 billion was attributable to three customers. The failure of our major customers to make any payments, the loss of existing orders or lack of new orders in the future, or a change in the product acceptance schedule by such customers could significantly reduce our revenues and have a material adverse effect on our financial condition, results of operations, business and/or prospects. While we have sought to diversify our business and customer base, we anticipate that our dependence on a limited number of customers will continue for the foreseeable future. There is a risk that existing customers will elect not to do business with us in the future, particularly as we face increased competition in each of our business segments, and/or that these customers will experience financial difficulties. Furthermore, due to the cost of our products, our customers are often dependent on the equity capital markets and debt markets to finance their purchases. As a result, these customers could experience financial difficulties and become unable to fulfill their contracts with us. There is also a risk that these customers will attempt to impose new or additional requirements on us that reduce the gross margins that we are able to generate through sales to such customers. If we do not develop relationships with new customers, we may not be able to increase, or even maintain, our revenue, and our financial condition, results of operations, business and/or prospects may be materially adversely affected.

Our success depends on the sale of a limited number of products.

A significant portion of our operating profits has historically been derived from sales of DSS units, SDR reactors, STC converters and ASF units, which sales accounted for 90% of our revenue for the fiscal year ended March 31, 2012. There can be no assurance that sales of this equipment will increase beyond, or be maintained at, past levels or that any sales of sapphire materials or HiCz materials (or any other future product offering, such as our recently commercialized DSS MonoCast technology) will offset any decrease in sales of DSS units, ASF systems or SDR reactors (or result in any revenue). Additionally, we have already experienced decreased demand for some products, sales of our STC converters are substantially lower than in prior periods due to changes in technology, and further changes in technology will also, we expect, result in a further reduction in demand for our DSS multicrystalline furnace. Factors affecting the level of future sales of our products include factors beyond our control, including, but not limited to, demand for solar products and sapphire material (including sapphire-based LED material and sapphire use in general illumination), development and/or use of alternatives to sapphire in LED applications (particularly in general illumination) and competing product offerings by other equipment manufacturers. We may be unable to diversify our product offerings and thereby increase our revenue and/or maintain our profits in the event of a decline in DSS units, ASF systems and SDR reactors sales. If sales of our PV, polysilicon or sapphire products decline for any reason, our financial condition, results of operations, business and/or prospects could be materially adversely affected.

We depend on a limited number of third party suppliers.

We use certain component parts supplied by a small number of third party suppliers in our polysilicon, PV and sapphire equipment products and ancillary equipment, and certain of these components are critical to the manufacture and operation of certain of our products. For example, we use specialist manufacturers to provide vessels and power supplies which are essential to the manufacture and operation of our polysilicon products. In addition, certain of our products consist entirely of parts and components supplied by third party suppliers, and in these instances filling orders depends entirely upon parties over which we exercise little or no control, and if these contractors were unable to supply, or refused to supply, the parts and components, we would be unable to complete orders which would have a negative impact on our reputation and our business.

Our materials businesses, as well as the customers for our ASF units, also depend on suppliers of raw materials and components that are utilized during the manufacturing process. For example, the supply of qualified meltstock and crucibles used to grow sapphire materials is limited and we expect demand will increase as we sell more ASF units, and as a result, there may be an insufficient availability of these items to grow our sapphire materials business as currently planned or available for the purchasers of our crystal growth systems, which would prevent us from growing our sapphire equipment business. Similar shortages may arise for our HiCz materials business if and when we commercialize a HiCz equipment offering.

Further, our agreements with raw material and equipment component suppliers are typically short term in nature, which leaves us vulnerable to the risk that our suppliers may change the terms on which they have previously supplied products to us or cease supplying products to us at any time and for any reason.

There is no guarantee that we will maintain relationships with our existing suppliers or develop new relationships with other suppliers. We are also dependent on our suppliers to maintain the quality of the components and equipment we use and the increased demands placed on these suppliers if we continue to grow may result in quality control problems. We may be unable to identify replacement or additional suppliers or qualify their products in a timely manner and on commercially reasonable terms, or at all. Component parts supplied by new suppliers may also be less suited to our products than the component parts supplied by our existing suppliers. Certain of the component parts used in our products have been developed, made or adapted specifically for us. Such parts are not generally available from other vendors and could be difficult or impossible to obtain elsewhere. As a result, there may be a significant time lag in securing an alternative source of supply. In addition, the inability of our suppliers to support our demand could be indicative of a marketwide scarcity of the materials, which could result in even longer interruptions in our ability to supply our products.

We utilize raw materials in manufacturing our materials and equipment and the prices for these materials fluctuate significantly and any increases in price or decrease in availability will harm our business

In the ordinary course of business, we are exposed to market risk from fluctuations in the price of raw materials and commodities necessary in the manufacture of our products, such as graphite, steel, copper, helium and molybdenum. We experience similar commodity risks in connection with the consumable materials utilized in our products, and in certain cases, there is very limited access to these commodities. The increase in the price of these commodities, due to further limitations of availability or to greater demand, will make our products less attractive and will harm our material and equipment business. If we bring more entrants into these markets, these commodity risks increase. Any significant increase in these prices would increase our expenses, decrease demand for our products and hurt our profitability. In addition, demand for our products will be negatively impacted if the raw materials that are used to create polysilicon, PV materials and sapphire were to increase.

Our failure to obtain sufficient raw materials, commodities, component parts for our equipment and/or third party equipment that meet our requirements in a timely manner and on commercially reasonable terms could interrupt or impair our ability to assemble our products, and may adversely impact our plans to expand and grow our business, as well as result in a loss of market share. Further, such failure may prevent us from delivering our products as required by the terms of our contracts with our customers, and may harm our reputation and result in breach of contract and other claims being brought against us by our customers. Any changes to our current supply arrangements, whether to the terms of supply from existing suppliers or a change in our suppliers, may also increase our costs in a material amount.

The prices for polysilicon and sapphire material, as well as silicon ingots, have, in the past, dropped as a result of either increased supply or decreased demand, and, at the same time, the prices for the inputs to create this output has either remained consistent or increased, which has resulted in decreased margins for polysilicon and sapphire and PV manufacturers, and if these circumstances were to continue or dampen, the demand for our PV, polysilicon and sapphire equipment would be negatively impacted.

The prices for polysilicon, sapphire and PV materials have decreased recently due, in part, to either excess supply or decreasing demand for these materials. Concurrently with these price drops, the costs for the consumable materials that are used in our equipment to make polysilicon, sapphire boules and PV ingots and wafers have either remained steady or, in some cases, increased. These two factors, operating in tandem, result in decreased margins for the manufacturers selling polysilicon, sapphire boules and PV ingots and wafers, and, depending on circumstances, could result in negative margins. If this situation were to persist, we would expect that the demand for our polysilicon reactors, ASF units and DSS furnaces (including our newly commercialized DSS MonoCast 450) would drop and may hamper the adoption of any new technologies we introduce (including our proposed HiCz equipment offering, which is still currently in devlopment). The on-going global economic uncertainty and tightened credit markets may exacerbate these circumstances.

We may face product liability claims and/or claims in relation to third party equipment.

It is possible that our products could result in property damage and/or personal injury, whether by product malfunctions, defects, improper use or installation or other causes. We cannot predict whether or not product liability claims will be brought against us or the effect of any resulting negative publicity on our business, which may include loss of existing customers, failure to attract new customers and a decline in sales. The successful assertion of product liability claims against us could result in potentially significant monetary damages being payable by us, and we may not have adequate resources to satisfy any judgment against us. Furthermore, it may be difficult or impossible to determine whether any damage or injury was due to product malfunction, operator error, failure of the product to be operated and maintained in accordance with our specifications or the failure of the facility in which our products are used to comply with the facility specifications provided to our customers or other factors beyond our control. For example, one of our significant customers experienced chamber leakage involving a number of DSS units in its facilities which we believe was the result of their facility failing to conform to specifications. We nonetheless agreed to replace certain chambers at our cost. Other customers may experience similar issues in the future as a result of product defects, facilities not complying with specifications or other reasons. To date, we have not received any product liability or other claims with respect to these or any other accidents.

In addition, we have provided third party equipment in connection with our product sales. There can be no guarantee that such third party equipment will function in accordance with our intended or specified purpose or that the customer's personnel, in particular those who are inexperienced in the use of the specialized equipment sold by us, will be able to correctly install and operate it, which may result in the return of products and/or claims by the customer against us. In the event of a claim against us due to third party equipment, we may be unable to recover all or any of our loss from the third party equipment provider. The bringing of any product liability claims against us, whether ultimately successful or not, could have a material adverse effect on our financial condition, results of operations, business and/or prospects.

Our future success depends on our management team and on our ability to attract and retain key technical employees and to integrate new employees into our management team successfully.

We are dependent on the services of our management team and our technical personnel.

Although certain members of our management team are subject to agreements with us, any and all of them may choose to terminate their employment with us on thirty or fewer days' notice. The loss of any member of the management team could have a material adverse effect on our financial condition, results of operations, business and/or prospects. There is a risk that we will not be able to retain or replace these or other key employees. Integrating new employees into our management team could prove disruptive to our daily operations, require a disproportionate amount of resources and management attention and ultimately prove unsuccessful. In addition, we are implementing our succession planning measures for our management and key staff or skilled employees. However, if we fail to successfully implement these succession plans for management and key staff when necessary, our operating results would likely be harmed.

We also depend on our technical personnel to grow our business. Recruiting and retaining capable personnel, particularly those with expertise in the polysilicon, PV and the sapphire industry, is vital to our success. There is substantial competition for qualified technical personnel, and qualified personnel are currently, and for the foreseeable future are likely to remain, a limited resource. Locating candidates with the appropriate qualifications can be costly, time-consuming and difficult. There can be no assurance that we will be able to attract new, or retain existing, technical personnel. We may need to provide higher compensation or increased training to our personnel. If we are unable to attract and retain qualified personnel, or are required to change the terms on which our personnel are employed, our financial condition, results of operations, business and/or prospects may be materially adversely affected.

New technologies we deploy may not gain market acceptance which could result in decreased cash resources and harm our results of operations.

We have expended significant financial resources and technical expertise in developing new products and services that we expect will improve our product portfolio and result in increased revenues. These investments, however, may not result in increased revenues and may require that we incur expenses that result in decreasing our cash balances For example, we have already spent approximately $60 million (and may spend up to an additional $20 million in contingent payments and additional significant capital spending) in connection with our acquisition of Confluence Solar, which we ultimately expect will result in a PV equipment offering, or HiCz, that is to be designed to produce high efficiency monocrystalline solar ingots, which is expected to lower PV production costs. In addition, we have invested significant amounts in our internal research and development efforts on our DSS MonoCast growth technology. We intend the DSS MonoCast equipment offering will serve as a bridge to our HiCz equipment offering, and we expect that HiCz equipment, which is still in development, will, over an extended period of time, supersede our MonoCast offerings. Both our MonoCast and HiCz offerings will be targeted at improving the ingot performance compared to that of multicrystalline silicon materials. If we are successful in commercializing these monocrystalline product lines, we expect that it will result in decreased sales of our multicrystalline products, including the DSS 650, which are currently less expensive but do not generate solar cells offering comparable efficiencies. We are also in the process of developing a silicon carbide equipment tool, but that is still in the early stages of development, and we are expending resources in that development effort. If we are not successful in commercializing these newer product lines, we would lose the significant investments we made in our internal development efforts and in the Confluence Solar acquisition.

We also have no experience in manufacturing and selling HiCz equipment and silicon carbide manufacturing equipment, and we may be unable to commercialize these products or ensure they gain wide-spread market acceptance. We also have very limited experience in installing and operating DSS MonoCast equipment, which is critical to recognizing any revenue on the sales of this product. If we are unable to bring any of these products to market and generate substantial sales, we may be unable to recover any or all of the investments we have made in them.

Given the pace of technological advancements in the PV equipment industry, it is possible that monocrystalline production may not gain meaningful market share as other companies develop products that generate solar cells offering even higher efficiency. Alternatively, there are competing monocrystalline production techniques that may result in a more efficient solar wafer and/or equipment that can make comparable quality silicon at equipment prices below what we charge or at which our equipment makes ingots. We face similar challenges and competition with respect to any silicon carbide equipment product we may bring to market. Any of the foregoing would have a significant and negative impact on our business and results of operation.

We may be unable to protect our intellectual property adequately and may face litigation to enforce our intellectual property rights.

Our ability to compete effectively against our competitors in the PV, polysilicon and sapphire markets will depend, in part, on our ability to protect our current and future proprietary technologies, product designs, product uses and manufacturing processes under relevant intellectual property laws including, but not limited, to laws relating to patents and trade secrets.

We own various patents and patent applications in the United States and other countries relating to our products, product uses and manufacturing processes. To the extent that we rely on patent protection, our patents may provide only limited protection for our technology and may not be sufficient to provide competitive advantages to us. For example, competitors could develop similar or more advantageous technologies or design around our patents or otherwise employ alternative products, equipment or processes that may successfully compete with our products and technology. In addition, patents are of limited duration. Any issued patents may also be challenged, invalidated or declared unenforceable. If our patents are challenged, invalidated or declared unenforceable, other companies will be better able to develop products that compete with ours, which could adversely affect our competitive business position, business prospects and financial condition. Further, we may not have, or be able to obtain, effective patent protection in all of our key sales territories. Our patent applications may not result in issued patents and, even if they do result in issued patents, the patents may not include rights of the scope that we seek. The patent position of technology-oriented companies, including ours, is uncertain and involves complex legal and factual considerations. Accordingly, we do not know what degree of protection we will obtain from our proprietary rights or the breadth of the claims allowed in patents issued to us or to others. Further, given the costs of obtaining patent protection, we may choose not to protect certain innovations that later turn out to be important to our business.

Third parties may infringe, misappropriate or otherwise violate our proprietary technologies, product designs, manufacturing processes and our intellectual property rights therein, which could have a material adverse effect on our financial condition, results of operations, business and/or prospects. For example, we have filed a lawsuit in the Hillsborough County Superior Court (Southern District) in New Hampshire against Advanced Renewable Energy Company, LLC ("ARC"), Kedar Gupta, its Chief Executive Officer and Chandra Khattak, an ARC employee, for the misappropriation of trade secrets relating to sapphire crystallization processes and equipment. Because the laws and enforcement mechanisms of various countries that we seek protection in may not allow us to adequately protect our intellectual property rights, the strength of our intellectual property rights will vary from country to country. Litigation to prevent, or seek compensation for such infringement, misappropriation or other violation, such as the ARC lawsuit described above, may be costly and may divert management attention and other resources away from our business without any guarantee of success.

Further, we conduct significant amounts of business in China, yet enforcement of Chinese intellectual property related laws (including trade secrets) has historically been weak, primarily because of ambiguities in Chinese laws and difficulties in enforcement. Accordingly, the intellectual property rights and confidentiality protections available to us in China may not be as effective as in the United States or other countries.

We also rely upon proprietary manufacturing expertise, continuing technological innovation and other know-how or trade secrets to develop and maintain our competitive position. While we generally enter into confidentiality and non-disclosure agreements with our employees and third parties to protect our intellectual property, such confidentiality and non-disclosure agreements could be breached and are limited, in some instances, in duration and may not provide meaningful protection for the trade secrets or proprietary manufacturing expertise that we hold. We have had in the past and may continue to have certain of our employees terminate their employment with us to work for one of our customers or competitors. Adequate or timely remedies may not be available in the event of misappropriation, unauthorized use or disclosure of our manufacturing expertise, technological innovations and trade secrets. In addition, others may obtain knowledge of our manufacturing expertise, technological innovations and trade secrets through independent development or other legal means and, in such cases, we may not be able to assert any trade secret rights against such a party.

We may face claims in relation to the infringement or misappropriation of third-party intellectual property rights.

We may be subject to claims that our products, processes or product uses infringe the intellectual property rights of others. These claims, even if meritless, could be expensive and time consuming to defend. In addition, if we are not successful in our defense of such claims, we could be subject to injunctions and/or damages, or be required to enter into licensing arrangements requiring royalty payments and/or use restrictions. In some instances, licensing arrangements may not be available to us or, if available, may not be available on acceptable terms.

Due to the competitive nature of the industries in which we participate, we may face potential claims by third parties of infringement, misappropriation or other violation of such third parties' intellectual property rights. From time to time we have received and may in the future receive notices or inquiries from other companies suggesting that we may be infringing their patents or misappropriating their intellectual property rights. Such notices or inquiries may, among other things, threaten litigation against us. Furthermore, the issuance of a patent to us does not guarantee that we have the right to practice the patented invention. Third parties may have blocking patents that could be used to prevent us from marketing our own patented product and practicing our own patented technology. In addition, third parties could allege that our products and processes make use of their unpatented proprietary manufacturing expertise and/or trade secrets, whether in breach of confidentiality and non-disclosure agreements or otherwise. If an action for infringement, misappropriation, or other violation of third party rights were successfully brought against us, we may be required to cease our activities on an interim or permanent basis and could be ordered to pay compensation, which could have a material adverse effect on our financial condition, results of operations, business and/or prospects. Additionally, if we are found to have willfully infringed certain intellectual property rights of another party, we may be subject to treble damages and/or be required to pay the other party's attorney's fees. Alternatively, we may need to seek to obtain a license of the third party's intellectual property rights or trade secrets, which may not be available, whether on reasonable terms or at all, and such technology may be licensed to other parties thereby limiting any competitive advantage to us. In addition, any litigation required to defend such claims brought by third parties may be costly and may divert management attention and other resources away from our business, without any guarantee of success. Moreover, we may also not have adequate resources to devote to our business in the event of a successful claim against us.

From time to time, we hire personnel who have obligations to preserve the secrecy of confidential information and/or trade secrets of their former employers. Some former employers monitor compliance with these obligations. While we have policies and procedures in place to guard against the risk of breach by our employees of confidentiality obligations to their former employers, there can be no assurance that a former employer of one or more of our employees will not allege a breach and seek compensation for alleged damages. If such a former employer were to successfully bring such a claim, our know-how and/or skills base could be restricted and our ability to produce certain products and/or to continue certain business activities could be affected, to the detriment of our financial condition, results of operations, business and/or prospects.

The international nature of our business subjects us to a number of risks, including unfavorable political, regulatory, labor and tax conditions in foreign countries.

A substantial majority of our marketing and distribution takes place outside the United States, primarily in China, and substantially all of our sales are to customers outside the United States. We also have contracts with customers in Europe and expect to recognize revenue from sales to customers in Asia and Europe in the future. In addition, we have transitioned our global operations center to Hong Kong, further increasing our exposure to the risks of operating in Asia. As a result, we are subject to the legal, political, social and regulatory requirements and economic conditions of many jurisdictions other than the United States. Risks inherent to maintaining international operations, include, but are not limited to, the following:

- trade disputes between countries in which our customers sell end-products, including their sales of solar wafers, cells and modules, and sapphire materials produced with our furnaces or reactors, which could result in government or trade organization actions that have the effect of increasing the price for our and our customers' products which would have a corresponding decrease in the demand for our products;

- withholding taxes or other taxes on our foreign income, tariffs or other restrictions on foreign trade and investment, including currency exchange controls imposed by or in other countries;
- the inability to obtain, maintain or enforce intellectual property rights in other jurisdictions, at a reasonable cost or at all;
- difficulty with staffing and managing widespread and growing international operations;
- complying with regulatory and legal requirements in the jurisdictions in which we operate and sell products;
- effectively operating and maintaining our internal controls and financial reporting processes across multiple countries;
- trade barriers such as export requirements, tariffs, taxes and other restrictions and expenses, which could increase the prices of our products and make our product offering less competitive in some countries; and
- establishing ourselves and becoming tax resident in foreign jurisdictions.

Our business in foreign markets requires us to respond to rapid changes in market conditions in these countries. Our overall success as a global business depends, in part, on our ability to succeed under differing legal, regulatory, economic, social and political conditions. There can be no assurance that we will be able to develop, implement and maintain policies and strategies that will be effective in each location where we do business. As a result of any of the foregoing factors, our financial condition, results of operations, business and/or prospects could be materially adversely affected.

We are a global corporation with significant operations in Asia, and challenges by various tax authorities to our global operations could, if successful, increase our effective tax rate and adversely affect our earnings.

We are a Delaware corporation that operates through various affiliates and subsidiaries in a number of countries throughout the world, including in Asia. We established our global operations center in Hong Kong and our operations in Asia have grown significantly. Our income taxes are based upon the applicable tax laws, treaties, and regulations in the many countries in which we operate and earn income as well as upon our operating structures in these countries. While we believe that we carefully analyze and account for the tax risks and uncertainties under the applicable rules, multiple tax authorities could contend that a greater portion of our and our affiliates' income should be subject to income or other tax in their respective jurisdictions. If successful, these challenges could result in an increase to our effective tax rate.

We continue to monitor the impact of various international tax proposals and interpretations of the tax laws and treaties in the countries where we operate, including those in the United States, China, Hong Kong, and other countries. If enacted, certain changes in tax laws, treaties, regulations, or their interpretation could result in a higher tax rate on our earnings, which could result in a significant negative impact on our earnings and cash flow from operations.

Compliance with the legal systems of the countries in which we offer and sell our products could increase our cost of doing business.

We offer and sell our products internationally, including in some emerging markets. As a result, we are and/or may become subject to the laws, regulations and legal systems of the various jurisdictions in which we carry on business and/or in which our customers or suppliers are located. Among the laws and regulations applicable to our business are health and safety and environmental regulations, which vary from country to country and from time to time. We must therefore design our products and ensure their manufacture so as to comply with all applicable standards. Compliance with legal and regulatory requirements, including any change in existing legal and regulatory requirements, may cause us to incur costs and may be difficult, impractical or impossible. In addition, China's legal system, where we do a significant amount of business, is rapidly evolving and, as a result, the interpretation and enforcement of many laws (including intellectual property laws), regulations and rules are not always uniform and legal proceedings in China often involve uncertainties and legal protections afforded are uncertain and may be limited. In addition, any litigation brought by or against us in China may be protracted and may result in substantial costs and diversion of resources and management attention and the anticipated outcome would be highly uncertain.

Accordingly, foreign laws and regulations which are applicable to us may have a material adverse effect on our financial condition, results of operations, business and/or prospects.

As a result of the procedural requirements or laws of the foreign jurisdictions in which we carry on business and/or in which our customers or suppliers are located, we may experience difficulty in enforcing supplier or customer agreements or certain provisions thereof, including, for example, the limitations on the product warranty we typically include in our customer contracts. In some jurisdictions, enforcement of our rights may not be commercially practical in light of the duration, cost and unpredictability of such jurisdiction's legal system. Any inability by us to enforce, or any difficulties experienced by us in enforcing, our contractual rights in foreign jurisdictions may have a material adverse effect on our financial condition, results of operations, business and/or prospects.

We are subject to export restrictions and laws affecting trade and investments, and the future sale of our products may be further limited or prohibited in the future by a government agency or authority.

As a global company headquartered in the United States, our products and services are subject to U.S. laws and regulations that may limit and/or restrict the export (and re-export from other countries) of some of our products, services and related product and technical information, as well as laws of those foreign jurisdictions to which we sell or from which we re-export our products. Compliance with these laws and regulations could significantly limit our operations and our sales in the future and failure to comply could result in a range of penalties, including restrictions on exports of all of our products for a specified time period, or forever, and severe monetary penalties. In certain circumstances, these restrictions may affect our ability to interact with our foreign subsidiaries and otherwise limit our trade with third parties (including vendors and customers) operating inside and outside the U.S. In addition, as we introduce new products, we may need to obtain licenses of approvals from the US and other governments to ship them into foreign countries. Failure to receive the appropriate approvals may mean that our development efforts (and expenses related to such development) may not result in any revenue, particularly as most of our customers are located in foreign jurisdictions. This would have a material and adverse impact on our business and our development efforts.

In addition, certain customers of our sapphire materials business operate in the defense sector or are subcontractors of companies in the defense industry, and our products are incorporated in, among other things, missiles, military aircraft and aerospace systems. In addition, Crystal Systems has received funding from the U.S. government in connection with certain research work for certain U.S. government agencies. Certain work performed pursuant to certain of these contracts is not commercially available, but we may make it available commercially in the future. The State Department, the Commerce Department or other government agencies may, however, determine that our sapphire material or other products, including our ASF systems, PV furnaces and/or polysilicon reactors, are important to the military potential of the U.S. If so, we may be subject to more stringent export licensing requirements or prohibited from selling certain of our sapphire materials for certain applications (or end uses), ASF systems, PV furnaces and/or polysilicon reactors to any customer outside the U.S. or to customers in certain jurisdictions. The government has, and will likely continue to, vigorously enforce these laws in light of continuing security concerns. If the export or sale of any of our current or future products outside the U.S. are limited or restricted by the U.S. government or any foreign government, our operations and results of operations would be negatively impacted.

We face particular market, commercial, jurisdictional and legal risks associated with our business in China.

We have had significant sales in China, accounting for 52% of our revenue in the fiscal year ended March 31, 2012, 71% of our revenue in the fiscal year ended April 2, 2011 and 63% of our revenue in the fiscal year ended April 3, 2010. Further, we have significant facilities and operations in China. Accordingly, our financial condition, results of operations, business and/or prospects could be materially adversely affected by economic, political and legal conditions or developments in China.

Examples of economic and political developments that could adversely affect us include government control over capital investments or changes in tax regulations that are applicable to us. In addition, a substantial portion of the productive assets in China remain government owned. The Chinese government also exercises significant control over Chinese economic growth through the allocation of resources, controlling payment of foreign currency denominated obligations, setting monetary policy and providing preferential treatment to particular industries or companies. Efforts by the Chinese government to slow the pace of growth of the Chinese economy, including the recent announcement by the Chinese Premier that China would target a lower growth rate than previous years, could result in decreased capital expenditures by solar and sapphire product manufacturers, which in turn could reduce demand for our products. Additionally, China has historically adopted laws, regulations and policies which impose additional restrictions on the ability of foreign companies to conduct business in China or otherwise place them at a competitive disadvantage in relation to domestic companies. Any adverse change in economic conditions or government policies in China could have a material adverse effect on our overall economic growth and therefore have an adverse effect on our financial condition, results of operations, business or prospects.

We have expanded, and expect that we will continue to expand, our presence in China, including in the areas of customer service, certain manufacturing services, administrative functions, sales and research and development. As we adopt a greater presence in China, we are increasingly exposed to the economic, political and legal conditions and developments in China, which could further exacerbate these risks, including the risk that we may not be able to obtain adequate legal protection in connection with any technological developments resulting from our research and development conducted in China.

We have entered into and may enter into or seek to enter into business combinations and acquisitions that may be difficult to integrate, disrupt our business, expose us to litigation or unknown liabilities, dilute stockholder value and divert management attention.

We may enter into business combinations or purchases. For example, we acquired Confluence Solar in 2011 and Crystal Systems in 2010. Acquisitions and combinations are accompanied by a number of risks, including the difficulty of integrating the operations and personnel of the acquired company, disruption of our ongoing business, distraction of management, expenses related to the acquisition and potential unknown liabilities and claims associated with acquired businesses. We may be subject to (i) liability for activities of the acquired company prior to the acquisition, including environmental and tax and other known and unknown liabilities and (ii) litigation or other claims in connection with the acquired company, including claims brought by terminated employees, customers, former stockholders or other third parties. In addition, there may, in particular, be risks and uncertainties in connection with the intellectual property rights and ownership of technology of an acquired company, including (i) the nature, extent and value of the intellectual property and technology assets of an acquired company, (ii) the rights that an acquired company has to utilize intellectual property and technology that it claims to have developed or to have licensed, and (iii) actions by third parties against the acquired company for intellectual property and technology infringement and the extent of the potential loss relating thereto. Third parties may also be more likely to assert claims against the acquired company, including claims for breach of intellectual property rights, once the company has been acquired by us.

Any inability to integrate completed acquisitions or combinations in an efficient and timely manner or the inability to properly assess and utilize the intellectual property and technology portfolio without infringing the rights of a third party could have an adverse impact on our results of operations. In addition, we may not be able to recognize any expected synergies or benefits in connection with a future acquisition or combination or we may be unable to effectively implement the business plan for the acquired company, which would prevent us from achieving our financial and business goals for the business. If we are not successful in completing acquisitions or combinations that we may pursue in the future, we may incur substantial expenses and devote significant management time and resources without a successful result. In addition, future acquisitions could require use of substantial portions of our available cash or result in the incurrence of debt or dilutive issuances of securities. If we were to incur additional debt in the future in connection with an acquisition, or otherwise, it may contain covenants restricting our future activities, may incur significant interest rates or penalties for breach and we may be unable to generate sufficient cash to pay the principal or interest. Also, any issuance of equity securities may be dilutive.

Acquisitions and combinations also frequently require the acquiring company to recognize significant amounts of intangible assets, such as goodwill, patents and trademarks and customer lists, in an acquisition, which amounts may be subject to a future impairment if we are unable to successfully implement the operating strategy for the acquired company.

Our ability to supply a sufficient number of products to meet demand could be severely hampered by natural disasters or other catastrophes.

Currently, a portion of our operations are located in Asia and we have increased our presence in Asia by opening our global operations center in Hong Kong. Additionally, a significant portion of our revenue is generated from customers that install our equipment in Asia and many of our suppliers are also located in Asia. These areas are subject to natural disasters such as earthquakes and floods. A significant catastrophic event such as earthquakes. floods, war, acts of terrorism or global threats, including, but not limited to, the outbreak of epidemic disease, could disrupt our operations and impair distribution of our products, damage inventory, interrupt critical functions, cause our suppliers to be unable to meet our demand for parts and equipment, reduce demand for our products, prevent our customers from honoring their contractual obligations to us or otherwise affect our business negatively. To the extent that such disruptions or uncertainties result in delays or our inability to fill orders, causes cancellations of customer orders, or the manufacture or shipment of our products, our business, operating results and financial condition could be materially and adversely affected.

We may be subject to concentration of credit risk related to our cash equivalents and short-term investments.

We may be exposed to losses in the event of nonperformance by the financial counterparties to our cash equivalent investments and short term investments. This risk may be heightened as a result of the financial crisis and volatility in the markets. We attempt to manage the concentration risk by making investments that comply with our investment policy. Currently, our cash equivalents are invested in cash deposit accounts at our financial institutions. Although we do not currently believe the principal amounts of these investments are subject to any material risk of loss, the recent volatility in the financial markets is likely to significantly impact the investment income we receive from these investments. In general, increases of credit risk related to our cash equivalents and short-term investments could have a material adverse effect on our financial condition, results of operations, business and/or prospects.

Our credit facilities contain covenants that impose significant restrictions on us.

On January 31, 2012, we entered into a credit agreement, or Credit Agreement, with Bank of America, N.A. and certain other lenders. The Credit Agreement contains covenants and conditions that restrict our ability to incur certain additional debt, pay dividends and make distributions, enter into specified transactions with affiliates, acquire businesses, among others, and resulted in liens being placed on certain of our properties and assets. The terms of the Credit Agreement also impose financial covenants on us and our subsidiaries relating to our leverage ratio and interest coverage ratio.

The foregoing restrictions may limit our ability to operate our business and our failure to comply with any of these covenants could result in the acceleration of our outstanding indebtedness under the Credit Agreement. If such acceleration occurs, we would be required to repay our indebtedness, and we may not have the ability to do so or we may not be able to refinance our indebtedness, which would prevent us from investing in our business in an effort to grow our operations. Even if new financing is made available to us, it may not be available on acceptable or reasonable terms. An acceleration of our indebtedness could impair our ability to operate as a going concern.

We may face significant warranty claims.

All of our equipment and materials are sold with certain warranties. The warranty is typically provided on a repair or replace basis, and is not limited to products or parts manufactured by us.

As a result, we bear the risk of warranty claims on all products we supply, including equipment and component parts manufactured by third parties. There can be no assurance that we will be successful in claiming under any warranty or indemnity provided to us by our suppliers in the event of a successful warranty claim against us by a customer or that any recovery from such supplier would be adequate. There is a risk that warranty claims made against us will exceed our warranty reserve and could have a material adverse effect on our financial condition, results of operations, business and/or prospects.

Exchange rate fluctuations may make our products less attractive to non-U.S. customers and otherwise have a negative impact on our operating results.

Our reporting currency is the U.S. dollar and almost all of our contracts are denominated in U.S. dollars. However, greater than 98% of our revenue was generated from sales to customers located outside the United States in each of the fiscal years ended March 31, 2012 April 2, 2011 and April 3, 2010, and we expect that a large percentage of our future revenue will continue to be derived from sales to customers located outside the United States. Changes in exchange rates between foreign currencies and the U.S. dollar could make our products less attractive to non-U.S. customers and therefore decrease our sales and gross margins. In addition, we incur costs in the local currency of the countries outside the United States in which we operate and as a result are subject to currency translation risk. Exchange rates between a number of foreign currencies and the U.S. dollar have fluctuated significantly over the last few years and future exchange rate fluctuations may occur. Our largest foreign currency exposure is the euro. In an attempt to mitigate foreign currency fluctuations, we have entered into, from time to time, forward foreign exchange contracts to hedge portions of equipment purchases from vendors located primarily in Europe. Our hedging activities may not be successful in reducing our exposure to foreign exchange rate fluctuations, for example, in the quarter ended December 31, 2011 we were required to take a charge of $1.4 million as a result of certain forward foreign exchange contracts no longer qualifying as cash flow hedges, which may occur again if we delay, cancel or otherwise modify the terms of the equipment purchases that affect the forecasted cash flow transaction being hedged. Future exchange rate fluctuations may have a material adverse effect on our financial condition, results of operations, business and/or prospects.

We have been subject to securities class action lawsuits. Potential similar or related litigation could result in substantial damages and may divert management's time and attention from our business.

In 2008, the Company, its directors and certain affiliates were defendants in a class action suits that alleged certain violations under various sections of the Securities Act of 1933, in connection with our initial public offering.

In March 2011, these class actions were settled and we were required to pay $10.5 million into a settlement fund. Of this amount, we contributed $1.0 million and our liability insurers contributed the remaining $9.5 million. Our contribution represented its contractual indemnification obligation to its underwriters.

As a publicly traded company, we may be subject to additional lawsuits relating to violations of the securities laws. Any such litigation would be expensive, time consuming to defend and, if we were unsuccessful in defending such claims, could result in the payments of significant sums. We do maintain insurance, but the coverage may not be sufficient and may not be available in all instances.

If we fail to maintain an effective system of internal controls, we may not be able to accurately report our financial results or prevent fraud. As a result, our stockholders could lose confidence in our financial reporting, which could harm our business and the trading price of our common stock.

We have complied with Section 404 of the Sarbanes-Oxley Act of 2002 by assessing, strengthening and testing our system of internal controls. Even though we concluded our system of internal controls was reasonably effective as of March 31, 2012, we need to continue to maintain our processes and systems and adapt them to changes as our business evolves and we acquire new business and technologies. This continuous process of maintaining and adapting our internal controls and complying with Section 404 is expensive and time-consuming, and requires significant management attention. We cannot be certain that our internal control measures will continue to provide adequate control over our financial processes and reporting and ensure compliance with Section 404. Furthermore, as our business changes and if we expand through acquisitions of other companies, our internal controls may become more complex and we will require significantly more resources to ensure our internal controls remain effective. Failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm our operating results or cause us to fail to meet our reporting obligations. If we or our independent registered public accounting firm identify material weaknesses, the disclosure of that fact, even if quickly remediated, could reduce the market's confidence in our financial statements and harm our stock price.

Interpretations of existing accounting standards or the application of new standards could affect our revenue recognition and other accounting policies, which could have an adverse effect on the way we report our operating results.

Generally accepted accounting principles in the United States are subject to interpretations by the Financial Accounting Standards Board ("FASB"), the American Institute of Certified Public Accountants, the SEC and various other organizations formed to promulgate and interpret accounting principles. A change in these accounting principles or their interpretations could affect the reporting of transactions that were completed before the announcement of a change in principles or interpretations.

In October 2009, the FASB issued authoritative guidance that provides amendments to the revenue recognition criteria for separating consideration in multiple-deliverable revenue arrangements.

This guidance prescribes a methodology for determining the fair value, or best estimated selling price, of deliverables on an individual element basis, including elements for which objective reliable evidence of fair value previously did not exist.

As noted in Note 2 to our financial statements included herein, under the current revenue guidance, for arrangements containing products considered to be "established", the majority of our revenue is recognized upon delivery of the product. For arrangements containing products considered to be "new", or containing customer acceptance provisions that are deemed more than perfunctory, revenue is recorded upon customer acceptance.

If we make incorrect estimates or judgments in applying our revenue recognition policies, for example, if we incorrectly classify a product as "established" when it should have been "new", it may impact the timing of recognizing that revenue and may further result in failing to meet guidance provided by us or require that we restate our prior financial statements. Additional errors in applying estimates or judgments in accounting policies may also adversely impact our operating results and may, in certain cases, require us to restate prior financial statements.

If we are unable to adopt and implement adequate data security procedures, we could lose valuable proprietary information, third parties may be able to access information about the operations of our equipment at customer sites and employee data, any of the foregoing may harm our reputation and our results of operations.

While we have implemented data security measures, a third party may still gain unauthorized access to our servers, laptops or mobile devices. We store our important proprietary information on our servers, including equipment specifications, and our employees may access this data remotely. This information is also shared via e-mail and we rely on industry standard encryption tools for transmitting data (which has been attacked in the past). If a competitor were able to access this information, we would lose the competitive advantages we believe we have and we could also lose the benefits that are or could be realized from our research and development efforts. Access to this information may be the result of a third-party by-passing our security measures, third party encryption tools not providing adequate protection or inadvertent error by an employee that results in this information being accessed by unauthorized users. Some of our servers containing our proprietary and confidential product and customer information are located in foreign jurisdictions, such as China and Hong Kong, and the governments in these jurisdictions may be able to access, review, retain and use this information without any legal recourse on our part or the right to compensation.

In a very limited number of cases, we are able to monitor the operations of our equipment in our customers' facilities. If a third party were able to access this information, they would be able to view important data about the operations of our equipment and use this customer information to their benefit. In addition, it is very likely that our reputation would be harmed among our customers and they could prevent our remote access in the future or even cease purchasing equipment from us.

Finally, we also store financial reporting information and employee data on our computer systems. If our financial information were tampered with, investors and could lose confidence in our reported financial results. If our employee information were accessed, our employees may lose confidence in our operations, we may confront challenges attracting new employees and may face government penalties if we were found to have taken inadequate measures to protect employee information.

We could be adversely affected by violations of applicable anti-corruption laws or violations of our internal policies designed to ensure ethical business practices.

We operate in a number of countries throughout the world, including in countries that do not have as strong a commitment to anti-corruption and ethical behavior that is required by U.S. laws or by corporate policies. We are subject to the risk that we, our U.S. employees or our employees located in other jurisdictions or any third parties that we engage to do work on our behalf in foreign countries may take action determined to be in violation of anti-corruption laws in any jurisdiction in which we conduct business, including the U.S. Foreign Corrupt Practices Act of 1977 (or the FCPA). In addition, we operate in certain countries in which the government may take an ownership stake in an enterprise and such government ownership may not be readily apparent (thereby increasing potential FCPA violations as we conduct business with that entity). Any violation of the FCPA or any similar anti-corruption law could result in substantial fines, sanctions, civil and/or criminal penalties and curtailment of operations in certain jurisdictions and might adversely affect our business, results of operations or financial condition. In addition, we have internal ethics policies that we require our employees to comply with in order to ensure that our business is conducted in a manner that our management deems appropriate. If these anti-corruption laws or internal policies were to be violated, our reputation and operations could also be substantially harmed. Further, detecting, investigating, and resolving actual or alleged violations is expensive and can consume significant time and attention of our senior management.

Risks Relating to Our Polysilicon Business

The market for polysilicon has been cyclical, resulting in periods of insufficient or excess production capacity and could result in variation in demand for our products.

The market for polysilicon has been cyclical. In the recent past, polysilicon supply had increased due principally to expansion by existing manufacturers. This factor, among others, resulted in declining prices in polysilicon. An excess in production capacity for polysilicon has, and in the future may, adversely affect demand for our SDR reactors. There can be no certainty that the increased demand during the periods of expansion in polysilicon manufacturing capacity will persist for an extended period of time, or at all. A lack of demand for our SDR reactors could have a material adverse effect on our financial condition, results of operations, business and/or prospects. Conversely, if there are shortages of polysilicon in the future, the PV industry may be unable to continue to grow and/or may decline, and, as a result, demand for our PV products may decrease or may be eliminated.

We license and do not own certain components of the technology underlying our SDR reactor and STC converter products.

Certain components of the technology underlying our SDR reactor and STC converter products is not owned by us, but is licensed under a ninety-nine year license agreement that could be terminated in the event of a material breach by us of such agreement that remains uncured for more than thirty days, or upon our bankruptcy or insolvency. To the extent such components are deemed to be incorporated into our current or future products, any termination of our rights to use such technology could have a material adverse effect on our ability to offer our polysilicon products and therefore on our financial condition, results of operations, business and/or prospects if our company was unable to secure these rights in a different manner or from an alternative arrangement.

Risks Relating to Our Photovoltaic Business

Government subsidies and economic incentives for on-grid solar electricity applications could be reduced or eliminated.

Demand for PV equipment, including on-grid applications, has historically been dependent in part on the availability and size of government subsidies and economic incentives. Currently, the cost of solar electricity exceeds the retail price of electricity in most major markets in the world. As a result, federal, state and local governmental bodies in many countries, most notably Germany, Italy, Spain, South Korea, Japan, China and the United States, have provided subsidies in the form of feed-in tariffs, rebates, tax write-offs and other incentives to end-users, distributors, systems integrators and/or manufacturers of PV products to promote the use of solar energy in on-grid applications and to reduce dependency on other forms of energy. Many of these government incentives have expired or are due to expire in time, phase out over time, cease upon exhaustion of the allocated funding and/or are subject to cancellation or non-renewal by the applicable authority. The reduction, expiration or elimination of relevant government subsidies or other economic incentives may result in the diminished competitiveness of solar energy relative to conventional and other renewable sources of energy, and adversely affect demand for PV equipment or result in increased price competition, all of which could cause our sales and revenue to decline and have a material adverse effect on our financial condition, results of operations, business and/or prospects.

Further, any government subsidies and economic incentives could be reduced or eliminated altogether at any time and for any reason. We believe that government subsidies and incentives will be eliminated in the near future. Also, relevant statutes or regulations may be found to be anti-competitive, unconstitutional or may be amended or discontinued for other reasons. Some government subsidies and incentives have been subject to challenge in courts in certain foreign jurisdictions. New proceedings challenging minimum price regulations or other government incentives in other countries in which we conduct our business or in which our customers conduct business, may be initiated, and if successful, could cause a decrease in demand for our products.

Existing regulations and policies and changes to these regulations and policies may present technical, regulatory and economic barriers to the purchase and use of photovoltaic products.

The market for electricity generation products is heavily influenced by government regulations and policies concerning the electric utility industry, as well as policies promulgated by electric utilities. These regulations and policies often relate to electricity pricing and technical interconnection of user-owned electricity generation. In the United States and in a number of other countries, these regulations and policies are currently being modified and may be modified again in the future. These regulations and policies could deter end-user purchases of PV products and investment in the research and development of PV technology. For example, without a mandated regulatory exception for PV systems, utility customers are often charged interconnection or standby fees for putting distributed power generation on the electric utility grid. These fees could increase the cost to end-users of PV systems and make such systems less attractive to potential customers, which may have a material adverse effect on demand for our products and our financial condition, results of operations, business and/or prospects.

The photovoltaic industry may not be able to compete successfully with conventional power generation or other sources of renewable energy.

Although the PV industry has experienced advances in recent years, it still comprises a relatively small component of the total power generation market and competes with other sources of renewable energy, as well as conventional power generation. Many factors may affect the viability of widespread adoption of PV technology and thus demand for solar wafer manufacturing equipment, including the following:

- cost-effectiveness of solar energy compared to conventional power generation and other renewable energy sources;
- performance and reliability of solar modules compared to conventional power generation and other renewable energy sources and products;
- availability and size of government subsidies and incentives to support the development of the solar energy industry;
- success of other renewable energy generation technologies such as hydroelectric, wind, geothermal and biomass; and
- fluctuations in economic and market conditions that affect the viability of conventional power generation and other renewable energy sources, such as increases or decreases in the prices of oil, natural gas and other fossil fuels.

As a result of any of the foregoing factors, our financial condition, results of operations, business and/or prospects could be materially adversely affected.

Risks Relating to Our Sapphire Business

If our sapphire equipment and material do not achieve market acceptance, prospects for our sapphire business would be limited.

The customers to whom we sell the ASF systems are, we believe, largely manufacturing for the LED industry and, in more limited cases, other industrial markets. Potential customers for sapphire equipment and sapphire-based LED materials manufactured with the ASF system may be reluctant to adopt these offerings as an alternative to existing sapphire materials and lighting technology or sapphire manufacturing processes. In addition, many of the customers who purchase our equipment, we believe, will utilize the material for LED lighting. However, LED lighting is currently more expensive than traditional lighting and if the price does not decrease in the near future, our customers may not have a market for the material they produce with our ASF systems, which would reduce the demand for our ASF systems.

In addition, potential customers may have substantial investments and know-how related to their existing sapphire, LED and lighting technologies, and may perceive risks relating to the complexity, reliability, quality, usefulness and cost-effectiveness of our sapphire equipment and sapphire material products compared to alternative products and technologies available in the market or that are currently under development. For example, companies are developing general lighting technologies that utilize silicon-based material (in lieu of sapphire) and assert that the production costs are significantly lower than the costs to produce sapphire-based lighting materials. If acceptance of sapphire material and sapphire-based LEDs, particularly in general illumination, do not increase significantly, opportunities to increase the sapphire equipment portion of our business and revenues would be limited.

In addition, the price of sapphire-based LED material has recently experienced a marked drop due, in part, to the readily available supply of such material. If the price of LED material, which is driven, in large part due to the supply that is generally available, drops, we would expect that our materials and equipment business would be negatively impacted.

Any of the foregoing factors could have an adverse impact on the growth of the sapphire portion of our business and the recoverability of our investment in Crystal Systems. Historically, the sapphire industry has experienced volatility in product demand and pricing. Changes in average selling prices of sapphire material as a result of competitive pricing pressures, availability of material, increased sales discounts and new product introductions by competitors could have an adverse impact on our results of operations.

Crystal growth using the ASF system requires a consistent supply of power and any interruption in the supply of power may result in sapphire material that has reduced or no sales value.

The process for growing sapphire boules using the ASF system technology requires that the system be supplied with a consistent supply of power during the cycle required to grow a boule. If there are certain types of power interruptions, which we have experienced at our Salem and Merrimack facilities, even for a brief period of time, the sapphire boule being generated by that system will be of inferior quality and we would likely be unable to sell that sapphire material to a customer. Such power interruptions at our facilities also delay and impair our research and development efforts with respect to sapphire material and ASF systems. In addition, if customers of our ASF system do not have consistent power supplies, our system would not gain market acceptance because it will not create boules of the quality that may be expected by our customers and we would likely not meet the required contractual acceptance criteria necessary to receive the final installment payment and, in many cases, we would not be able to recognize any revenue on that ASF system if such acceptance criteria is not met.

Production and sale of sapphire growth systems for producing LED materials is a new industry and we have limited operating history, which makes it difficult to evaluate the business prospects for this business segment.

Because of our limited operating history in the sapphire industry it is difficult to evaluate our business and prospects. While we have gained acceptances on our ASF systems from our early customers, our sapphire equipment business, however, presents the difficulties frequently encountered by those that are in the early stage of development, coupled with the risks and uncertainties encountered in new and evolving markets such as the market for sapphire growth technology. We may not be able to successfully address these challenges. If we fail to do so, we may incur losses and our business would be negatively impacted.

While we have shipped and commissioned ASF systems at several customer sites, our customers lack experience in operating the ASF systems. Our sapphire furnaces require a skilled and trained employee base to properly operate and efficiently maintain the systems. While we offer training in connection with the sale of ASF systems, at certain customer sites, we have discovered that those applicable customers have not yet hired the personnel or instituted the operations procedures necessary to properly run the ASF system they purchased. As a result of these factors, we believe that certain ASF systems have generated sapphire material that is not salable. Additionally, even in those cases where the sapphire boule was to specification, the boule has not always been properly oriented by the customer and some or all of the value of the sapphire boule was lost as it was sliced and cored. If our customers do not have the manufacturing expertise to operate the ASF systems, they may be delayed in ramping up their operations and sapphire manufacturing operations, we may not recognize revenue from the sale of these systems (or such recognition may be delayed) and the ASF systems may not gain wider market acceptance, all of which would harm our reputation and the results of our sapphire business segment.

Risks Relating to Our Common Stock

Future sales of our common stock, or the perception in the public markets that these sales may occur, could depress our stock price.

Future sales of substantial amounts of our common stock in the public market or the perception that these sales could occur, could adversely affect the price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. In addition, future equity financings could also result in dilution to our stockholders and new securities could have rights, preferences and privileges that are senior to those of our common shares.

Our certificate of incorporation currently authorizes us to issue up to 500 million shares of common stock, and as of March 31, 2012, we had approximately 118 million shares of common stock outstanding. All of these shares are freely tradable, in the public market under a registration statement or an exemption under the securities laws. Moreover, as of March 31, 2012, 7.6 million shares of our common stock were issuable upon the exercise of outstanding vested and unvested options and upon vesting of outstanding restricted stock units.

Our certificate of incorporation and by-laws contain provisions that could discourage another company from acquiring us and may prevent attempts by our stockholders to replace or remove our current management.

Some provisions of our certificate of incorporation and by-laws may have the effect of delaying, discouraging or preventing a merger or acquisition that our stockholders may consider favorable, including transactions in which stockholders may receive a premium for their shares. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace or remove our board of directors. These provisions include:

- the removal of directors only by the affirmative vote of the holders of two-thirds of the shares of our capital stock entitled to vote;
- any vacancy on our board of directors, however occurring, including a vacancy resulting from an enlargement of the board, may only be filled by vote of the directors then in office;
- inability of stockholders to call special meetings of stockholders or take action by written consent;
- advance notice requirements for board nominations and proposing matters to be acted on by stockholders at stockholder meetings; and
- authorization of the issuance of "blank check" preferred stock without the need for action by stockholders.

We are a technology-oriented company and, as such, we expect that the price of our common stock may fluctuate substantially.

We operate in an industry where there are rapid changes in technologies and product offerings. Broad market, industry and economic factors may adversely affect the market price of our common stock, regardless of our actual operating performance. Factors that could cause fluctuations in our stock price may include, among other things:

- actual or anticipated variations in quarterly operating results;
- changes in market prices for our products or for our raw materials;
- changes in our financial guidance or estimates made by us or by any securities analysts who may cover our stock or our failure to meet the estimates made by securities analysts;
- changes in the market valuations of other companies operating in our industry;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, divestitures or significant contracts;
- changes in governmental policies with respect to energy;

- additions or departures of key personnel; and
- sales of our common stock, including sales of our common stock by our directors and officers or by our larger stockholders.

Announcements of contract awards or bankruptcies of solar-related companies could have a significant impact on our stock price.

It is common for equipment manufacturers in the business segments in which we operate to enter into contracts for the sale and delivery of substantial amounts of equipment, involving highly competitive bidding situations. Public announcements of contract awards often cause a reaction in the stock market and affect, sometimes significantly, the trading price of the stock of the manufacturer that received a contract award. It could also have a negative effect on the trading price of stock of competitors that did not receive such contract. This reaction may be unrelated to the historical results of operations or financial condition of the affected companies or, in the case of unsuccessful competitors, any guidance they may have provided with respect to their future financial results. An announcement that a competitor of ours was awarded a significant customer contract could have a material adverse effect on the trading price of our stock.

In addition, there have been several recent announcements that companies offering solar power related services and materials have filed or will file for bankruptcy. For example, Solyndra filed for bankruptcy in August 2011. Such announcements, and future similar announcements, will likely have a negative effect on the trading price of our stock. This will likely be the case even if such companies do not utilize the output for the equipment we sell.

Our quarterly operating results have fluctuated significantly in the past and we expect that our quarterly results will continue to fluctuate significantly in the future.

Our quarterly operating results have fluctuated significantly in the past and we expect that our quarterly results will continue to fluctuate significantly in the future. Future quarterly fluctuations may result from a number of factors, including:

- the size of new contracts and when we are able to recognize the related revenue, especially with respect to our polysilicon products;
- requests for delays in deliveries by our customers;
- delays in customer acceptances of our products;
- delays in deliveries from our vendors;
- our rate of progress in the fulfillment of our obligations under our contracts;
- the degree of market acceptance of our products and service offerings;
- the mix of products and services sold;
- budgeting cycles of our customers;
- product lifecycles;
- changes in demand for our products and services;
- the level and timing of expenses for product development and sales, general and administrative expenses;
- competition by existing and emerging competitors, including in the PV, polysilicon and sapphire industry;

- announcements by our competitors or customers of the awarding of a significant contract;
- termination of contracts in our backlog;
- our success in developing and selling new products and services, controlling costs, attracting and retaining qualified personnel and expanding our sales force;
- changes in government subsidies and economic incentives for on-grid solar electricity applications;
- announcements regarding litigation or claims against us;
- changes in export licensing or export restrictions with respect to our products;
- changes in our strategy;
- negative announcements regarding solar and sapphire industry participants, such as the bankruptcies of Evergreen Solar and Solyndra, as well as government investigations of Solyndra operations;
- foreign exchange fluctuations; and
- general economic conditions.

Based on these factors, we believe our future operating results will vary significantly from quarter-to-quarter and year-to-year. As a result, quarter-to-quarter and year-to-year comparisons of operating results are not necessarily meaningful nor do they indicate what our future performance willbe.

Hedging activity and sales of our common stock related to the Mandatorily Exchangeable Notes issued by UBS AG and/or the expectation of distribution of our common stock at maturity of the exchangeable notes could depress our stock price.

During September 2010, UBS AG sold its Mandatorily Exchangeable Notes due 2013, or the exchangeable notes, pursuant to which UBS AG will deliver to holders of the exchangeable notes at maturity up to 17.5 million shares of our common stock or the value of such shares in cash, or a combination of cash and shares, based on a formula linked to the price of our common stock. In connection with the issuance by UBS AG of its exchangeable notes, GT Solar Holdings, LLC (a former significant shareholder) sold an aggregate of 14.0 million shares of our common stock to UBS Securities LLC, an affiliate of UBS AG. We understand that UBS AG and one or more of its affiliates have entered into and/or are expected to enter into hedging arrangements related to UBS AG's obligations under the exchangeable notes. This hedging activity will likely involve trading in our common stock or in other instruments, such as options or swaps, based upon our common stock, and may include sales of common stock acquired by an affiliate of UBS AG upon early exchange of exchangeable notes. This hedging activity could affect our stock price, including by depressing it. Also, the price of our common stock could be depressed by possible sales of our common stock by investors who view the exchangeable notes as a more attractive means of equity participation in us and by hedging or arbitrage trading activity that we expect to occur involving our common stock by investors in the exchangeable notes. Our stock price could become more volatile and could be depressed by investors' anticipation of the potential distribution into the market of substantial additional amounts of our common stock at the maturity of the exchangeable notes.

We currently do not intend to pay dividends on our common stock and as a result, the only opportunity to achieve a return on an investment in our common stock is if the price appreciates.

We currently do not expect to declare or pay dividends on our common stock in the foreseeable future. In addition, our credit agreement with Bank of America, N.A., which we entered into in

January 2012, restricts our right to declare or make any dividends, subject to certain exceptions. As a result, the only opportunity to achieve a return on an investment in our common stock will be if the market price of our common stock appreciates and the shares are sold at a profit. We cannot assure our investors that the market price for our common stock will ever exceed the price that was paid.

Our actual operating results may differ significantly from our guidance.

From time to time, we release guidance in our quarterly earnings releases, quarterly earnings conference call or otherwise, regarding our future performance that represent our management's estimates as of the date of release. This guidance, which includes forward-looking statements, is based on projections prepared by our management. These projections are not prepared with a view toward compliance with published guidelines of the American Institute of Certified Public Accountants, and neither our registered public accountants nor any other independent expert or outside party compiles or examines the projections and, accordingly, no such person expresses any opinion or any other form of assurance with respect thereto.

Projections are based upon a number of assumptions and estimates that, while presented with numerical specificity, are inherently subject to significant business, economic and competitive uncertainties and contingencies, many of which are beyond our control and are based upon specific assumptions with respect to future business decisions, some of which will change. We generally state possible outcomes as high and low ranges which are intended to provide a sensitivity analysis as variables are changed but are not intended to represent that actual results could not fall outside of the suggested ranges. The principal reason that we release guidance is to provide a basis for our management to discuss our business outlook with analysts and investors. We do not accept any responsibility for any projections or reports published by any such persons. Guidance is necessarily speculative in nature, and it can be expected that some or all of the assumptions of the guidance furnished by us will not materialize or will vary significantly from actual results. Accordingly, our guidance is only an estimate of what management believes is realizable as of the date of release. Actual results will vary from our guidance and the variations may be material. In light of the foregoing, investors are urged not to rely upon, or otherwise consider, our guidance in making an investment decision in respect of our common stock.

Any failure to successfully implement our operating strategy or the occurrence of any of the events or circumstances set forth in our "Risk Factors" in this Annual Report on Form 10-K could result in the actual operating results being different from our guidance, and such differences may be adverse and material.

Item 1B. ***Unresolved Staff Comments***

None.

Item 2. ***Properties***

We lease our corporate headquarters, which is located in Nashua, New Hampshire. The Nashua headquarters is approximately 24,000 square feet and is utilized for certain general corporate, finance and administrative functions that support all of our business segments. We own our facility located in Merrimack, New Hampshire. This facility has approximately 106,000 square feet, and includes an advanced manufacturing center, as well as administrative, product development, sales, marketing and customer service facilities. Our manufacturing facility in Merrimack, New Hampshire is equipped with advanced CAD software, computers and plotters for mechanical and electrical designs. We also own several additional acres of undeveloped land adjacent to our Merrimack facility, which could be used to accommodate future growth, if necessary. Our Merrimack, New Hampshire facility and the land on

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which it is located are subject to a lien pursuant to the Credit Agreement we entered into in January 2012 with Bank of America N.A. (and certain other lenders).

In order to better serve our customers in Asia, we have a global operations center located in Hong Kong.

In total, we conduct our operations through (i) one facility we own in Merrimack, New Hampshire and (ii) fourteen leased facilities. Certain information regarding our leased facilities is set forth below:

Location	Approximate Size	Expiration Date	Principal Function	Business Segment Utilizing Facility
Missoula, Montana	14,744 sq. ft.	January 2013	Office facility	Polysilicon
Missoula, Montana	11,937 sq. ft.	December 2012	Warehousing, testing, research and development	Polysilicon
Merrimack, New Hampshire	1,300 sq. ft.	May 2012	Office facilities	PV/Sapphire/General Corporate
Merrimack, New Hampshire	50,360 sq. ft.	July 2012	Warehousing	PV/Sapphire
Nashua, New Hampshire	24,080 sq. ft.	December 2013	Office facility	General Corporate
Salem, Massachusetts	122,615 sq. ft.	July 2023	Pilot production operations, office facilities and warehousing	Sapphire
Hazelwood, Missouri	68,420 sq. ft.	July 2020	Office facility, pilot production operations, warehouse	Polysilcon (HiCz)
Shanghai, China	50,000 sq. ft.	September 2013	Light manufacturing, warehouse, offices	Polysilicon/PV/Sapphire/General Corporate
Shanghai, China	11,613 sq. ft.	February 2014	Office facility	General Corporate
Shanghai, China	388 sq. ft.	August 2012	Office facility	Polysilicon/PV/Sapphire/General Corporate
Beijing, China	1,740 sq. ft.	September 2012	Office facility	PV/Sapphire
Chupei City, Taiwan	2,776 sq. ft.	July 2012	Office facility	Polysilicon/PV/Sapphire/General Corporate
Chupei City, Taiwan	3,188 sq. ft.	October 2014	Office facility, warehouse	Polysilicon/PV/Sapphire
Hong Kong	17,751 sq. ft.	January 2015	Office facility	Polysilicon/PV/Sapphire/General Corporate

Item 3. *Legal Proceedings*

We are not subject to any material pending legal proceedings. We are, however, subject to various routine legal proceedings and claims incidental to our business which we believe will not have a material adverse impact on our financial position, results of operations and cash flows.

Item 4. *Mine Safety Disclosure*

Not applicable.

PART II

Item 5. ***Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities***

Price Range of Common Stock

Our common stock was listed on The NASDAQ Global Select Market under the symbol "SOLR" beginning July 24, 2008. Prior to this time, there was no public market for our common stock. In August 2011, we changed our name to GT Advanced Technologies Inc. In connection with this name change, we also changed our ticker symbol to "GTAT." The following table sets forth the range of high and low sales prices per share as reported on The NASDAQ Global Select Market for the periods indicated.

	High	Low
Fiscal 2012		
Fourth Quarter	$ 9.89	$ 7.30
Third Quarter	$ 9.21	$ 6.40
Second Quarter	$ 17.50	$ 6.80
First Quarter	$ 16.40	$ 9.07
Fiscal 2011		
Fourth Quarter	$ 11.95	$ 9.18
Third Quarter	$ 9.57	$ 6.65
Second Quarter	$ 8.48	$ 5.55
First Quarter	$ 6.18	$ 4.90

The closing sales price of our common stock on The NASDAQ Global Select Market was $4.30 per share on May 18, 2012. As of May 18, 2012 there were approximately 26 record holders of our common stock. Because many of our shares are held of record by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of stockholders represented by these record holders.

Dividend Policy

On June 30, 2008, we declared a cash dividend of $90.0 million to our stockholders of record as of June 30, 2008. That dividend was paid on August 1, 2008. We do not intend to pay any other dividends on our common stock for the foreseeable future. The Credit Agreement that we entered into with Bank of America N.A (and certain other lenders) on January 31, 2012 imposes restrictions on our ability, and the ability of our subsidiaries, to pay cash dividends, subject to certain limited exceptions.

Stock Price Performance Graph

The following graph compares the cumulative return attained by shareholders on our common stock since July 24, 2008 relative to the cumulative total returns of the NASDAQ Composite Index and the Ardour Solar Energy Index. An investment of $100 (with reinvestment of all dividends) is assumed to have been made in our common stock and in each index on July 24, 2008 and its relative performance is tracked through March 31, 2012. No cash dividends have been declared on shares of our common stock since July 24, 2008, the date our shares commenced trading. This performance graph is not "soliciting material," is not deemed filed with the SEC and is not to be incorporated by reference in any filing by us under the Securities Act of 1933, as amended (the "Securities Act"), or the Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing. The stock price performance shown on the graph represents past performance and should not be considered an indication of future price performance.

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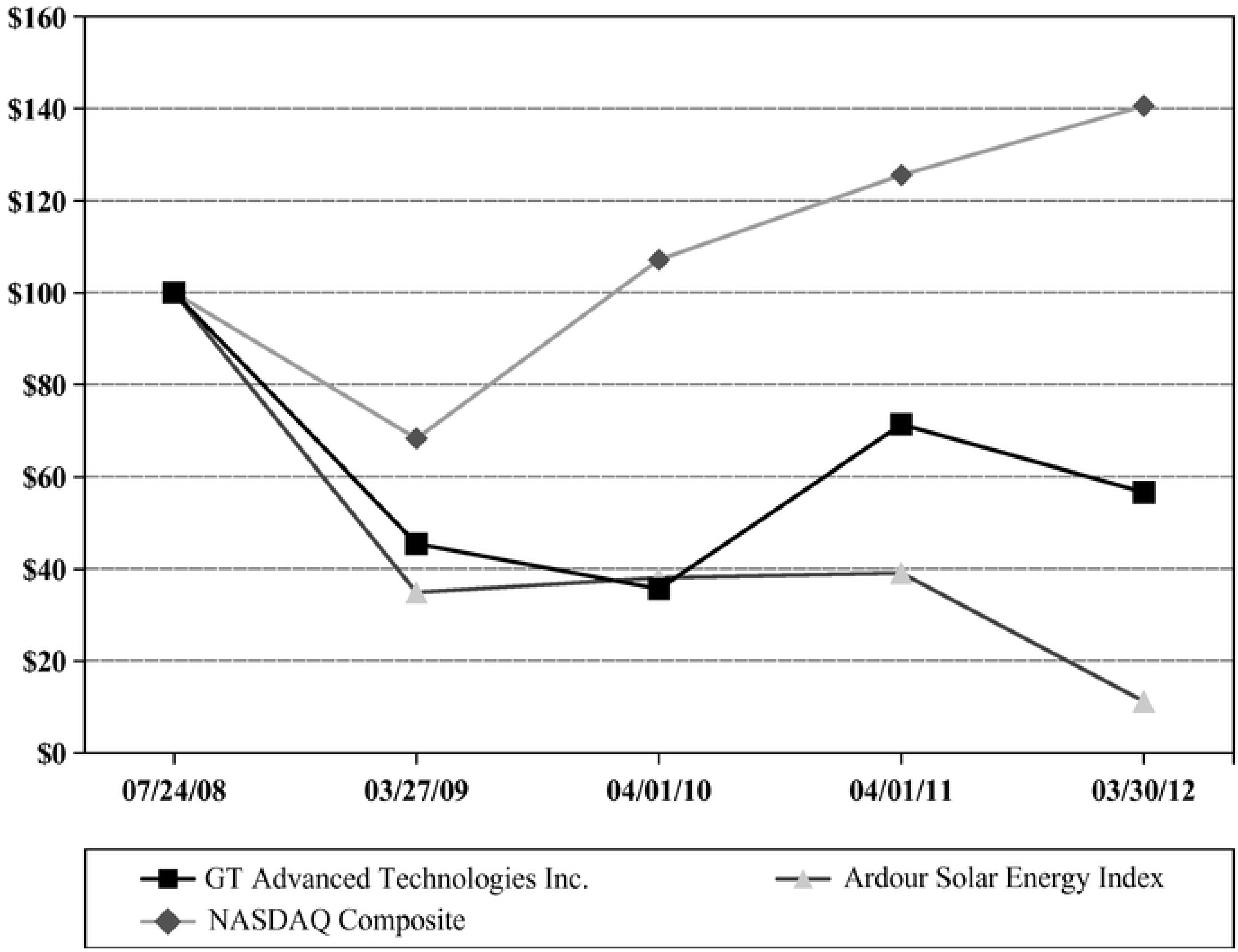

	7/24/2008*	3/27/2009	4/1/2010	4/1/2011	3/30/2012
GT Advanced Technologies Inc.(1)	100.00	45.51	35.71	71.35	56.68
Ardour Solar Energy Index(2)	100.00	34.93	38.12	39.15	11.24
NASDAQ Composite	100.00	68.28	107.15	125.56	140.59

* $100 invested on July 24, 2008 in stock and in index, including, for purposes of each index, reinvestment of dividends.

Note:

(1) GT Advanced Technologies Inc. total return based upon $14.59 per share price at close of first day trading. The initial public offering price was $16.50 per share.

(2) The Ardour Solar Energy Index is a rules-based, modified global-capitalization-weighted, float-adjusted index consisting of companies engaged in solar power and related products and services with market capitalization exceeding $100 million and average three months trading volumes equal to or greater than $1 million a day.

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Purchases of Equity Securities by the Issuer and Affiliate Purchases

The following table sets forth information in connection with purchases made by, or on behalf of, us or any affiliated purchaser, of shares of our common stock during the three months ended March 31, 2012:

	(a) Total Number of Shares Purchased	(b) Average Price Paid per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	(d) Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs
Month ended February 4, 2012	16,432	$ 8.06	—	$ —
Month ended March 3, 2012	17,175	$ 8.80	—	$ —
Month ended March 31, 2012	1,616,718	$ 7.95	1,615,593	$ 25,000,000

On November 18, 2011, we entered into a master confirmation agreement and a transaction confirmation agreement, which we refer to as the ASR Agreement, with UBS AG, London Branch to effect an accelerated repurchase of $75 million of our common stock. The shares were repurchased as part of our previously announced $100 million share repurchase authorization.

Pursuant to the ASR Agreement, on November 23, 2011, we paid $75.0 million to UBS and received 7,822,686 shares of our common stock on that date. The accelerated share repurchase was scheduled to be completed no later than March 23, 2012. UBS, however, had the option to deliver shares prior to the completion date and to accelerate the completion date. UBS exercised its ability to deliver shares prior to completion date, and delivered 900,000 shares of our common stock to us on March 5, 2012. UBS also exercised its ability to accelerate the completion date and, on March 8, 2012, UBS delivered to the us an additional 715,593 shares of common stock. The effective per share repurchase price under the ASR Agreement was $7.95 based on the volume-weighted average share price of our common stock, less a discount, during the accelerated share repurchase period. All of the shares received by us under the ASR Agreement were canceled and retired upon receipt.

Additionally, our employees surrendered, and we subsequently retired, 34,732 shares of our common stock during the three months March 31, 2012 to satisfy the minimum tax withholding obligations on the vesting of restricted stock unit awards under our 2008 Equity Incentive Plan.

Item 6. ***Selected Consolidated Financial Data***

The following selected consolidated financial data should be read together with "Item 7. Management's Discussion and Analysis of Financial Conditions and Results of Operations" and our consolidated financial statements and the accompanying notes thereto included elsewhere in this Annual Report on Form 10-K. The consolidated statement of operations and balance sheet data for all periods presented is derived from the audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K or in Annual Reports on Form 10-K for prior years on file with the Securities and Exchange Commission.

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Our reporting period is based on a 52-week year that ends on the Saturday closest to March 31, which in our fiscal year ended April 3, 2010 resulted in a 53-week fiscal year.

	GT Advanced Technologies, Inc.				
	Fiscal Year Ended March 31, 2012	Fiscal Year Ended April 2, 2011	Fiscal Year Ended April 3 2010	Fiscal Year Ended March 28, 2009	Fiscal Year Ended March 31, 2008
Statement of Operations Data:					
Revenue	$ 955,705	$ 898,984	$ 544,245	$ 541,027	$ 244,052
Cost of Revenue	528,905	520,989	325,263	326,358	151,709
Gross Profit	426,800	377,995	218,982	214,669	92,343
Research and Development	49,872	23,753	21,410	18,323	10,517
Selling and Marketing	19,763	19,792	11,823	17,469	10,452
General and Administrative	68,575	56,648	38,623	32,228	21,435
Amortization of Intangible Assets	8,198	4,500	3,164	3,105	3,018
Income from Operations	280,392	273,302	143,962	143,544	46,921
Interest Income	468	603	420	2,996	6,543
Interest Expense(1)	(12,980)	(2,923)	(1,383)	1,652	(1,651)
Other Income (Expense), net(2)	2,058	(384)	(3,125)	(6,012)	(1,244)
Income before Income Taxes	269,938	270,598	139,874	142,180	50,569
Provision for Income Taxes	86,541	95,843	52,618	54,212	14,464
Net Income	$ 183,397	$ 174,755	$ 87,256	$ 87,968	$ 36,105
Income per Common Share:					
Basic	$ 1.48	$ 1.26	$ 0.61	$ 0.62	$ 0.25
Diluted	1.45	1.24	0.60	0.61	0.25
Shares used to compute Income per Common Share:					
Basic	123,924	138,673	143,409	142,582	142,290
Diluted	126,051	140,902	145,390	144,471	144,059
Dividends paid per Common Share(3)	—	—	—	$ 0.63	—
Balance Sheet Data (at end of period):					
Cash and Cash Equivalents	$ 350,903	$ 362,749	$ 230,748	$ 107,148	$ 54,839
Short-term Investments	—	—	19,967	—	—
Restricted Cash(4)	—	—	—	—	164,028
Deferred Revenue	196,159	445,517	334,347	348,127	164,190
Working Capital(5)	186,415	282,824	177,150	57,672	33,039
Total Assets	1,132,590	1,126,292	732,081	737,423	600,611
Total Debt(6)	75,000	120,313	—	—	—
Stockholders' Equity	331,554	201,940	178,986	81,905	91,641
Cash Flow Data:					
Cash provided by (used in):					
Operating Activities	$ 217,673	$ 251,774	$ 147,276	$ 152,872	$ 1,532
Investing Activities	(107,983)	(34,033)	(24,540)	(10,959)	(4,841)
Financing Activities	(121,643)	(85,948)	863	(89,614)	(15,934)
Other	107	208	1	10	23
Increase (Decrease) in Cash and Cash Equivalents	$ (11,846)	$ 132,001	$ 123,600	$ 52,309	$ (19,220)
Other Financial Data:					
Depreciation and Amortization	$ 17,848	$ 9,667	$ 6,870	$ 5,111	$ 4,052
Capital Expenditures paid in cash	48,152	31,263	4,573	10,509	4,483

(1) For the fiscal year ended March 31, 2012, we incurred interest expense in connection with the credit facility we entered into with Bank of America N.A. (and certain other lenders) on January 31, 2012. In addition, during the fiscal year ended March 31, 2012, we recorded interest expense of $6.1 million related to the recognition of unamortized deferred financing costs in connection with terminating our credit facility with Credit Suisse that we entered into on December 13, 2010. For the fiscal year ended April 2, 2011, we incurred interest expense in connection with our credit facility with Credit Suisse, as well as the amortization of deferred financing costs in connection with this credit facility.

(2) For the fiscal year ended March 31, 2008, other expense includes $1.6 million of costs related to our initial public offering. For the fiscal year ended March 28, 2009, other expense includes $2.6 million of costs related to our initial public offering and $3.0 million attributed to the ineffective portion of certain forward foreign exchange contracts. For the fiscal years ended March 31, 2012 and April 3, 2010, other expense includes $1.4 million and $2.1 million, respectively, attributed to the ineffective portion of certain forward foreign exchange contracts. In addition, for the fiscal year ended March 31, 2012, other income includes a gain on fair value adjustment of $3.4 million in connection with our accelerated share repurchase program.

(3) On June 30, 2008, we declared a dividend in the aggregate amount of $90.0 million to our then existing stockholders which was paid on August 1, 2008.

(4) Restricted cash includes cash held in escrow as collateral in respect of outstanding standby letters of credit related to customer deposits and as security for bank fees.

(5) Working capital represents current assets minus current liabilities.

(6) On December 13, 2010, we entered into a credit agreement with Credit Suisse AG which consisted of a term facility in an aggregate maximum amount of $125.0 million with a final maturity date on December 13, 2013, and a revolving credit facility, in an aggregate principal amount of $75.0 million with a final maturity date on December 13, 2013. The full amount of the term facility was drawn by us on December 13, 2010. We terminated this facility with Credit Suisse in November 2011. On January 31, 2012, we entered into a new credit agreement, with Bank of America, N.A. (and certain other lenders), we refer to this as the Bank of America Credit Facility. The Bank of America Credit Facility consists of a term loan facility provided to one of our U.S. subsidiaries in an aggregate principal amount of $75.0 million with a final maturity date of January 31, 2016, a revolving credit facility available to this U.S. subsidiary in an aggregate principal amount of $25.0 million with a final maturity date of January 31, 2016 and a revolving credit facility available to our Hong Kong subsidiary in an aggregate principal amount of $150.0 million with a final maturity date of January 31, 2016. The full amount of the term facility with our applicable U.S. subsidiary was drawn on January 31, 2012 and no amounts have been drawn on the revolving facilities as of March 31, 2012.

Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our audited consolidated financial statements and the related notes included elsewhere in this Annual Report on Form 10-K. In addition to historical consolidated financial information, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions as described under the "Cautionary Statement Concerning Forward-Looking Statements," that appears above in this Annual Report on Form 10-K. Our actual results could differ materially from those anticipated by these forward-looking statements as a result of many factors, including those discussed under "Item 1A. Risk Factors" and elsewhere in this Annual Report on Form 10-K.

Company Overview

GT Advanced Technologies Inc., through its subsidiaries (referred to collectively as "we," "us" and "our") is a global provider of polysilicon production technology and crystalline ingot growth systems and related photovoltaic manufacturing services for the solar industry, and sapphire growth systems and material for the LED and other specialty markets. Our customers include several of the world's largest solar companies as well as companies in the photonics and LED industries.

In August 2011, we acquired 100% of the outstanding shares of stock of privately-held Confluence Solar, Inc., or Confluence Solar, the developer of HiCz, a continuously-fed Czochralski (HiCz) growth technology, that is designed to enable the production of high efficiency monocrystalline solar ingots. The acquisition of Confluence Solar is intended to expand our PV product portfolio and expand our business into more advanced crystal growth technologies that are designed to increase cell efficiencies and enable our customers to produce high performance monocrystalline silicon at lower costs.

On November 18, 2011, we entered into an accelerated share repurchase agreement with UBS AG, under which we repurchased $75.0 million worth of shares of our common stock. The effective per share purchase price was be based generally on the average of the daily volume weighted average prices per share of our common stock, less a discount, calculated over the term of the accelerated share repurchase program. In connection with this agreement, we paid $75.0 million to UBS AG on November 23, 2011 and received approximately 7.8 million shares on that date, which was approximately 80% of the total shares repurchased under the accelerated share repurchase program. On March 6, 2012, we received notice from UBS AG of its intent to exercise and finalize the transaction with a valuation date of March 5, 2012. Prior to this notice, on March 5, 2012, UBS delivered 0.9 million shares of our common stock to us in anticipation of having to deliver shares to us as part of the final settlement. On March 8, 2012 UBS AG delivered another 0.7 million shares of our common stock pursuant to its notice of exercise to fully settle its obligations under the accelerated share repurchase agreement. The total number of shares ultimately repurchased under the accelerated share repurchase agreement was approximately 9.4 million shares based on an effective per share repurchase price of $7.95 per share, net of a discount. All of the shares received by us under this accelerated share repurchase program were canceled and retired upon receipt by us.

We operate through three business segments: our polysilicon business, our photovoltaic, or PV, business and our sapphire business.

Polysilicon Business

Our polysilicon business manufactures and sells silicon deposition reactors, or SDR, used to react gases at high temperatures to produce polysilicon, the key raw material used in silicon-based solar wafers and cells, while also offering engineering services and related equipment.

Photovoltaic Business

Our PV business manufactures and sells directional solidification, or DSS, crystallization furnaces and ancillary equipment used to cast crystalline silicon ingots by melting and cooling polysilicon in a precisely controlled process. These ingots are used to make photovoltaic wafers which are, in turn, used to make solar cells.

During fiscal year 2012, we made two advances in our PV segment. First, in January 2012, we announced the commercial availability of our new DSS MonoCast growth technology. This technology is designed to generate silicon ingots with greater efficiencies than the silicon ingots developed with multicrystalline growth equipment. This equipment solution was first offered as upgrades to certain DSS furnaces currently used by our customers. Second, we acquired Confluence Solar in August 2011, which is a producer of monocrystalline silicon materials using continuous Czochralski growth production methods. We are currently in the process of developing an equipment offering based on Confluence Solar's continuously-fed Czochralski (HiCz) growth technology. While both our MonoCast equipment offering and our HiCz efforts are targeted at improving the ingot performance compared to that of multicrystalline silicon materials, we expect that, over an extended period of time, HiCz will ultimately supersede our MonoCast offerings. We have not yet commercialized the HiCz monocrystalline equipment, we do, however, expect to continue to sell HiCz monocrystalline material, manufactured at our pilot production plant in Hazelwood, Missouri, into select markets.

Sapphire Business

Our sapphire business manufactures and sells sapphire material and equipment. Our sapphire material is manufactured using our advanced sapphire crystal growth furnace, or ASF, that incorporate the Heat Exchanger Method, or HEM, technology. During fiscal year 2012 we began shipping and commissioning ASF systems for our customers and began recognizing revenue on these systems during the latter part of the fiscal year. In addition to selling ASF systems, we intend to continue production and sale of sapphire materials in selected specialty markets.

Corporate Name Change and Change in Fiscal Year End

Effective August 8, 2011, we changed our name from GT Solar International, Inc. to GT Advanced Technologies Inc. The name change was effected pursuant to Delaware law by the merger of a wholly-owned subsidiary into the Company. In addition, on April 16, 2012, we amended our amended and restated by-laws to provide that our fiscal year will end on December 31 of each year. Prior to this amendment, our by-laws had provided that our fiscal year ended on the Saturday closest to March 31st of each year. As a result of this change to our fiscal year end, we will report a nine-month transition period consisting of the period from April 1, 2012 to December 31, 2012, and our 2013 fiscal year will begin on January 1, 2013 and end on December 31, 2013.

Factors Affecting the Results of Our Operations

Demand for our polysilicon and PV products and services are driven by end-user demand for solar power. Key drivers of the demand for solar power include: volatile prices of conventional energy sources; the desire for energy independence to counter perceived geopolitical supply risks surrounding fossil fuels; environmental pollution from fossil fuels and the resulting tightening of emission controls; the competitive cost of energy from alternative renewable energy sources; government incentive programs that make solar energy more cost competitive; and changing consumer preferences towards renewable energy sources. Demand for our sapphire products are driven by end-used demand for sapphire material, LED-quality material in particular. Key drivers of the demand for sapphire material include: adoption of sapphire components in consumer products and electronics, acceptance in the general lighting industry, the cost of sapphire compared to alternative technologies and the availability of sapphire material in the market which directly impacts the price that can be charged for sapphire material.

In each of our three business segments, the end-user demand for the output of our equipment has either declined substantially or supply has surpassed demand during the course of fiscal year 2012. As a result, the demand for our equipment offerings in each of our business segments became more limited as the year progressed. The market prices for polysilicon, solar cells and wafers and sapphire material, including LED material, have dropped significantly. In order to decrease inventories, we believe that companies selling polysilicon, solar cells and wafer and sapphire material, including some of our customers, have had to sell at prices that provide little or no margin. In some cases, we believe that these companies have been unable to reduce their inventories and, as a result of continued production of these materials, they are increasing their inventories. We are unable to determine when, and if, these inventories will decline or prices will recover. We expect that these circumstances will continue through the remainder of calendar year 2012 and beyond. As a result, we expect that the demand for our polysilicon, PV and sapphire equipment, and sapphire materials and HiCz materials (materials sales, however, make up a very small portion of our revenue) will continue to be very limited for the remainder of calendar year 2012 and beyond. As a result, much of our business for the remainder of calendar year 2012 will result from filling orders in our backlog and we do not expect, during this time, that our backlog will increase in a material amount.

The limited demand for our products due to market conditions is exacerbated by trade tensions between China and the U.S. On May 17, 2012, the U.S. Department of Commerce announced its preliminary determination that China had violated fair trade policies by "dumping" into the U.S. certain solar products at prices that were intended to advantage Chinese manufacturers. In connection with this ruling, certain Chinese solar cell and wafer manufacturers (including some of our equipment customers) had preliminary duties levied against them of approximately 31%. The Chinese government responded by saying the preliminary determination was deliberately provoking trade friction between the two nations. This follows a March 2012 action by the United States to impose preliminary punitive duties, in the single digits, on solar panels imported from China. The Department of Commerce is expected to issue final rulings on these matters later in the year. In addition, Congress has considered legislation targeting China's currency practices, which would, among other things, impose trade sanctions against Chinese companies that ship finished goods into the U.S. at artificially low prices caused by Chinese currency manipulation. The Chinese government has indicated that passage of this legislation or similar actions could lead to retaliatory tariffs. Retaliatory tariffs and trade tensions with China would have a material adverse impact on our business since we sell into China and our equipment customers sell end products into the U.S. In addition, if the U.S. government were to issue final determinations consistent with the preliminary determinations in 2012 or impose other duties on solar products from China, it would have a direct and negative effect on several of our PV customers who purchase our PV equipment and polysilicon equipment.

Changes in the global capital markets have resulted in a more stringent lending environment which in turn has caused decreased spending within the industries we serve. Our PV segment, for example, has reported decreased revenue of almost 50% for the fiscal year ended March 31, 2012 as compared to the prior fiscal year. We believe that this decrease is due, in part, to tighter lending conditions in all markets, particularly China. We believe the negative impact of a more stringent lending environment has resulted in decreased demand for our other products as well, including ASF units and polysilicon reactors. The international commercial lending environment has not stabilized and if the availability of capital or credit remains constrained (including in China) or if capital or credit were to become even more limited, we expect that the results of operations attributable to our PV business, and our other business segments, would continue to be negatively impacted.

In addition, the sovereign debt crisis in Europe has led to macroeconomic instability, depreciation of the euro, fiscal austerity, reduction in government support for certain programs and slowing growth in the entire region. While we generate only a small portion of our total revenue to sales to customers in Europe, a portion of the end-users of solar power and LED materials are located in Europe. We expect that customers for our equipment will be negatively impacted by the sovereign debt crisis and, as such, will have decreased demand for the silicon and sapphire materials generated using our equipment. In addition, the solar industry in Europe has relied upon governmental support to foster its growth and the debt crisis (and general economic slowdown) we believe has caused governments to withdraw or eliminate their support and incentives for solar power. We expect that this crisis will cause a further decrease in demand for our polysilicon, sapphire and PV equipment offerings. Given the continued uncertainty in European markets, it is impossible to determine how long this period of instability will continue. In addition, there is increasing evidence that this economic instability is impacting other regions as well, including China (the European Union is China's largest trading partner) and will impact our equipment customers.

We are required to make a significant upfront investment in order to fill orders for our PV, polysilicon and sapphire production equipment. In the past we have had customers for our DSS furnaces and SDR reactors place orders and fail to make payments (and while we did not complete these orders, we incurred certain expenses in order to prepare to complete delivery under the contract terms, including non-refundable deposits we were required to make to certain vendors and suppliers). In an attempt to mitigate such risks, we generally require our customers to make non-refundable deposits and/or provide letters of credit on most polysilicon, PV and sapphire equipment orders. These advances, however, may not cover all of the expenses we incur in preparing to fill the applicable order. In addition, we have negotiated extensions of the delivery schedules and other modifications under some of our existing contracts and we expect similar negotiations to occur in the future. When customers fail to make a deposit when due under their contracts, we may terminate, and have terminated, certain of those contracts. When we renegotiate terms of existing contracts with our customers, such negotiations may result in a change in the timing of deliveries, reduction in the number of units to be delivered and a change in other terms, which may have an impact on our results of operations as more fully described under the heading "Order Backlog."

There is an excess of polysilicon manufacturing capacity and the market price for polysilicon has significantly declined. Those market participants without the ability to produce polysilicon efficiently will be unable to operate profitably in a lower polysilicon price environment. Accordingly, we expect that there will be an even greater focus on reducing production costs among polysilicon manufacturers. Since polysilicon production equipment is one of the principal factors that accounts for the costs of polysilicon production for manufacturers, we expect that for the future there will be substantial pressure by our customers to lower the cost of equipment or they may delay or cancel their purchases of polysilicon production equipment. In the face of a consolidating market, we will need to be positioned to capture a portion of the future demand for polysilicon equipment among the more limited number of manufacturers by delivering equipment with higher throughput and lower power consumption, leading to greater efficiencies. However, the timing of any future purchases is uncertain and it may be a significant amount of time before we see the benefits of any purchases of equipment, if at all.

We believe that, due to limited demand or oversupply, consolidation within the solar industry and increasing cost pressures, some of our PV customers have lowered capacity utilization rates and delayed or terminated expansion projects as they respond to weaker end market demand. Further, due to higher efficiencies offered by monocrystalline silicon and advances in monocrystalline silicon production technology, we may experience a longer contraction (or permanent reduction) in end user demand for multicrystalline silicon solar modules than in the past. This contraction has resulted in increased pressure on the margins for our PV products. It is not possible to determine when market demand for multicrystalline solar products will return with any certainty, or if it will return at all (particularly as a result of improvements in monocrystalline growth technologies). In an effort to respond to anticipated future demand for monocrystalline silicon, in January 2012 we commercially launched our DSS MonoCast growth technology, which generates refined silicon ingots with the potential to constitute to higher cell efficiencies than multicrystalline ingots. In addition, in August 2011, we purchased Confluence Solar which is a manufacturer of monocrystalline silicon material using the continuously-fed Czochralski growth technology. We are developing an equipment offering based on this HiCz growth process and we are targeting commercial release in the first half of calendar 2013. While both the MonoCast equipment and our anticipated HiCz offering will both improve the ingot performance compared to that of multi-crystalline silicon materials, we expect that, over an extended period of time, HiCz equipment will ultimately supersede our MonoCast equipment offerings. There are, however, no certainties that there will be any meaningful demand for monocrystalline silicon or that the prices charged to manufacture such silicon will make our MonoCast or HiCz products attractive to end-users and these offering may not replace the revenue that we generated in the past with the DSS multicrystalline furnace.

Demand for PV on-grid applications, which in turn impacts the demand for PV manufacturing equipment, has historically been dependent in part on the availability and size of government subsidies and economic incentives. As noted above, we believe that the ability of governments to provide economic incentives have been significantly impacted by the recent global economic downturn, particularly in Europe, where many of the end-users for solar wafers and cells are located. For example, Germany, which has among the world's largest PV installed base, has implemented reductions in solar feed-in tariff rates for certain solar systems and further reductions in solar feed-in tariff rates may be made in the future. We believe that governments are moving more aggressively than they have in the past to reduce all forms of governmental assistance to the solar industry and we expect that governmental subsidies, feed-in tariffs and similar supports will be eliminated in their entirety in the near future. It is difficult to determine the impact that a changing incentive program has on solar module demand and our customers' ability to sell solar modules in a particular geographic market, particularly Europe. We believe decreasing costs within the solar value chain will reduce the effect of tariffs on the investment returns for solar projects. The changing environment for such government incentive programs, however, creates uncertainty for the solar industry.

During fiscal year 2012 we began shipping and commissioning ASF systems for our customers and began recognizing revenue on these systems during the latter part of the fiscal year. As more of our ASF units are accepted by customers, we expect that revenues attributable to our sapphire equipment will be significantly larger than revenue from our sapphire material. As noted above, the price for sapphire material has recently experienced significant decrease. We anticipate long-term demand for sapphire material will be driven, in large part, by general illumination manufacturers. However, in the short-term, the decreased demand for sapphire materials, including among illumination companies, may negatively impact demand for our materials and ASF systems and may delay the timing of which amounts attributable to materials and ASF systems roll-off of backlog and into revenue and the timing on which we enter into new contracts to sell ASF systems. We are unable to estimate when the price of sapphire material will recover, but we do expect the current decreased prices to continue for the short-term. In addition, while we do offer training in connection with the sale of ASF systems, at certain customer sites, we have discovered that those customers have not yet hired or sufficiently trained their personnel and have not yet instituted the equipment operations procedures necessary to properly run the ASF system they purchased. As a result, we believe the ASF systems at certain of our customer's sites have generated sapphire material that is not salable. Additionally, even in those cases where the sapphire boule was to specification, the boule has not always been properly oriented by the customer and some or all of the value of the sapphire boule was lost as it was sliced and cored. If our customers do not have the manufacturing expertise to operate the ASF systems and properly orient sapphire boules, they may be delayed in ramping up their operations and sapphire manufacturing operations, we may not recognize revenue from the sale of these systems (or such recognition may be delayed) and the ASF systems may not gain wider market acceptance.

Our results of operations are also affected by when we are able to recognize revenue under our PV, polysilicon and ASF system contracts. Our revenue recognition policies require us to defer revenue recognition in certain circumstances from shipped equipment and recognize revenue at a later date as more fully described under the caption "Note 2-Significant Accounting Policies-Revenue Recognition" in the notes to the consolidated financial statements included elsewhere in this Annual Report on Form 10-K. Other factors affecting operations include delays in customer acceptances of our products, delays of deliveries of ordered products and our rate of progress in the fulfillment of our obligations under our contracts. A delay in deliveries or cancellations of orders would cause us to have inventories in excess of our short-term needs, and may delay our ability to recognize, or prevent us from recognizing, revenue on contracts in our order backlog and result in losses for advancements or other payments made to vendors and suppliers that cannot be cancelled.

Our business plan is focused on growing and diversifying our product and technology offerings. We expect that achieving these goals of growth and diversification will include the acquisition of businesses and technologies from third parties. In order to achieve our objective of diversifying our business to technologies outside of polysilicon, PV and sapphire, we expect that some of these acquisitions will be in markets or industries that are unrelated to those markets we currently serve. We are, however, an equipment company and we currently expect that future acquisitions will continue to be for the purpose of accessing technologies that will enable us to provide industrial equipment to our customers. This business diversification plan involves risks. As a result of these potential future acquisitions, our company may be viewed by the market in the future as other than a solar and sapphire company and our stock may be valued differently than is currently the case depending on what markets we serve in the future. Diversification may also require significant time and resource commitments from our senior management, which will limit the amount of time these individuals will have available to devote to our existing operations. Also, we may be unable to successfully complete acquisitions or effectively integrate them into our operations.

In addition, our results of operations are affected by a number of other factors including the availability and market price of polysilicon, alumina material and certain process consumables, availability of raw materials, foreign exchange rates, interest rates, commodity prices (including molybdenum, steel and graphite prices) and macroeconomic factors, including the availability of capital that may be needed by our customers, as well as political, regulatory and legal conditions in the international markets in which we conduct business, including China.

Acquisition of Confluence Solar, Inc.

On August 24, 2011, we acquired 100% of the outstanding shares of stock of privately-held Confluence Solar, Inc., the developer of HiCz, a continuously-fed Czochralski (HiCz) growth technology that is designed to enable the production of high efficiency monocrystalline solar ingots. The purchase consideration consisted of $60.6 million, net of a working capital adjustment of $0.5 million, and a potential additional $20.0 million of contingent consideration based on the attainment of a financial target, an operational target and certain technical targets.

The acquisition of Confluence Solar is intended to expand our PV product portfolio and expand our business into more advanced crystal growth technologies that are designed to increase cell efficiencies and enable our customers to produce high performance monocrystalline silicon at lower costs. We expect that, over an extended period of time, the Confluence Solar technologies will ultimately replace our own DSS and DSS MonoCast equipment. At this time, our efforts in the HiCz crystal growth area are focused on commercializing equipment technologies for monocrystalline silicon producers, although we are still in the development stage and no product is commercially available. We will, however, continue to sell limited volumes of HiCz material to customers in selected markets.

We are obligated to make expenditures in the Confluence Solar business to fund capital purchases of at least $25.0 million, which is expected to be substantially funded by the middle of the calendar year 2012.

The transaction has been accounted for as a business combination and is included in our results of operations beginning on August 24, 2011, the date of acquisition. The acquired business did not contribute material revenues for the period from August 24, 2011 to March 31, 2012. The results of the acquired business are included in our PV business segment.

Order Backlog

Our order backlog primarily consists of amounts due under written contractual commitments and signed purchase orders for PV, polysilicon and sapphire equipment not yet shipped to customers, deferred revenue (which represents amounts for equipment that has been shipped to customers but not yet recognized as revenue) and short-term contracts or sales orders for sapphire materials. Substantially all of the contracts in our order backlog for PV, polysilicon and sapphire equipment require the customer to either post a standby letter of credit in our favor and/or make advance payment prior to shipment of equipment.

From the date of a written commitment, we generally would expect to deliver PV and sapphire equipment products over a period ranging from three to nine months and polysilicon products over a period ranging from twelve to eighteen months, however, in certain cases revenue may be recognized over longer periods. Disregarding the effect of any contract terminations or modifications, we would expect to convert approximately 33% of our March 31, 2012 order backlog into revenue during the next twelve months and approximately 67% thereafter. Although most of our orders require substantial non-refundable deposits, our order backlog as of any particular date should not be relied upon as indicative of our revenues for any future period.

If a customer fails to perform its outstanding contractual obligations on a timely basis, and such failure continues after notice of breach and a cure period, we may terminate the contract. Our contracts generally do not contain cancellation provisions and in the event of a customer breach, the customer may be liable for contractual damages. During the fiscal year ended March 31, 2012, we terminated or modified contracts resulting in a $135.9 million reduction in our order backlog (74% of the reduction was attributable to six contracts). During the fiscal year ended April 2, 2011, we terminated or modified contracts resulting in a $10.7 million reduction in our order backlog (82% of the reduction was from three contracts). During the fiscal year ended March 31, 2012, we recorded revenues of $35.5 million from terminated contracts and during the fiscal year ended April 2, 2011, we recorded revenues of $44.4 million from terminated contracts.

Although we have a reasonable expectation that most of our customers will substantially perform on their contractual obligations, we attempt to monitor those contracts that we believe to be at risk, which include contracts with customers to whom we have sent notices of breach for failure to provide letters of credit or to make payments when due. We conduct negotiations with certain customers who have requested that we extend their delivery schedules or make other contract modifications, or who have not provided letters of credit or made payments in accordance with the terms of their contracts. We engage in a certain level of these negotiations in the ordinary course. We monitor the effect, if any, that these negotiations may have on our future revenue recognition. If we cannot come to an agreement with these customers, our order backlog could be reduced. Other customers with contracts in our order backlog that are not currently under negotiation may approach us with similar requests in the future, or may fail to provide letters of credit or to make payments when due. If we cannot come to an agreement with these customers, our order backlog could be further reduced. If we do come to an agreement with customers extending delivery schedules, the timing of expected revenue recognition could be pushed into later periods than we had anticipated.

The table below sets forth our order backlog as of March 31, 2012 and April 2, 2011 by business segment:

Product Category	March 31, 2012 Amount	March 31, 2012 % of Backlog	April 2, 2011 Amount	April 2, 2011 % of Backlog
	(dollars in millions)			
Photovoltaic business	$ 138	8%	$ 468	39%
Polysilicon business	880	49%	537	45%
Sapphire business	761	43%	184	16%
Total	$ 1,779	100%	$ 1,189	100%

Our order backlog totaled $1.8 billion as of March 31, 2012. Our order backlog attributable to our PV, polysilicon and sapphire businesses as of March 31, 2012, included deferred revenue of $196.2 million, of which $4.2 million related to our PV business, $183.9 million related to our polysilicon business and $8.1 million related to our sapphire business. Cash received in deposits related to our order backlog where deliveries have not yet occurred was $332.1 million as of March 31, 2012.

As of March 31, 2012, our order backlog consisted of contracts with 16 PV customers, contracts with 16 polysilicon customers, and contracts with several sapphire customers. Our order backlog as of March 31, 2012, included $434.2 million, $390.4 million and $178.4 million attributed to three different customers, each of which individually represents 24%, 22%, and 10%, respectively, of our order backlog.

Critical Accounting Policies and Estimates

In preparing our financial statements in conformity with generally accepted accounting principles in the United States (GAAP), we make estimates, judgments and assumptions about future events that affect the amounts of reported assets, liabilities, revenues and expenses, as well as the disclosure of contingent liabilities in our financial statements and the related notes thereto. On a periodic basis, we evaluate our estimates, including those related to revenue, inventory, income taxes and business combinations. We operate in competitive industries that are influenced by a variety of diverse factors including, but not limited to, technological advances, product life cycles, long customer and supplier lead times, and geographic and macroeconomic trends. Estimating product demand beyond a relatively short forecasting horizon is difficult and prone to forecasting error due to the inherent lack of visibility in the industry. Some of our accounting policies require the application of significant judgment by management in the selection of appropriate assumptions for determining these estimates. By their nature, these judgments are subject to an inherent degree of uncertainty. As a result, we cannot assure you that actual results will not differ significantly from estimated results. We base our judgments and estimates on our historical experience, on our forecasts and on other available information, as we deem appropriate. Our significant accounting policies are described in Note 2 to our consolidated financial statements for the fiscal year ended March 31, 2012 included elsewhere in this Annual Report on Form 10-K.

We believe that the following are the critical accounting policies which are the most important to the portrayal of our financial condition and that require the most subjective judgment used by us in the preparation of our consolidated financial statements.

Revenue Recognition

The majority of the our contracts involve the sale of equipment and services under multiple element arrangements. We recognize revenue when persuasive evidence of an arrangement exists, the sale price is fixed or determinable, collectability is reasonably assured through historical collection results and regular credit evaluations, and delivery has occurred and there are no uncertainties regarding customer acceptance.

On April 3, 2011, we prospectively adopted the provisions of *Accounting Standards Update ("ASU") 2009-13, Revenue Recognition (Topic 605)-Multiple-Deliverable Revenue Arrangements ("ASU 2009-13")* for new and materially modified arrangements originating on or after April 3, 2011. *ASU 2009-13* amended the accounting standards for multiple-deliverable revenue arrangements to require an entity to allocate revenue in an arrangement on the basis of the relative selling price of deliverables at the inception of the arrangement. When applying the relative selling price method, the selling price for each deliverable is determined using vendor-specific objective evidence of selling price ("VSOE"), if it exists, or third-party evidence of selling price ("TPE"). If neither VSOE nor TPE exists, then we use our best estimate of the selling price ("ESP") for that deliverable. The use of the residual method was eliminated by *ASU 2009-13*.

The multiple-deliverable revenue guidance outlined in *ASU 2009-13* requires that we evaluate each deliverable in an arrangement to determine whether such deliverable would represent a separate unit of accounting. The product or service constitute a separate unit of accounting when it fulfills the following criteria: (a) the delivered item(s) has value to the customer on a standalone basis and (b) if the arrangement includes a general right of return relative to the delivered item, delivery or performance of the undelivered item(s) is considered probable and substantially our control. Our sales arrangements do not include a general right of return and the majority of our products and services qualify as separate units of accounting.

Prior to the adoption of *ASU 2009-13*, our products or services constitute separate units of accounting when it fulfilled the following criteria: (a) the delivered item(s) has value to the customer on a standalone basis, (b) there is objective and reliable evidence of the fair value of the undelivered item(s), and (c) if the arrangement includes a general right of return relative to the delivered item, delivery or performance of the undelivered item(s) is considered probable and substantially in the control of the Company. Given the differences created in the pre *ASU 2009-13* accounting model in comparison to the *ASU 2009-13* accounting model, for transactions entered into prior to the adoption of *ASU 2009-13*, where objective evidence of fair value exists for all undelivered elements, but not delivered elements, we apply the residual method for recognizing revenue. If objective evidence of fair value does not exist for the undelivered elements of the arrangement, all revenue is deferred until such evidence does exist, or until all elements for which we do not have objective evidence of fair value are delivered, whichever is earlier assuming all other revenue recognition criteria are met.

We have and continue to establish VSOE based upon the price charged when the same element is sold separately or established by management having the relevant pricing authority. When VSOE exists, it is used to determine the selling price of a deliverable. Objective evidence of fair value for installation and training services is based upon the estimated time to complete the installation and training at the established fair value hourly rates that we charge for similar professional services on a stand-alone basis. We have not been able to establish VSOE for certain of our products and for certain of our services because we have not sold such products or services on a stand-alone basis.

When VSOE is not established, we attempt to establish the selling price of each element based on TPE. Our products and services differ from that of our competitors and therefore, comparable pricing of competitors' products and services with similar functionality cannot be obtained. Accordingly, we generally are not able to determine TPE for our products or services.

For transactions entered into subsequent to the adoption of *ASU 2009-13*, when we are unable to establish selling price using VSOE or TPE, we use ESP in our allocation of arrangement consideration for the relevant deliverables. The objective of ESP is to determine the price at which we would transact a sale if a product or service was sold on a stand-alone basis. We determine ESP for our products and certain services by considering multiple factors including, but not limited to, overall market conditions, profit objectives and historical pricing practices for such deliverables. Changes in the ESP of the deliverables in our typical contracts is not expected to have a material impact on the timing of revenue recognition as the majority of the allocated consideration is weighted toward the equipment deliverables. In allocating arrangement consideration to our typical deliverables, equipment deliverables receive a higher proportion of the consideration than other deliverables due to their ESP's being significantly higher than our other deliverables.

Our ASF and DSS equipment contracts contain customer-specified acceptance provisions. Polysilicon reactors contracts do not contain customer-specified acceptance provisions, and are generally deemed to be contractually accepted at the time the reactor is initially delivered to the customer's facility. For arrangements containing products that we consider to be "established," we recognize product revenue upon delivery, assuming all other revenue recognition criteria are met. For arrangements containing products considered to be "new," or containing customer acceptance provisions that are deemed to be more than perfunctory, product revenue is recorded upon customer acceptance or at the time the product is determined to be "established".

Products are classified as "established" products if post-delivery acceptance provisions and the installation process have been determined to be routine and there is a demonstrated history of achieving the predetermined contractual objective specifications.

In determining when a "new" product is considered "established", we consider the following factors: (i) the stability of the product's technology, (ii) the test results of products prior to shipment, (iii) successful installations at customer's sites and (iv) the performance results once installed. We generally believes that the satisfaction of the first two criteria, coupled with the satisfaction of final two criteria for multiple product units in the facilities of at least three to five separate customers that, in each case, results in acceptance in accordance with the standard contract terms are necessary to support the conclusion that there are no uncertainties regarding customer acceptances of the standard objective specifications and therefore the installation process can be considered perfunctory.

Inventories

We value our inventory at the lower of cost or market. The determination of the lower of cost or market requires that we quantify the difference between the cost of inventory and its estimated market value and to make significant assumptions about our customers' future demand for products, the future demand by end-users of the material generated with our equipment and any future transitions we make to new product offerings from our legacy products. These assumptions include, but are not limited to, future manufacturing schedules, customer demand, supplier lead time and technological and market obsolescence. We estimate the excess and obsolescence of inventory based on factors such as inventory on hand, historical usage and forecasted demand based on backlog and other factors.

Business Combinations

Business combinations are accounted for at fair value. Acquisition costs are expensed as incurred and recorded in general and administrative expenses; in-process research and development is recorded at fair value as an indefinite-lived intangible asset at the acquisition date; restructuring costs associated with a business combination are expensed subsequent to the acquisition date; contingent consideration obligations are recorded at fair value on the date of acquisition, with increases or decreases in the fair value arising from changes in assumptions or discount periods recorded as contingent consideration expenses in the consolidated statement of operations in subsequent periods; and changes in deferred tax asset valuation allowances and income tax uncertainties after the acquisition date generally affect income tax expense. All changes that do not qualify as measurement period adjustments are included in current period earnings. The fair values assigned to tangible and intangible assets acquired and liabilities assumed, including contingent consideration, are based on management's estimates and assumptions, as well as other information compiled by management, including valuations that utilize customary valuation procedures and techniques. Significant judgment is required in estimating the fair value of intangible assets acquired in a business combination and in assigning their respective useful lives. The fair value estimates are based on available historical information and on future expectations and assumptions deemed reasonable by management at the time.

If the actual results differ from the estimates and judgments we utilized, the amounts recorded in the financial statements could result in a possible impairment of the intangible assets and goodwill, or require acceleration of the amortization expense of finite-lived intangible assets.

Significant judgment is required in estimating the fair value of the contingent consideration obligations. Increases or decreases in the fair value of the contingent consideration obligations can result from changes in assumed discount periods and rates, changes in the assumed timing and amount of revenue and expense estimates and changes in assumed probability adjustments with respect to the attainment of certain financial, technical and operational metrics. Accordingly, future business and economic conditions, as well as changes in any of the assumptions described above, can materially impact the amount of contingent consideration expense recorded in any given period.

Income Taxes

Our business is global and as such we are subject to taxes in both the US and foreign jurisdictions. Tax laws and tax rates vary substantially in these jurisdictions and are, along with the interpretation of the tax laws, subject to change based on the political and economic climate in those countries.

Significant judgment is required in determining our worldwide income tax provision and recording the related tax assets and liabilities. In the ordinary course of our business, there are operational decisions, transactions, facts and circumstances, and calculations which make the ultimate tax determination uncertain. Furthermore, our tax positions are periodically subject to challenge by taxing authorities. We have recorded reserves for taxes and the associated interest that may become payable in future years as a result of audits by tax authorities. Certain of these reserves are for uncertain income tax positions taken on income tax returns.

We recognize tax benefits for uncertain tax positions based on an assessment of whether the position is more likely than not to be sustained by the taxing authorities. If this threshold is not met, the full amount of the uncertain tax position is recorded as a liability. If the threshold is met, the tax benefit that is recognized is the largest amount that is greater than 50% likely of being realized upon ultimate settlement. This analysis presumes the taxing authorities' full knowledge of the positions taken and all relevant facts, but does not consider the time value of money. We also accrue for interest and penalties on these uncertain tax positions and include such charges in the income tax expense in the consolidated statements of operations.

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Results of Operations

The following tables set forth the results of operations as a percentage of revenue for the fiscal years ended March 31, 2012, April 2, 2011, and April 3, 2010:

	Fiscal Years Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
Statements of Operations Data:*			
Revenue	100%	100%	100%
Cost of revenue	55	58	60
Gross profit	45	42	40
Research and development	5	3	4
Selling and marketing	2	2	2
General and administrative	7	6	7
Amortization of intangible assets	1	1	1
Income from operations	30	30	26
Interest income	—	—	—
Interest expense	(1)	—	—
Other income (expense), net	—	—	—
Income before income taxes	29	30	26
Provision for income taxes	9	11	10
Net income	20%	19%	16%

* Percentages subject to rounding.

Fiscal Year Ended March 31, 2012 Compared to Fiscal Year Ended April 2, 2011

Revenue. The following table sets forth revenue for the fiscal years ended March 31, 2012 and April 2, 2011.

Business Category	Fiscal Years Ended March 31, 2012	Fiscal Years Ended April 2, 2011	Change	% Change
	(dollars in thousands)			
Photovoltaic business	$ 375,546	$ 740,088	$ (364,542)	
Polysilicon business	363,278	143,591	219,687	
Sapphire business	216,881	15,305	201,576	
Total revenue	$ 955,705	$ 898,984	$ 56,721	6%

Our total revenue increased 6% to $955.7 million for the fiscal year ended March 31, 2012, as compared to $899.0 million for the fiscal year ended April 2, 2011, primarily due to the commercialization of our ASF systems, increased demand in our polysilicon business, offset in part by a reduction in revenue from our PV business.

Revenue from our PV business decreased 49% to $375.5 million for the fiscal year ended March 31, 2012 as compared to $740.1 million for the fiscal year ended April 2, 2011. The decrease is primarily due to decreased demand for our DSS products from solar manufacturers, a trend that began in fiscal year 2012. The principal reason for the decrease was fewer DSS units shipped during the fiscal year ended March 31, 2012, which we believe was due to weaker demand as a result of excess capacity in the PV market. Our PV business is subject to fluctuations in demand for our PV products, particularly our DSS furnace. The impact of the reduction in shipments was offset in part by the recognition of revenue related to units that were shipped in prior periods.

Revenue from our polysilicon business increased by 153% to $363.3 million for the fiscal year ended March 31, 2012 as compared to $143.6 million for the fiscal year ended April 2, 2011. Polysilicon revenue for the fiscal year ended March 31, 2012 relates primarily to contracts that were in our order backlog as of April 2, 2011, for which the revenue recognition process has been completed. Polysilicon revenue may fluctuate significantly from period to period due to the changes in supply and demand in the marketplace and the length of time it takes to complete our obligations under the contracts. As a result of this variability, our polysilicon business tends to have a higher level of deferred revenue than our other business segments. Approximately 94% and 65% of our deferred revenue balances at March 31, 2012 and April 2, 2011, respectively, relate to our polysilicon business.

Included in our backlog are certain polysilicon contracts that grant contractual rights which require revenue to be recognized ratably over the contract period. Revenue recognition from these contracts commences when all other elements have been delivered and other contract criteria have been met. During the fiscal years ended March 31, 2012 and April 2, 2011, we recognized revenue on a ratable basis from six of these contracts of $185.0 million and $83.5 million, respectively. As of March 31, 2012, our deferred revenue balance included $128.8 million related to these contracts.

Our sapphire business revenue during the fiscal year ended March 31, 2012 is attributable to the sale of sapphire equipment and material used mostly, we believe, in sapphire-based LED applications and other specialty markets. We acquired Crystal Systems, which is the basis for our sapphire business, on July 29, 2010. Revenue from our sapphire business was $216.9 million for the fiscal year ended March 31, 2012, as compared to $15.3 million for the fiscal year ended April 2, 2011. The increase in revenue for our sapphire business is primarily related to the commercialization of our ASF systems during the fiscal year ended March 31, 2012. We began shipping and commissioning these units and recorded revenue in connection with meeting the revenue recognition criteria on certain of these ASF systems during fiscal 2012.

A substantial percentage of our revenue results from sales to a small number of customers. One of our customers accounted for 23% of our revenue for the fiscal year ended March 31, 2012 and one customer accounted for 19% of our revenue for the fiscal year ended April 2, 2011. No other customer accounted for more than 10% of our revenue during the respective periods.

Based on our results through March 31, 2012 and our order backlog as of that date, we believe our polysilicon business will account for a majority of our revenue for the twelve month period ending March 30, 2013. For the twelve month period ending March 30, 2013, we believe that no one customer will account for more than 25% of our total annual revenue.

Gross Profit and Gross Margins. The following tables set forth gross profit and gross margin for the fiscal years ended March 31, 2012 and April 2, 2011.

	Fiscal Years Ended			
	March 31, 2012	April 2, 2011	Change	% Change
	(dollars in thousands)			
Gross profit				
Photovoltaic business	$ 183,512	$ 314,609	$ (131,097)	
Polysilicon business	157,420	59,873	97,547	
Sapphire business	85,868	3,513	82,355	
Total	$ 426,800	$ 377,995	$ 48,805	13%

	Fiscal Years Ended	
	March 31, 2012	April 2, 2011
Gross margins		
Photovoltaic business	49%	43%
Polysilicon business	43%	42%
Sapphire business	40%	23%
Overall	45%	42%

Overall gross profit as a percentage of revenue, or gross margin, increased for the fiscal year ended March 31, 2012 to 45% from 42% for the fiscal year ended April 2, 2011. The changes in gross margins primarily relate to our PV and sapphire businesses and are further discussed below.

Our gross margins in our PV, polysilicon and sapphire businesses tend to vary depending on the volume, pricing and timing of revenue recognition.

Our PV gross margins for the fiscal year ended March 31, 2012 were 49% , as compared to 43% for the fiscal year ended April 2, 2011. The increase for the fiscal year ended March 31, 2012 was due primarily to the timing of final acceptance on certain contracts during the fiscal year ended March 31, 2012, lower periodic costs and an increase in the average selling price of our DSS units. In addition, PV gross margins for the fiscal year ended March 31, 2012 included $8.5 million of contract termination revenue with no associated costs. These increases were offset in part by a reduction in factory utilization and a reduction in sales volume of other PV equipment. In addition, gross margins for the fiscal year ended April 2, 2011 included revenue from a terminated turnkey project that generated a gross margin of approximately 17%. We expect margins from our DSS multicrystalline furnaces may decrease in future periods as a result of cost pressure increasing due to competition in the PV equipment market as well as PV customers (and potential customers) having more limited access to cash to purchase PV equipment.

Our polysilicon gross margins for fiscal years ended March 31, 2012 and April 2, 2011 were 43% and 42%, respectively. Revenue recognized in connection with contract terminations for our polysilicon business did not have a material impact on our margins for the fiscal year ended March 31, 2012. The increase in our polysilicon margins is primarily related to an increase in the number of projects on which revenue was recognized, off-set largely by a decrease in the costs associated with those projects.

Our sapphire business gross margins were 40% for the fiscal year ended March 31, 2012, as compared to 23% for the fiscal year ended April 2, 2011. The increase in gross margin for the sapphire business during the fiscal year ended March 31, 2012 is primarily related to the commercialization of our ASF systems. During the fiscal year ended March 31, 2012, we recorded, for the first time, revenues in connection with the sale of our sapphire equipment. Margins on the sale of our sapphire equipment are higher than our historical sapphire margins (which are attributable solely to sapphire material production and sales).

Operating Expenses. The following table sets forth total operating expenses for the fiscal years ended March 31, 2012 and April 2, 2011:

	Fiscal Years Ended March 31, 2012	Fiscal Years Ended April 2, 2011	Change	% Change
	(dollars in thousands)			
Operating Expenses				
Research and development	$ 49,872	$ 23,753	$ 26,119	110%
Selling and marketing	19,763	19,792	(29)	—%
General and administrative	68,575	56,648	11,927	21%
Amortization of intangible assets	8,198	4,500	3,698	82%
Total	$ 146,408	$ 104,693	$ 41,715	40%

Operating expenses increased 40% to $146.4 million for the fiscal year ended March 31, 2012, as compared to $104.7 million for the fiscal year ended April 2, 2011.

Research and development expenses consist primarily of payroll and related costs, including stock-based compensation expense, for research and development personnel who design, develop, test and deploy our PV, polysilicon and sapphire equipment, materials and services. We expect to continue to invest in new product development and attempt to expand certain of our existing product bases in each of our segments, as well as efforts to introduce new products across each of our segments. Research and development expenses increased 110% to $49.9 million for the fiscal year ended March 31, 2012, as compared to $23.8 million for the fiscal year ended April 2, 2011. The increase in research and development costs compared to the fiscal year ended April 2, 2011 was driven primarily by projects related to our sapphire and PV businesses. The increases for the fiscal year ended March 31, 2012 primarily related to increases attributable to: non-production materials of $14.2 million in connection with projects across all lines of business, payroll and payroll related costs of $4.3 million primarily as a result of increased headcount at our US locations and the acquisition of Confluence Solar, costs associated with the disposal of fixed assets of $0.9 million, shipping and receiving expenses of $0.9 million, outside service related costs of $0.8 million and increases of $2.8 million in other research and development expenses. In addition, during the fiscal year ended March 31, 2012, there was a reduction in the amount of research and development resources allocated to customer related projects of $2.2 million. Included in research and development expenses for the fiscal year ended March 31, 2012 are $5.3 million of research and development costs related to Confluence Solar which was acquired on August 24, 2011. We expect our rate of research and development spending to increase in future periods.

Selling and marketing expenses consist primarily of payroll and related costs, stock-based compensation expense and commissions for personnel engaged in marketing, sales and support functions, as well as advertising and promotional expenses. Selling and marketing expenses remained flat at $19.8 million for the fiscal year ended March 31, 2012 and the fiscal year ended April 2, 2011. Sales and marketing expenses for the fiscal year ended March 31, 2012 were primarily driven by a decrease in sales commissions of $2.5 million, principally a result of fewer third party commissions in our PV business in connection with the decrease in PV revenue. This decrease was offset primarily by increases of $1.2 million in payroll and payroll-related expenses due to increased headcount, an increase of $1.0 million in other sales and marketing expenses and an increase of $0.3 million in outside services. Sales commissions are accrued based on operational factors such as deposits, shipments and final acceptances received from customers rather than when revenue is recognized and thus may vary from quarter to quarter. Selling and marketing expenses related to Confluence Solar were not material for the fiscal year ended March 31, 2012.

General and administrative expenses consist primarily of the following components: payroll, stock-based compensation expense and other related costs, including expenses for executive, finance, business applications, human resources and other administrative personnel; and fees for professional services. The increase in general and administrative expenses of 21% to $68.6 million in the fiscal year ended March 31, 2012, as compared to $56.6 million for the fiscal year ended April 2, 2011, was primarily due to an increase in payroll and payroll-related costs of $6.8 million primarily due to increased headcount; increases in facilities costs of $5.9 million primarily related to activities at our Salem and Hazelwood pilot production facilities; an increase in transaction related costs of $2.7 million primarily driven by our acquisition of Confluence Solar; an increase in earn-out accretion of $2.2 million associated with our Crystal Systems and Confluence Solar acquisitions; and an increase in bad debt expense of $0.7 million. These increases were offset primarily by an increase in the amount of general and administrative expenses allocated to other functional areas of $4.6 million; a decrease in legal expenses of $0.9 million, a decrease in tax consulting services of $0.4 million and a decrease of $1.6 million in other general and administrative expenses. Included in general and administrative expenses for the fiscal year ended March 31, 2012 are $2.6 million of expenses related to Confluence Solar which was acquired on August 24, 2011.

Amortization Expense. Amortization of intangible assets consists of the amortization of intangible assets obtained in business or technology acquisitions. Amortization expense attributed to intangible assets increased 82% to $8.2 million for the fiscal year ended March 31, 2012, as compared to $4.5 million for the fiscal year ended April 2, 2011. The increase was due to $4.5 million in amortization related to the Confluence Solar acquisition and $0.8 million from a full year of amortization related to the acquisition of Crystal Systems in fiscal 2011. These increases are offset in part by a decrease of $1.6 million for the year ended March 31, 2012 in amortization expense attributed to the mix of intangible assets being amortized, as certain intangibles related to our PV business became fully amortized during fiscal 2012.

Interest Income. Interest income includes interest earned on invested cash and marketable securities. Interest income decreased to $0.5 million for the fiscal year ended March 31, 2012, as compared to $0.6 million for the fiscal year ended April 2, 2011. The decrease in interest income for the fiscal year ended March 31, 2012 was driven primarily by the decreased returns earned on our invested cash, offset by an increase in our average cash balances during the fiscal year ended March 31, 2012. We typically invest our excess cash primarily in money market mutual funds. All of our available cash was deposited in cash accounts at our financial institutions as of March 31, 2012.

Interest Expense. Interest expense includes interest paid on our debt obligations as well as amortization of deferred financing costs. Interest expense increased to $13.0 million for the fiscal year ended March 31, 2012, as compared to $2.9 million for the fiscal year ended April 2, 2011. The increases were due primarily to interest expense and the amortization of deferred financing costs in connection with the termination of our credit facility that we entered into with Credit Suisse during fiscal 2011, which credit facility was subsequently terminated in November 2011. Included in interest expense for the fiscal year ended March 31, 2012 was $9.6 million of non-cash charges for the amortization of deferred financing costs in connection with the Credit Suisse credit facility. The balance of interest expense relates primarily to interest expense associated with this Credit Suisse credit facility and the credit facility we entered into with Bank of America N.A. (and certain other lenders) in January 2012, as well as deferred financing costs under the Bank of America credit facility.

Other, net. Other income, net, was $2.1 million for the fiscal year ended March 31, 2012 as compared to other expenses, net of $0.4 million for the fiscal year ended April 2, 2011. During the fiscal year ended March 31, 2012, we recorded other income of $3.3 million to reflect an appreciation of the fair value of the accelerated share repurchase contract over the settlement period of our accelerated share repurchase program. This increase was offset in part by a loss of $1.4 million due to fair value adjustments on certain forward foreign exchange contracts that no longer qualified as a cash flow hedge because the hedging relationship was no longer deemed to be highly effective due to changes in the forecasted deliveries for certain euro denominated inventory purchase commitments.

Provision for Income Taxes. Our effective tax rate is based on our expectation of annual earnings from operations in the U.S. and other tax jurisdictions world-wide.

Our world-wide effective tax rate was 32% for the fiscal year ended March 31, 2012 and 35% for the fiscal year ended April 2, 2011. The effective tax rate is lower in the fiscal year ended March 31, 2012 when compared to the same period in the prior fiscal year, principally due to increased levels of income in lower tax jurisdictions. For the fiscal year ended March 31, 2012, 53% of income before tax was generated in foreign jurisdictions compared to 50% in the prior fiscal year. We commenced the transition of our global operations center to Hong Kong in the prior fiscal year, and as a result, the benefit of operating in the lower tax rate jurisdiction had a greater impact on reducing our effective tax rate for the year ended March 31, 2012 compared to the prior year. We continue to increase our activities in Asia to accommodate the sapphire equipment business as well as our global operations center to Hong Kong.

Fiscal Year Ended April 2, 2011 Compared to Fiscal Year Ended April 3, 2010

Revenue. The following table sets forth revenue for the fiscal years ended April 2, 2011 and April 3, 2010.

Business Category	Fiscal Year Ended April 2, 2011	Fiscal Year Ended April 3, 2010	2011 versus 2010 Change	2011 versus 2010 Percentage
	(dollars in thousands)			
Photovoltaic equipment	$ 716,400	$ 180,692	$ 535,708	
Photovoltaic services, parts and other	23,688	6,034	17,654	
Total photovoltaic business	740,088	186,726	553,362	296%
Polysilicon business	143,591	357,519	(213,928)	
Sapphire business	15,305	—	15,305	
Total revenue	$ 898,984	$ 544,245	$ 354,739	65%

Our total revenue increased 65% to $899.0 million for the fiscal year ended April 2, 2011, as compared to $544.2 million for the fiscal year ended April 3, 2010, primarily due to increased demand in our PV business, offset in part by a reduction in revenue from our polysilicon products and services.

Revenue from our PV business increased 296% to $740.1 million for the fiscal year ended April 2, 2011 as compared to $186.7 million for the fiscal year ended April 3, 2010.

The increase is primarily due to increased demand for our DSS products from solar manufacturers that began in fiscal year 2010 and continued into fiscal year 2011. In addition, we began shipping our updated DSS furnace, the DSS 450HP in fiscal 2011.

PV equipment revenue increased 296% to $716.4 million for the fiscal year ended April 2, 2011 as compared to $180.7 million for the fiscal year ended April 3, 2010. Our PV equipment revenue includes sales of DSS units as well as other PV equipment. During the fiscal year ended April 2, 2011, revenue from DSS sales increased 371% to $657.8 million as compared to $139.6 million for the fiscal year ended April 3, 2010, which prior year period included $2.6 million of revenue from a non-refundable deposit from a contract termination. We believe that the increased sales of DSS units is primarily attributed to near-term demand for ingot manufacturing capacity by our Asian customers and the initial orders for our recently introduced DSS 450HP unit. During the fiscal year ended April 2, 2011 we began shipping these units and during the first fiscal quarter of 2011 we began to recognize revenue on these DSS 450HP units when we were able to obtain sufficient evidence of customer acceptance in accordance with our revenue recognition policy.

Sales of other PV equipment, included in total PV equipment revenue, accounted for $58.6 million of our revenue for the fiscal year ended April 2, 2011 and $41.1 million of our revenue for the fiscal year ended April 3, 2010, which prior period included $7.4 million from a terminated turnkey contract. Other PV equipment revenue is primarily attributed to ancillary equipment under our DSS contracts, which can vary based upon specific customer requirements, as well as revenue from PV turnkey integration contracts. During the fiscal year ended April 2, 2011, we recognized turnkey revenue of $41.2 million, including $5.7 million from the sale of DSS units and $35.5 million from the sale of other PV equipment. Included in this turnkey revenue for fiscal 2011 was $40.3 million related to a turnkey contract that was substantially delivered but was terminated due to non-payment of an outstanding receivable. During the fiscal year ended April 3, 2010, we recognized turnkey revenue totaling $33.4 million, including $5.8 million from the sale of DSS units and $27.6 million from the sale of other PV equipment, which included $7.4 million from a turnkey contract termination.

During the fiscal year ended April 2, 2011, we completed a review of our PV turnkey business and decided to no longer offer these services. This decision was based on our assessment of reduced market opportunities, as well as low gross margins compared to our other product lines. Our decision did not impact the recoverability of any tangible or intangible assets, and we did not incur any significant costs to eliminate this product offering.

Revenue from PV services, parts and other was $23.7 million for the fiscal year ended April 2, 2011 and $6.0 million for the fiscal year ended April 3, 2010. This increase is due in part to the sale of upgrade kits that convert our standard DSS 450 unit to a DSS 450HP unit, which we introduced during the fiscal year ended April 3, 2010.

Revenue from our polysilicon business decreased by 60% to $143.6 million for the fiscal year ended April 2, 2011 as compared to $357.5 million for the fiscal year ended April 3, 2010, which prior period included $11.1 million of a non-refundable deposit from contract termination. Polysilicon revenue may fluctuate significantly from period to period due to the cyclical nature of this business and the variability inherent in meeting post-delivery customer acceptance provisions related to reactor performance. Revenue in our polysilicon business is recognized only upon customer acceptance of the product, whether existing or new, unless acceptance becomes perfunctory. As a result our polysilicon business tends to have a higher level of deferred revenue than our PV business. Approximately 65% and 75% of our deferred revenue balance at April 2, 2011 and April 3, 2010, respectively, relates to our polysilicon business. Polysilicon revenue for the fiscal year ended April 2, 2011 substantially relates to contracts that were in our order backlog as of April 3, 2010.

Included in our backlog are certain polysilicon contracts that grant contractual rights which require revenue to be recognized ratably over the contract period. Revenue recognition from these contracts commences when all other elements have been delivered and other contract criteria have been met. During the fiscal year ended April 2, 2011 and April 3, 2010, we recognized revenue on a ratable basis from one of these contracts of $83.5 million and $48.3 million, respectively. As of April 2, 2011, our deferred revenue balance included $72.9 million related to this contract.

Revenue from our sapphire business was $15.3 million for the fiscal year ended April 2, 2011. Our sapphire business revenue is attributable to the sale of material used in sapphire-based LED applications and other specialty markets such as the defense, medical, research and aerospace industries. Our sapphire business was acquired on July 29, 2010 and therefore, there is no prior year comparison.

In both the fiscal years ended April 2, 2011 and April 3, 2010, a substantial percentage of our revenue resulted from sales to a small number of customers. One of our customers accounted for 19%

of our revenue for the fiscal year ended April 2, 2011 and one customer accounted for 34% of our revenue for the fiscal year ended April 3, 2010. No other customer accounted for more than 10% of our revenue during the respective periods.

Cost of Revenue, Gross Profit and Gross Margins. The following table sets forth total cost of revenue and gross profit for the fiscal year ended April 2, 2011 and April 3, 2010:

	Fiscal Year Ended			
	April 2, 2011	April 3, 2010	Change	% Change
	(dollars in thousands)			
Cost of revenue				
Photovoltaic business	$ 425,479	$ 123,955	$ 301,524	
Polysilicon business	83,718	201,308	(117,590)	
Sapphire business	11,792	—	11,792	
Total	$ 520,989	$ 325,263	$ 195,726	60%
Gross profit				
Photovoltaic business	$ 314,609	$ 62,771	$ 251,838	
Polysilicon business	59,873	156,211	(96,338)	
Sapphire business	3,513	—	3,513	
Total	$ 377,995	$ 218,982	$ 159,013	73%

Cost of revenue consists primarily of the costs and expenses we incur to manufacture and deliver our products to our customers, including the costs for the components incorporated into our furnaces and reactors. Our PV cost of revenue and gross profit increased $301.5 million, or 243%, and $251.8 million, or 401%, for the fiscal year ended April 2, 2011 as compared to the fiscal year ended April 3, 2010, respectively, primarily due to an overall increase in PV revenue and the increased expenses associated with meeting the increased demand in our PV business. Our polysilicon cost of revenue and gross profit decreased by $117.6 million, or 58%, and $96.3 million, or 62%, for the fiscal year ended April 2, 2011 as compared to the fiscal year ended April 3, 2010, respectively, primarily due to an overall decrease in polysilicon revenue. During the fiscal year ended April 3, 2010, our PV cost of revenue included costs of $12.8 million related to excess overhead and increases in our inventory reserves reflecting the overall decrease in manufacturing activities as a result of delays in deliveries requested by our customers. Our sapphire business was acquired on July 29, 2010 and therefore, there is no prior year comparison.

The following table sets forth gross margins for our overall business and each segment for the fiscal year ended April 2, 2011 and April 3, 2010:

	Fiscal Year Ended	
	April 2, 2011	April 3, 2010
Gross margins		
Photovoltaic business	43%	34%
Polysilicon business	42%	44%
Sapphire business	23%	—
Overall	42%	40%

Overall gross profit as a percentage of revenue, or gross margin, increased to 42% for the fiscal year ended April 2, 2011 from 40% for the fiscal year ended April 3, 2010.

Our PV gross margins for the fiscal year ended April 2, 2011 were 43% as compared to 34% for the fiscal year ended April 3, 2010. The increase was primarily due to improved factory utilization and lower material costs, offset in part by an increase in other variable costs including warranty, packing and shipping costs, as a result of an increase in sales and order volume in the fiscal year ended April 2, 2011. Gross margins for the PV business during the fiscal year ended April 3, 2010, were adversely impacted by the overall reduction in our sales volumes that resulted in excess manufacturing costs and increased inventory reserves and by turnkey projects which generated gross margins of 21%.

Our polysilicon gross margins for the fiscal year ended April 2, 2011 were 42%, slightly less than the gross margin for the fiscal year ended April 3, 2010 of 44%.

Our gross margins in our PV and polysilicon businesses tend to vary depending on the volume, pricing and timing of revenue recognition.

Our sapphire business gross margins were 23% for the fiscal year ended April 2, 2011 from the sale of sapphire materials. Our sapphire business margins tend to vary depending on the demand for LED materials, as well as volume and customer and product mix. Our sapphire business was acquired on July 29, 2010 and, therefore, there is no prior year comparison. The gross margins for fiscal year ended April 2, 2011 did not include amounts attributable to our ASF furnaces, only amounts related to sapphire material, but we do expect amounts for the ASF furnaces to be included in gross margins for fiscal year 2012.

Operating Expenses. The following table sets forth total operating expenses for the fiscal years ended April 2, 2011 and April 3, 2010:

	Fiscal Years Ended			
	April 2, 2011	April 3, 2010	Change	% Change
	(dollars in thousands)			
Operating Expenses				
Research and development	$ 23,753	$ 21,410	$ 2,343	11%
Selling and marketing	19,792	11,823	7,969	67%
General and administrative	56,648	38,623	18,025	47%
Amortization of intangible assets	4,500	3,164	1,336	42%
Total	$ 104,693	$ 75,020	$ 29,673	40%

Operating expenses increased 40% to $104.7 million for the fiscal year ended April 2, 2011, as compared to $75.0 million for the fiscal year ended April 3, 2010.

Research and development expenses consist primarily of payroll and related costs, including stock-based compensation expense, for research and development personnel who design, develop, test and deploy our PV, polysilicon and sapphire equipment, sapphire materials and our services. Research and development expenses increased 11% to $23.8 million for the fiscal year ended April 2, 2011, as compared to $21.4 million for the fiscal year ended April 3, 2010. The increase was primarily related to an increase in payroll and payroll related costs of $2.0 million and an increase in the use of non-production materials of $1.5 million as we continued to incur labor and material costs associated with our next generation DSS products. These increases were offset in part by a decrease in consulting, contract labor and outside services costs of $1.7 million, primarily in our polysilicon business. Our spending on research and development activities is directly related to projects under development and the timing of the spending associated with each of the projects may vary from quarter to quarter. We acquired Crystal Systems on July 29, 2010, and, therefore, there is no prior year comparison for our sapphire business.

Sales and marketing expenses consist primarily of payroll and related costs, stock-based compensation expense and commissions for personnel engaged in marketing, sales and support functions, as well as advertising and promotional expenses. Selling and marketing expenses increased 67% to $19.8 million for the fiscal year ended April 2, 2011 from $11.8 million for the fiscal year ended April 3, 2010. Selling and marketing expenses for our PV business increased by approximately $6.3 million, primarily due to an increase in commissions of $3.8 million and payroll and payroll-related costs of $1.7 million. Selling and marketing expenses for our polysilicon business increased by approximately $1.1 million primarily due to an increase in third party commissions of $0.6 million. During fiscal year ended April 3, 2010, we had reduced the number of employee and non-employee sales representatives eligible to receive commissions. Sales commissions are accrued based on operational factors such as deposits, shipments and final acceptances received from customers rather than when revenue is recognized and thus may vary from quarter to quarter. We acquired Crystal Systems on July 29, 2010, and, therefore, there is no prior year comparison for our sapphire business.

General and Administrative. General and administrative expenses consist primarily of the following components: payroll, stock-based compensation expense and other related costs, including expenses for executive, finance, business applications, human resources and other administrative personnel; and fees for professional services. General and administrative expenses increased 47% to $56.6 million for the fiscal year ended April 2, 2011 from $38.6 million for the fiscal year ended April 3, 2010. The increase was primarily related to increases in payroll and related costs of $7.8 million which includes a $3.6 million increase in cash incentive compensation as a result of exceeding management incentive compensation targets; increases in tax consulting, legal fees and outside service costs of $1.9 million, primarily related to the transition of our base of operations to Hong Kong, the acquisition of Crystal Systems and a $1.0 million charge related to settlement of our securities class action lawsuit; increased facilities and office expenses of $3.5 million; increases in depreciation of $1.1 million driven primarily by our expansion of the sapphire business and $2.3 million in earn-out accretion in connection with the acquisition of Crystal Systems.

Amortization of Intangible Assets. Amortization of intangible assets consists of the amortization of intangible assets obtained in business or technology acquisitions. Amortization expense attributed to intangible assets increased 42% to $4.5 million for the fiscal year ended April 2, 2011 from $3.2 million for the fiscal year ended April 3, 2010. The increase is due to the amortization of intangible assets related to the Crystal Systems acquisition of $2.1 million, offset in part by a decrease of $0.8 million related to certain intangibles in our PV business that became fully amortized during the fiscal year ended April 2, 2011.

Interest Income. Interest income includes interest earned on invested cash and marketable securities. During the fiscal year ended April 2, 2011, we earned $0.6 million in interest income as compared to $0.4 million in interest income for the fiscal year ended April 3, 2010. We invest our excess cash primarily in money market funds. Interest income increased due to higher overall balances of our cash and cash equivalents in the fiscal year ended April 2, 2011 as compared to fiscal year ended April 3, 2010.

Interest Expense. Interest expense includes interest paid on our debt obligations as well as amortization of deferred financing costs. During the fiscal year ended April 2, 2011, interest expense increased to $2.9 million, as compared to $0.8 million for the fiscal year ended April 3, 2010. The increase is due primarily to interest expense and the amortization of deferred financing costs in connection with entering into the credit facility with Credit Suisse during the fiscal year ended April 2, 2011 (which was subsequently terminated in November 2011).

Interest Component of Forward Foreign Exchange Contracts. The interest component of forward foreign exchange contracts represents the interest rate differential between the two currencies involved in our forward foreign exchange contracts for the specified period of time and can be either a premium or discount at the beginning of the contract and are adjusted to reflect interest rate market condition changes. Such changes can result in interest income or interest expense over the life of the contract. These amounts were not significant for the fiscal years ended April 2, 2011 and April 3, 2010.

Other Expense, net. Other expense, net, was $0.4 for the fiscal year ended April 2, 2011 as compared to other expense, net of $3.1 million for the fiscal year ended April 3, 2010. Other expense for the fiscal year ended April 2, 2011 was comprised primarily of net costs incurred in connection with our secondary offering in September 2010 of $0.5 million and gains recorded on foreign currency transactions. During the fiscal year ended April 3, 2010, other expense, net included costs associated with a secondary public offering of our common stock of $0.8 million and losses on foreign exchange of $0.4 million. In addition, in fiscal 2010 we incurred a loss of $2.1 million due to fair value adjustments on certain forward foreign exchange contracts that no longer qualified as a cash flow hedge because the hedging relationship was no longer deemed to be highly effective due to changes in the forecasted deliveries for certain Euro denominated purchase commitments.

Provision for Income Taxes. Our effective tax rate was 35.4% and 37.6% for the fiscal years ended April 2, 2011 and April 3, 2010, respectively. Our tax rate is affected by recurring items, such as tax rates in foreign jurisdictions and the relative amount of income we earn in foreign jurisdictions, which we expect will continue to increase as a result of our continued transition of our global operations center to Hong Kong. The change in our reported tax rate for the fiscal year ended April 2, 2011, as compared to the same period in the prior year, primarily relates to proportionally higher levels of income in lower tax jurisdictions.

Net Income. As a result of the foregoing factors, for the fiscal year ended April 2, 2011, we recorded net income of $174.8 million, compared to a net income of $87.3 million for the fiscal year ended April 3, 2010.

Liquidity and Capital Resources

Overview

We fund our operations generally through cash generated by operations, proceeds from our credit facilities and proceeds from exercises of stock awards.

Our combined cash and cash equivalents decreased by $11.8 million during the fiscal year ended March 31, 2012, from $362.7 million as of April 2, 2011 to $350.9 million as of March 31, 2012. Our liquidity is affected by many factors, some based on the normal operations of our business and others related to the uncertainties of the industry and global economies.

On January 31, 2012, GT Advanced Technologies Inc., our U.S. operating subsidiary (or the U.S. Borrower) and our Hong Kong subsidiary (or the Hong Kong Borrower) entered into a credit agreement (which we refer to as the 2012 Credit Agreement), with Bank of America, N.A., as administrative agent, Swing Line Lender and L/C Issuer (or Bank of America) and the lenders from time to time party thereto. The 2012 Credit Agreement consists of a term loan facility (the 2012 Term Facility) provided to the U.S. Borrower in an aggregate principal amount of $75.0 million with a final maturity date of January 31, 2016, a revolving credit facility (or the U.S. Revolving Credit Facility) available to the U.S. Borrower in an aggregate principal amount of $25.0 million with a final maturity date of January 31, 2016 and a revolving credit facility available to the Hong Kong Borrower in an aggregate principal amount of $150.0 million with a final maturity date of January 31, 2016 (or the Hong Kong Revolving Facility; together with the U.S. Revolving Credit Facility, the 2012 Revolving Credit Facility; and together with the Term Facility, the 2012 Credit Facilities). The 2012 Credit Facilities are available in the form of base rate loans based on Bank of America's prime rate plus a margin of 2.00% or Eurodollar rate loans based on LIBOR plus a margin of 3.00%. The 2012 Term Facility amortizes in equal quarterly amounts which in the aggregate equal 5% of the original principal amount of the Term Facility in each of years 1 and 2 of the loan and 10% of the original principal amount of the Term Facility in each of years 3 and year 4 of the loan, with the balance payable on January 31, 2016. The 2012 Credit Facilities are subject to mandatory prepayment in the event that we have excess cash flow during any fiscal year (with such first mandatory prepayment scheduled to be made following the end of our transaction period ending December 31, 2012), subject to certain exceptions. The 2012 Credit Facilities also requires us to comply with certain covenants, including a maximum consolidated leverage ratio and a minimum consolidated interest coverage ratio. Proceeds of the 2012 Term Facility and 2012 Revolving Facility are available for use by us and our applicable subsidiaries for general corporate purposes. The full amount of the 2012 Term Facility was drawn by us on January 31, 2012 and no amounts have been drawn on the 2012 Revolving Facility as of March 31, 2012. We use the 2012 Revolving Facility in connection with the issuance of letters of credit which may be up to the aggregate principal amount of the 2012 Revolving Facility.

On December 13, 2010, we entered into the Credit Agreement (which we refer to as the Credit Suisse Credit Agreement), with Credit Suisse AG, Cayman Islands Branch, (or Credit Suisse) as administrative agent and collateral agent, and the lenders from time to time, party to the Credit Suisse Credit Agreement. The Credit Suisse Credit Agreement consisted of the term facility, in an aggregate maximum principal amount of $125.0 million with a final maturity date of December 13, 2013 and the revolving facility, in an aggregate maximum principal amount of $75.0 million with a final maturity date of December 13, 2013. In November 2011, we terminated the Credit Suisse Credit Agreement, as amended, and related Guarantee and Collateral Agreement, which was entered into at the time the Credit Suisse Credit Agreement was executed in order to secure certain of the obligations under the Credit Suisse Credit Agreement. On November 15, 2011, we paid $91.3 million to settle amounts owed under the term facility portion of the Credit Suisse credit agreement, which included principal of $90.9 million and accrued interest of $0.4 million. In connection with the termination of this credit agreement, we recorded interest expense of $6.1 million related to the unamortized portion of debt issuance costs.

As noted above, our cash and cash equivalents balances decreased by $11.8 million during the fiscal year ended March 31, 2012, from $362.7 million as of April 2, 2011 to $350.9 million as of March 31, 2012. The decrease was principally attributable to $75.0 million paid by us in connection with the repurchase of shares of our common stock in an accelerated share repurchase and approximately $60.4 million of cash paid to acquire Confluence Solar, offset in part by a $217.7 million increase in cash flow from operating activities and proceeds from our 2012 Term Facility. In addition, in November 2011 we elected to terminate the Credit Suisse Credit Agreement. In connection with this termination, we made a principal and interest payment of $91.3 million to settle the final amounts owed under the Credit Suisse Credit Agreement upon termination, including all principal and interest due up to that time. As a result of the termination of the Credit Suisse Credit Agreement, we were required to cash collateralize the then outstanding letters of credit, representing performance guarantees issued against customer deposits (as of March 31, 2012, all then outstanding letters of credit were issued pursuant to the 2012 Revolving Facility). Net cash provided by operating activities in the fiscal year ended March 31, 2012 allowed us to fund our working capital requirements during such period. The following discussion of the changes in our cash balance refers to the various sections of our Consolidated Statements of Cash Flows, which appears in Item 8 of this Annual Report on Form 10-K.

Net cash provided by operating activities in each of the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010 has allowed us to fund our working capital requirements. We manage our cash inflows through the use of customer deposits and milestone billings that are intended to allow us in turn to meet our cash outflow requirements, which consist primarily of vendor payments and prepayments for contract related costs (raw material and components costs) and payroll and overhead costs. Customer deposits are initially classified as deposits, and then reclassified to deferred revenue when equipment has been shipped or services have been provided, but revenue has not yet been recognized. We generally make advance payments to suppliers after the corresponding deposit is received from our customers.

At March 31, 2012, we had $350.9 million in cash and cash equivalents, of which $236.5 million was held by certain of our foreign subsidiaries. We currently intend that cash and cash equivalents held by these foreign subsidiaries will be indefinitely reinvested in foreign jurisdictions in order to fund working capital requirements and repay debt (both third-party and inter-company) and, in the event we were to undertake certain strategic initiatives, we would use this cash for such strategic initiatives (such as investment, expansion and acquisitions) of our foreign subsidiaries in the normal course of business. Moreover, we do not currently intend to repatriate cash and cash equivalents held by foreign subsidiaries to the United States because cash generated from our domestic businesses and credit available under our credit agreement with Bank of America, N.A. are currently sufficient (and are expected to continue to be sufficient for at least the next 12 months) to fund the cash needs of our operations in the United States. However, if, in the future, cash and cash equivalents held by foreign subsidiaries are needed to fund the our operations in the United States or for the purpose of making certain strategic investments in the United States, the repatriation of such amounts to the United States would result in a significant incremental tax liability in the period in which the decision to repatriate occurs. Payment of any incremental tax liability would reduce the cash available to us to fund our operations by the amount of taxes paid.

Our principal uses of cash are for raw materials and components, wages, salaries and investment activities, such as the purchase of property, plant and equipment. We outsource a significant portion of our manufacturing and therefore we require minimal capital expenditures to meet our production demands. Our capital expenditures for our fiscal year ended March 31, 2012, April 2, 2011 and April 3, 2010, were $48.2 million, $31.3 million, and $4.6 million respectively, which were used primarily for improving our business information systems, expanding product offerings and expanding certain of our facilities. Our total capital expenditures in the twelve month period ending March 30, 2013 are expected to range from approximately $45 million to approximately $65 million, consisting primarily of research and development expenditures and expanding our HiCz™ pilot production plant in Hazelwood, Missouri. The foregoing estimate of our capital expenditures in the twelve month period ending March 30, 2013 excludes and capital expenditures we may make in connection with any business, assets or technologies we may acquire during this period.

We believe that cash generated from operations together with our existing cash, customer deposits and any borrowings under the 2012 Credit Agreement, including the 2012 Revolving Facility, will be sufficient to satisfy working capital requirements, commitments for capital expenditures and other cash requirements for the foreseeable future, including at least the next twelve months. If we were to engage in any strategic transactions, such as an acquisition of another business or technologies from third parties, it could require that we utilize a significant amount of our available cash and, as a result, we may be required to increase our outstanding indebtedness or raise additional capital in through the sale of equity, which may not be available on favorable terms, or at all.

Under the terms of the 2012 Credit Agreement, we are required to pay to Bank of America (and the other lenders) the lesser of (i) $25.0 million or (ii) 50% of excess cash flow (as defined in the 2012 Credit Agreement) (as reduced by voluntary repayments of the Term Facility), subject to certain exceptions. The first such mandatory prepayment is to be made following the end of our transition period ending December 31, 2012.

Cash Flows

The following discussion of the changes in our cash balance refers to the various sections of our consolidated statements of cash flows, which appears in Item 8 of this Annual Report on Form 10-K. The following table summarizes our primary sources and uses of cash in the periods presented:

	Fiscal Years Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
	(dollars in thousands)		
Cash provided by (used in):			
Operating activities	$ 217,673	$ 251,774	$ 147,276
Investing activities	(107,983)	(34,033)	(24,540)
Financing activities	(121,643)	(85,948)	863
Effect of foreign exchange rates on cash	107	208	1
Net (decrease) increase in cash and cash equivalents	$ (11,846)	$ 132,001	$ 123,600

Cash Flows From Operating Activities

For the fiscal year ended March 31, 2012, our cash provided by operations was $217.7 million. Our cash flow from operations was driven primarily by net income of $183.4 million, an increase in customer deposits of $187.6 million due to new orders received during the fiscal year ended March 31, 2012 in our polysilicon and sapphire equipment businesses and a decrease in accounts receivable of $20.2 million. These items were partially offset by an increase in inventories of $75.8 million, an increase in vendor advances of $68.6 million, a decrease in deferred revenue of $249.4 million and a decrease in accounts payable and accrued expenses of $45.4 million.

For the fiscal year ended April 2, 2011, our cash provided by operations was $251.8 million. Our cash flow from operations was driven by net income of $174.8 million, an increase in customer deposits of $23.8 million in our PV, polysilicon and sapphire businesses, an increase in deferred revenue less deferred costs of $54.3 million, as well as an increase in accounts payable and accrued expenses of $60.5 million. These items were partially offset by an increase in inventories and vendor advances of $60.3 million and an increase in accounts receivable of $33.0 million.

For the fiscal year ended April 3, 2010 our cash provided by operations was $147.3 million. Our cash flow from operations was driven by net income of $87.3 million, reductions in inventory and vendor advances of $130.8 million reflecting an increase in shipments during the latter half of the fiscal year resulting in a favorable impact to cash flow, a decrease in accounts receivable of $4.8 million and an income tax refund of $35.3 million due to an election of a change in accounting method for tax purposes. As a result of this change in methodology, we were in an overpayment position regarding our estimated income taxes for the year ended March 28, 2009. We filed for a refund of Federal income taxes in May 2009 in the amount of $35.3 million, which was received in June 2009. These items were partially offset by a decrease in customer deposits of $103.0 million and a decrease in accounts payable and accrued expenses of $22.4 million.

Cash Flows From Investing Activities

For the fiscal year ended March 31, 2012, our cash used in investing activities was $108.0 million. The acquisition of Confluence Solar, net of cash acquired and purchase price adjustment, consumed approximately $60.4 million of cash. Additionally, capital expenditures for the period were approximately $48.2 million. These capital expenditures were primarily used for expanding our product offerings in the PV business (including developing our HiCz technology) and sapphire business and improving our business information systems.

For the fiscal year ended April 2, 2011, our cash used in investing activities was $34.0 million. The acquisition of Crystal Systems, net of cash acquired, used approximately $22.8 million of cash. Capital expenditures were approximately $31.3 million and were primarily used for expanding our sapphire business facility and improving our business information systems. These items were partially offset by the proceeds from sale of $20.0 million of short-term investments.

During the fiscal year ended April 3, 2010, cash used in investing activities was $24.5 million, consisting of $4.6 million for the purchase of property, plant and equipment, and $20.0 million for the purchase of short-term investments. Short-term investments consist of commercial paper that matures within one year from the date of purchase.

Cash Flows From Financing Activities

For the fiscal year ended March 31, 2012, cash used in financing activities was $121.6 million, driven primarily by principal payments made under our Credit Suisse Credit Agreement of $120.3 million. Of these principal payments, $9.4 million related to scheduled principal payments under this Credit Suisse Credit Agreement. In addition, $20.0 million represents an additional voluntary principal prepayment made by us to Credit Suisse on June 15, 2011. In addition, we terminated the Credit Suisse Credit Agreement in November 2011 and made a principal payment of $90.9 million to settle the final amounts owed under that credit facility. On November 18, 2011, we entered into an accelerated share repurchase agreement with UBS AG, under which we repurchased $75.0 million of our common stock. The total number of shares of our common stock received by us was 9.4 million.

During the fiscal year ended March 31, 2012, we paid $4.9 million in connection with the achievement of certain of our contingent consideration obligations to the former shareholders of Crystal Systems. A portion of this payment has been classified as an operating cash outflow pursuant to the accounting guidance for business combinations.

These amounts were offset by the receipt of $75.0 million in connection with entering into the 2012 Credit Agreement with Bank of America and the lenders from time to time party thereto, as well as the receipt of $10.6 million of proceeds and related excess tax benefits in connection with the exercise of outstanding stock options.

For the fiscal year ended April 2, 2011, cash used by financing activities was $85.9 million, driven primarily by the repurchase of our common stock from GT Solar Holdings, LLC (a company that formerly held more than a majority of the shares of our outstanding common stock and which company was controlled by investment funds affiliated with Oaktree Capital Management, L.P.), which was offset in part by proceeds received pursuant to the Credit Suisse Credit Agreement.

On November 12, 2010, we repurchased 26.5 million shares of our common stock from GT Solar Holdings, LLC at a per share price of $7.66, or an aggregate of approximately $203.5 million. The source of funds for the repurchase of these shares of common stock was our available cash.

On December 13, 2010, we entered into the Credit Suisse Credit Agreement, which consisted of a term facility in an aggregate principal amount of $125.0 million with a final maturity date of December 13, 2013 and a revolving facility in an aggregate principal amount of $75.0 million with a final maturity date of December 13, 2013. The full amount of the term facility was drawn by us on December 13, 2010 and no amounts were drawn on the revolving facility. After payment of fees related to the Credit Suisse Credit Agreement we received approximately $115.0 million in connection with the term facility. In March 2011, we made a principal payment of $4.7 million in connection with the term facility. The Credit Suisse Credit Agreement was subsequently terminated in November 2011.

In March 2011, we paid $3.5 million in connection with the achievement of certain targets of our contingent consideration obligation to the former shareholders of Crystal Systems. A portion of this payment has been classified as an operating cash outflow pursuant to the accounting guidance for business combinations.

During the fiscal year ended April 3, 2010, cash generated from financing activities was $0.9 million representing the net cash from the exercise of stock options.

Long Term Debt and Revolving Credit Facility

On December 13, 2010, we entered into the Credit Agreement (which we refer to as the Credit Suisse Credit Agreement), with Credit Suisse AG, Cayman Islands Branch, (or Credit Suisse) as administrative agent and collateral agent, and the lenders from time to time, party to the Credit Agreement. The Credit Agreement consisted of the term facility, in an aggregate maximum principal amount of $125.0 million with a final maturity date of December 13, 2013 and the revolving facility, in an aggregate maximum principal amount of $75.0 million with a final maturity date of December 13, 2013.

In November 2011, we terminated the Credit Suisse Credit Agreement, as amended, and related Guarantee and Collateral Agreement, which was entered into at the time the Credit Suisse Credit Agreement was executed in order to secure certain of the obligations under the Credit Suisse Credit Agreement. On November 15, 2011, we paid $91.3 million to settle amounts owed under the term facility portion of the Credit Suisse Credit Agreement, which included principal of $90.9 million and accrued interest of $0.4 million. In connection with the termination of this credit agreement, we recorded interest expense of $6.1 million related to the unamortized portion of debt issuance costs.

On January 31, 2012, GT Advanced Technologies Inc., our U.S. operating subsidiary (or the U.S. Borrower) and our Hong Kong subsidiary (or the Hong Kong Borrower) entered into a credit agreement (which we refer to as the 2012 Credit Agreement), with Bank of America, N.A., as administrative agent, Swing Line Lender and L/C Issuer (or Bank of America) and the lenders from time to time party thereto. The 2012 Credit Agreement consists of a term loan facility (the 2012 Term Facility) provided to the U.S. Borrower in an aggregate principal amount of $75.0 million with a final maturity date of January 31, 2016, a revolving credit facility (or the U.S. Revolving Credit Facility) available to the U.S. Borrower in an aggregate principal amount of $25.0 million with a final maturity date of January 31, 2016 and a revolving credit facility (or the Hong Kong Revolving Facility; together with the U.S. Revolving Credit Facility, the 2012 Revolving Credit Facility; and together with the Term Facility, the 2012 Credit Facilities) available to the Hong Kong Borrower in an aggregate principal amount of $150.0 million with a final maturity date of January 31, 2016. The 2012 Credit Facilities are available in the form of base rate loans based on Bank of America's prime rate plus a margin of 2.00% or Eurodollar rate loans based on LIBOR plus a margin of 3.00%. The 2012 Term Facility amortizes in equal quarterly amounts which in the aggregate equal 5% of the original principal amount of the Term Facility in each of years 1 and 2 of the loan and 10% of the original principal amount of the Term Facility in each of years 3 and year 4 of the loan, with the balance payable on January 31, 2016. The 2012 Credit Facilities are subject to mandatory prepayment in the event that we have excess cash flow during any fiscal year (with the first mandatory prepayment scheduled to be made following the end of our transition period ending December 31, 2012), subject to certain exceptions. The 2012 Credit Facilities also requires us to comply with certain covenants, including a maximum consolidated leverage ratio and a minimum consolidated interest coverage ratio. Proceeds of the 2012 Term Facility and 2012 Revolving Facility are available for use by us and our subsidiaries for general corporate purposes. The full amount of the 2012 Term Facility was drawn by us on January 31, 2012 and no amounts have been drawn on the 2012 Revolving Facility as of such date. We use the 2012 Revolving Credit Facility in connection with the issuance of letters of credit up to the aggregate principal amount of such Revolving Facility.

The proceeds of the 2012 Term Facility and the U.S. Revolving Credit Facility are secured by a lien on substantially all of the tangible and intangible property of us and our wholly-owned domestic subsidiaries (including the U.S. Borrower), including but not limited to accounts receivable, inventory, equipment, general intangibles, certain investment property, certain deposit and securities accounts, certain owned real property and intellectual property, and a pledge of the capital stock of each of our wholly-owned domestic subsidiaries (limited in the case of pledges of capital stock of any foreign subsidiaries, to 65% of the capital stock of any first-tier foreign subsidiary), subject to certain exceptions and thresholds, and the repayment of such proceeds is guaranteed by us and our wholly-owned domestic subsidiaries. The proceeds of the Hong Kong Revolving Credit Facility are secured by a lien on substantially all of the tangible and intangible property of the Hong Kong Borrower, including but not limited to accounts receivable, inventory, equipment, general intangibles, certain investment property, certain deposit and securities accounts, certain owned real property and intellectual property, and a pledge of the capital stock of the Hong Kong Borrower, subject to certain exceptions and thresholds, and the repayment of such proceeds is guaranteed by us and our wholly-owned domestic subsidiaries.

We may, at our option, prepay borrowings under the 2012 Credit Facility (in whole or in part), at anytime without penalty subject to conditions set forth in the 2012 Credit Facility. We are required to make mandatory prepayments:

- of the lesser of (i) $25.0 million or (ii) 50% of excess cash flow (as defined in the 2012 Credit Agreement) in any fiscal year (with the first mandatory prepayment scheduled to be made following the end of our transition period ending December 31, 2012) (as reduced by voluntary repayments of the Term Facility), subject to certain exceptions;

- 100% of the net cash proceeds (as defined in the 2012 Credit Agreement) of all asset sales or other dispositions of property (as described in the 2012 Credit Agreement) by us and our subsidiaries in excess of $5.0 million, subject to certain exceptions;

- 100% of the net cash proceeds (as defined in the 2012 Credit Agreement) of extraordinary receipts (as described in the 2012 Credit Agreement) by us and our subsidiaries in excess of $5.0 million, subject to certain exceptions; and

- 100% of the net cash proceeds (as defined in the 2012 Credit Agreement) from non-permitted indebtedness by us, subject to certain exceptions.

The 2012 Credit Agreement imposes certain financial covenants on us and our subsidiaries, including, (i) minimum ratio of consolidated adjusted EBITDA (as defined in the 2012 Credit Agreement) to consolidated interest charges (as defined in the 2012 Credit Agreement) of 3.50 to 1.00 at the end of any period of four consecutive fiscal quarters and (iii) maximum leverage ratio (as defined in the 2012 Credit Agreement) of 2.0 to 1.0 at the end of any period of four consecutive fiscal quarters.

The 2012 Credit Agreement requires that we and our subsidiaries comply with covenants relating to customary matters (in addition to the financial covenants described above), including with respect to incurring indebtedness and liens, using the proceeds received under the 2012 Credit Agreement, transactions with affiliates, making investments and acquisitions, effecting mergers and asset sales, prepaying indebtedness, and restrictions on our ability to pay dividends to shareholders. As of March 31, 2012, we were in compliance with all covenants under the 2012 Credit Agreement.

The 2012 Credit Agreement includes events of default relating to customary matters, including, among other things, nonpayment of principal, interest or other amounts; violation of covenants; inaccuracies in the representations and warranties in any material respect; cross default and cross acceleration with respect to indebtedness in an aggregate principal amount of $10.0 million or more; bankruptcy or similar proceedings or events; judgments involving liability of $10.0 million or more that are not paid; ERISA events; actual or asserted invalidity of guarantees or security documents; and change of control. Events of default can trigger, among other things, acceleration of payment of all outstanding principal and interest under the 2012 Credit Agreement.

We use amounts available under the 2012 Revolving Facilities in connection with standby letters of credit related to customer deposits. As of March 31, 2012, we had approximately $126.5 million of outstanding letters of credit pursuant to the 2012 Revolving Facilities resulting in approximately $48.5 million of available credit under the 2012 Revolving Facilities. The 2012 Credit Agreement allows us to cash collateralize letters of credit up to an amount of $35.0 million to the extent that outstanding standby letters of credit exceed the amount of our collective 2012 Revolving Credit Facilities.

Share Repurchase Program

In November 2011, our board of directors authorized a $100.0 million share repurchase program consisting of the purchase of $75.0 million of our common stock which was financed with existing cash through an accelerated share repurchase program (or ASR), and the purchase of an additional $25.0 million of its common stock that may be made from time to time through open market repurchases or privately negotiated transactions, as determined by our management. On November 18, 2011, we entered into an accelerated share repurchase agreement with UBS AG, under which we would repurchase $75.0 million of our common stock. The effective per share purchase price was based on the average of the daily volume weighted average prices per share of our common stock, less a discount, calculated during the term of the accelerated share repurchase agreement. In connection with this agreement, in November 2011 we paid $75.0 million to UBS AG and at such time received 7.8 million shares, of which:

- $60.0 million, or 80%, represented the value, based on the closing price of the our common stock on November 18, 2011, of the approximately 7.8 million shares of our common stock that UBS AG delivered to us in November 2011; and

- $15.0 million, or 20%, represented an advance payment that covered additional shares that UBS AG would deliver to us upon settlement. This advanced payment was accounted for as a forward share repurchase contract in the statement of stockholders' equity, as a reduction to additional paid-in capital.

On March 6, 2012, we received notice from UBS of its intent to exercise and finalize the ASR transaction with a valuation date of March 5, 2012. Prior to this notice, on March 5, 2012, UBS delivered 0.9 million shares of common stock in anticipation of having to deliver shares to us as part of the final settlement. UBS delivered these shares early, as was their right under the contract. On March 8, 2012 UBS delivered another 0.7 million shares of our common stock pursuant to its notice of exercise to fully settle its obligations under the ASR agreement.

The total number of shares we received under the ASR was 9.4 million. This amount is comprised of the 7.8 million initial shares, 0.9 million early delivery shares and 0.7 million final settlement shares. The effective per share repurchase price was $7.95 per share based on the volume-weighted average share price of the company's common stock, less a discount, during the ASR period. All of the shares received by us under the ASR were canceled and retired upon receipt by us.

Derivatives and Hedging Activities

We enter into foreign currency forward exchange contracts to hedge certain cash flow exposures from the impact of changes on foreign currency exchange rates. These forward foreign exchange contracts are entered into in connection with certain foreign currency denominated inventory purchases made in the normal course of business and accordingly are not speculative in nature.

As of March 31, 2012, we had euro denominated forward foreign exchange contracts with notional amounts of €24.9 million, or $33.8 million, that qualified as cash flow hedges. These contracts had a combined fair value asset and liability of $0.1 million and $0.6 million as of March 31, 2012, respectively. These contracts typically expire within 12 months of the date on which they are entered into.

During the fiscal year ended March 31, 2012, we recorded other expense of $1.4 million in connection with ineffective portions of certain foreign currency forward exchange contracts.

Changes in the fair value of our cash flow hedges are recognized in stockholders' equity as a component of accumulated other comprehensive loss as these financial instruments qualify for hedge accounting.

Off-Balance Sheet Arrangements

We do not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities that would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. As such, we are not exposed to any financing, liquidity, market or credit risk that could arise if we had engaged in such relationships.

Standby Letters of Credit

As of March 31, 2012, we had $126.5 million of standby letters of credit outstanding against the 2012 Revolving Credit Facilities (which are a component of the 2012 Credit Agreement we entered into with Bank of America N.A. and certain other lenders in January 2012) which represented performance guarantees issued against customer deposits. These standby letters of credit are scheduled to expire within the next twelve months and have not been included in the consolidated financial statements included herein.

Contractual Obligations and Commercial Commitments

Under generally accepted accounting principles as used in the United States, some obligations and commitments are not required to be included in the consolidated balance sheets and statements of income. These obligations and commitments, while entered into in the normal course of business, may have a material impact on liquidity.

The following table reflects our contractual obligations and commercial commitments as of March 31, 2012:

	Payments due by period				
	Total	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 years
	(dollars in thousands)				
Operating lease obligations(a)	$ 22,979	$ 4,187	$ 6,601	$ 3,691	$ 8,500
Purchase commitments under agreements(b)	418,198	386,732	27,639	3,827	—
Contingent consideration obligations(c)	27,993	17,993	10,000	—	—
Long term debt obligations(d)	75,000	3,750	11,250	60,000	—
Interest obligations(d)	8,515	2,395	4,392	1,728	—
Other long-term liabilities(e)(f)	547	—	547	—	—
Total	$ 553,232	$ 415,057	$ 60,429	$ 69,246	$ 8,500

(a) These amounts represent our minimum operating lease payments due under non-cancellable operating leases as of March 31, 2012. For additional information about our operating leases, refer to Note 13 of the Notes to Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K.

(b) Purchase commitments under agreements relate to arrangements entered into with suppliers of polysilicon, PV and sapphire raw materials and ancillary equipment. These agreements specify future quantities and pricing of products to be supplied by the vendors and we may be subject to a financial penalty, including forfeiting any deposits in the event that we terminate the arrangements. Certain portions of the purchase commitments are satisfied in advance of the delivery of goods in the form of prepayments, which are then offset against future orders upon delivery. As of March 31, 2012, our outstanding prepayments under certain of these purchase commitments amounted to $88.6 million. In connection with our acquisition of Confluence Solar, we have agreed to make capital expenditures of at least $25.0 million, of which $22.0 million has been spent as of March 31, 2012, to develop the business and, in part, to support the achievement of the financial, operational and technical targets associated with the contingent consideration.

(c) Consists of contingent payments, which have not been risk adjusted or discounted, that we may be obligated to pay to the former shareholders of Crystal Systems and Confluence Solar based on the full achievement of certain contingent consideration targets.

(d) Amounts relate to principal and interest obligations under our credit agreement with Bank of America and certain other lenders that we entered into in January 2012. For additional information about our long-term debt, refer to Note 9 of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K.

(e) Other long-term liabilities reflected on our consolidated balance sheet are for a liability related to long-term employee incentive payments.

(f) Liabilities for unrecognized income tax benefits, and the associated interest and penalties, of $26.4 million as of March 31, 2012 are not included in the table above as we are uncertain as to if or when such amounts may be settled.

Recent Accounting Pronouncements

Recently Adopted Accounting Pronouncements

On April 3, 2011, we prospectively adopted the provisions of Accounting Standards Update ("ASU") 2009-13, *Revenue Recognition (Topic 605) - Multiple-Deliverable Revenue Arrangements, or* ASU 2009-13, for new and materially modified arrangements originating on or after April 3, 2011.

In January 2012, we prospectively adopted Accounting Standards Update No. 2011-04, *Fair Value Measurement (Topic 820): Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRSs*. This accounting standard clarifies the application of certain existing fair value measurement guidance and expands the disclosures for fair value measurements that are estimated using significant unobservable (Level 3) inputs. This amendment is effective on a prospective basis for annual and interim reporting periods beginning on or after December 15, 2011. The adoption of this update did not have a material impact on our consolidated financial statements.

Accounting Pronouncements Not Yet Adopted

In June 2011, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update No. 2011-05, *Presentation of Comprehensive Income*. This standard eliminates the current option to report other comprehensive income and its components in the statement of changes in stockholders' equity. The amendment requires that all non-owner changes in stockholders' equity be presented either in a single statement of comprehensive income or in two separate but consecutive statements. The standard is intended to enhance comparability between entities that report under U.S. GAAP and those that report under International Financial Reporting Standards, and to provide a more consistent method of presenting non-owner transactions that affect an entity's equity. The amendments in this update are to be applied retrospectively. The amendments are effective for fiscal years, and interim periods within those years, beginning after December 15, 2011, which for us would be the fiscal year beginning April 1, 2012. We have not yet determined which method we will elect to present comprehensive income under the new standard.

In September 2011, the FASB issued Accounting Standards Update No. 2011-08, *Testing Goodwill for Impairment*, which amends the guidance on testing goodwill for impairment. Under the revised guidance, entities testing goodwill for impairment have the option of performing a qualitative assessment before calculating the fair value of the reporting unit. If entities determine, on the basis of qualitative factors, that the fair value of the reporting unit is more likely than not less than the carrying amount, the two-step impairment test would be required. This amendment does not change how goodwill is calculated or assigned to reporting units, nor does it revise the requirement to test goodwill annually for impairment. In addition, it does not amend the requirement to test goodwill for impairment between annual tests if events or circumstances warrant; however, it does revise the examples of events and circumstances that an entity should consider. This update is effective for fiscal years beginning after December 15, 2011, and early adoption is permitted. We plan to adopt this new standard on April 1, 2012. The adoption of this standard is not expected to have a material impact on our consolidated financial statements.

Item 7A. *Quantitative and Qualitative Disclosures about Market Risk*

Investment Risks

We typically maintain an investment portfolio of bank deposits or money market funds with various financial institutions. At any time a rise in market interest rates could have an adverse impact on the fair value of our investment portfolio. Conversely, declines in market interest rates could have a material impact on the interest earnings of our investment portfolio. We do not currently hedge these interest rate exposures. We place our investments with high quality issuers and have investment policies limiting, among other things, the amount of credit exposure to any one issuer. We seek to limit default risk by purchasing only investment grade securities. As of March 31, 2012, we do not hold any investments. All cash balances are maintained as bank deposits at our financial institutions.

We may elect to invest a significant amount of our cash in money market funds. As with most money market funds, the ones that we have invested in from time to time include government securities, certificates of deposit, commercial paper of companies and other highly-liquid securities that are believed to be low-risk. The money market funds in which we have invested, however, also hold positions in securities issued by both sovereign states and banks located in jurisdictions experiencing macroeconomic instability, some of which may not currently be considered low-risk. Certain sovereign states and banks located in these jurisdictions, have experienced severe disruptions lately, in part, from the belief that they may be unable to repay their debt, and the value of the securities issued by these institutions have experienced volatility. While we do not believe that we have any direct exposure to the riskiest securities, for example, we do not directly hold any securities issued by the governments of Greece, Spain, Portugal, France and Ireland, the funds that we may invest in may hold these securities. In addition, these money market funds could hold Euros or Euro-based securities. To the extent that volatility was to have a significant impact on the Euro, a portion of any cash held in money market accounts could lose its value. Further, if the financial upheavals were to spread to other sovereign states, such as the United Kingdom, our cash could also be at risk due to the fact that the funds in which we have placed our cash do invest directly in the securities issued by the sovereign states, corporations and banks in these jurisdictions. As of March 31, 2012, none of our cash was held in money market funds.

Foreign Currency Risk

Although our reporting currency is the U.S. dollar and substantially all of our existing sales contracts are denominated in U.S. dollars, we incur costs denominated in other currencies. In addition, although we maintain our cash balances primarily in the U.S. dollar, from time to time, we maintain cash balances in currencies other than the U.S. dollar. As a result, we are subject to currency risk.

Our primary foreign currency exposure relates to fluctuations in foreign currency exchange rates, primarily the euro for certain inventory purchases from vendors located in Europe. Fluctuations in exchange rates could affect our gross and net profit margins and could result in foreign exchange and operating losses or gains due to such volatility. Changes in the customer's delivery schedules can affect related payments to our vendors which could cause fluctuations in the cash flows and when we expect to make payments when these cash flows are realized or settled.

Exchange rates between a number of currencies and U.S. dollars have fluctuated significantly over the last few years and future exchange rate fluctuations may occur.

We enter into forward foreign currency exchange contracts that qualify as cash flow hedges to hedge portions of certain of our anticipated foreign currency denominated inventory purchases. These contracts typically expire within 12 months. Consistent with the nature of the economic hedges provided by these forward foreign currency exchange contracts, increases or decreases in their fair values would be effectively offset by corresponding decreases or increases in the U.S. dollar value of our future foreign currency denominated inventory purchases (i.e., "hedged items"). The information provided below relates only to the hedging instruments and does not represent the corresponding changes in the underlying hedged items.

As of March 31, 2012, we had forward foreign currency exchange contracts with notional amounts of €24.9 million, all of which expire within twelve months. As of March 31, 2012, the fair value and carrying amount of our forward foreign currency exchange contracts was a net asset of $0.1 million and a net liability of $0.6 million. During fiscal year ended March 31, 2012, we recorded a $1.4 million charge for foreign currency losses on the ineffective portion of our foreign currency exchange forward contracts as a result of changes in the timing of payments of certain of our outstanding purchase obligations.

Relative to our foreign currency exposures existing at March 31, 2012 and April 2, 2011, a 10% appreciation (depreciation) of the Euro against the U.S. dollar would result in an increase (decrease) in the fair value of these derivative instruments of approximately $3.3 million and $1.8 million, respectively.

Interest Rate Risk

On January 31, 2012, we, our U.S. operating subsidiary (the "U.S. Borrower") and our Hong Kong subsidiary (the "Hong Kong Borrower") entered into a credit agreement (the "2012 Credit Agreement"), with Bank of America, N.A., as administrative agent, Swing Line Lender and L/C Issuer ("Bank of America") and the lenders from time to time party thereto. The 2012 Credit Agreement consists of a term loan facility (the "2012 Term Facility") provided to the U.S. Borrower in an aggregate principal amount of $75.0 million with a final maturity date of January 31, 2016, a revolving credit facility (the "U.S. Revolving Credit Facility") available to the U.S. Borrower in an aggregate principal amount of $25.0 million with a final maturity date of January 31, 2016 and a revolving credit facility (the "Hong Kong Revolving Facility"; together with the U.S. Revolving Credit Facility, the "2012 Revolving Credit Facility"; together with the "Term Facility", the "2012 Credit Facilities") available to the Hong Kong Borrower in an aggregate principal amount of $150.0 million with a final maturity date of January 31, 2016. The 2012 Credit Facilities are available in the form of base rate loans based on Bank of America's prime rate plus a margin of 2.00% or Eurodollar rate loans based on LIBOR plus a margin of 3.00%. The 2012 Credit Facilities also require that we comply with certain covenants, including a maximum consolidated leverage ratio and a minimum consolidated interest coverage ratio. Proceeds of the 2012 Term Facility and 2012 Revolving Facility are available for use by us and certain of our subsidiaries for general corporate purposes. The full amount of the 2012 Term Facility was drawn by us on January 31, 2012 and no amounts have been drawn on the 2012 Revolving Facility as of such date. We may use the 2012 Revolving Facility in connection with the issuance of letters of credit up to the aggregate principal amount of the Revolving Facility. As of March 31, 2012, there was $33.7 million and $14.8 million available for borrowing under the Hong Kong Revolving Facility and U.S. Revolving Facility, respectively.

If the LIBOR rate increases by 100 basis points from that in effect at March 31, 2012, our annual interest expense would change by approximately $0.7 million.

Item 8. ***Financial Statements and Supplementary Data***

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GT Advanced Technologies Inc.

Consolidated Balance Sheets

(In thousands, except per share data)

	March 31, 2012	April 2, 2011
Assets		
Current assets:		
Cash and cash equivalents	$ 350,903	$ 362,749
Accounts receivable, net	65,676	87,134
Inventories	193,295	127,572
Deferred costs	91,740	125,805
Vendor advances	85,396	20,044
Deferred income taxes	13,857	62,539
Refundable income taxes	1,516	21,780
Prepaid expenses and other current assets	12,117	17,114
Total current assets	814,500	824,737
Property, plant and equipment, net	99,982	54,441
Other assets	20,306	9,930
Intangible assets, net	86,357	22,705
Deferred cost	9,293	129,301
Goodwill	102,152	85,178
Total assets	$1,132,590	$1,126,292
Liabilities and stockholders' equity		
Current liabilities:		
Current portion of long-term debt	$ 3,750	$ 18,750
Accounts payable	34,323	63,401
Accrued expenses	37,074	39,987
Contingent consideration	16,071	4,837
Customer deposits	334,098	144,429
Deferred revenue	165,149	247,495
Accrued income taxes	37,620	23,014
Total current liabilities	628,085	541,913
Long-term debt	71,250	101,563
Deferred income taxes	38,918	59,080
Deferred revenue	31,010	198,022
Contingent consideration	6,402	6,391
Other non-current liabilities	547	817
Accrued income taxes	24,824	16,566
Total liabilities	$ 801,036	$ 924,352
Commitments and contingencies *(Note 13)*		
Stockholders' equity:		
Preferred stock, 10,000 shares authorized, none issued and outstanding	—	—
Common stock, $0.01 par value; 500,000 shares authorized, 118,331 and 125,683 shares issued and outstanding as of March 31, 2012 and April 2, 2011, respectively	1,183	1,257
Additional paid-in capital	131,563	123,338
Accumulated other comprehensive loss	(187)	(2,852)
Retained earnings	198,995	80,197
Total stockholders' equity	331,554	201,940
Total liabilities and stockholders' equity	$1,132,590	$1,126,292

The accompanying notes are an integral part of these consolidated financial statements.

GT Advanced Technologies Inc.

Consolidated Statements of Operations

(In thousands, except per share data)

	Fiscal Years Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
Revenue	$ 955,705	$ 898,984	$ 544,245
Cost of revenue	528,905	520,989	325,263
Gross profit	426,800	377,995	218,982
Operating expenses:			
Research and development	49,872	23,753	21,410
Selling and marketing	19,763	19,792	11,823
General and administrative	68,575	56,648	38,623
Amortization of intangible assets	8,198	4,500	3,164
Total operating expenses	146,408	104,693	75,020
Income from operations	280,392	273,302	143,962
Other income (expense):			
Interest income	468	603	420
Interest expense	(12,980)	(2,923)	(1,383)
Other, net	2,058	(384)	(3,125)
Income before income taxes	269,938	270,598	139,874
Provision for income taxes	86,541	95,843	52,618
Net Income	$ 183,397	$ 174,755	$ 87,256
Net income per share:			
Basic	$ 1.48	$ 1.26	$ 0.61
Diluted	$ 1.45	$ 1.24	$ 0.60
Weighted-average number of shares used in per share calculations:			
Basic	123,924	138,673	143,409
Diluted	126,051	140,902	145,390

The accompanying notes are an integral part of these consolidated financial statements.

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GT Advanced Technologies Inc.

Statement of Stockholder's Equity

(In thousands, except per share data)

	Common Stock Shares	Common Stock Par Value	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity	Total Comprehensive Income
Balance at March 28, 2009	143,048	$1,431	$ 80,070	$ 8,793	$ (8,389)	$ 81,905	
Share-based compensation			5,682			5,682	
Option exercises and vesting of restricted stock units	941	9	1,057			1,066	
Forfeiture of unvested restricted stock and dividend	(56)	(1)	36			35	
Excess tax benefits from share-based award activity			485			485	
Minimum tax withholdings payments for employee share-based awards	(118)	(1)	(686)			(687)	
Net income				87,256		87,256	$ 87,256
Other comprehensive income (loss):							
Cash flow hedge of foreign exchange (net of taxes of $1,189)					3,239	3,239	3,239
Foreign currency translation and other adjustments (net of taxes of $2)					5	5	5
Total Comprehensive Income							$ 90,500
Balance at April 3, 2010	143,815	1,438	86,644	96,049	(5,145)	178,986	
Share-based compensation			8,200			8,200	
Option exercises and vesting of restricted stock units	3,097	31	9,200			9,231	
Excess tax benefits from share-based award activity			2,546			2,546	
Minimum tax withholdings payments for employee share-based awards	(174)	(1)	(1,532)			(1,533)	
Net income				174,755		174,755	$ 174,755
Other comprehensive income (loss):							
Cash flow hedge of foreign exchange (net of taxes of $1,234)					1,742	1,742	1,742
Foreign currency translation and other adjustments					551	551	551
Total Comprehensive Income							$ 177,048

Common stock issued for Crystal Systems acquisition	5,445	54	30,884			30,938	
Repurchase of common stock	(26,500)	(265)	(12,604)	(190,607)		(203,476)	
Balance at April 2, 2011	125,683	1,257	123,338	80,197	(2,852)	201,940	
Share-based compensation			14,592			14,592	
Option exercises and vesting of restricted stock units	2,387	23	6,887			6,910	
Excess tax benefits from share-based award activity			3,475			3,475	
Minimum tax withholdings payments for employee share-based awards	(301)	(3)	(3,079)			(3,082)	
Repurchase of common stock	(9,438)	(94)	(13,650)	(64,599)		(78,343)	
Net income				183,397		183,397	$ 183,397
Other comprehensive income (loss):							
Cash flow hedge of foreign exchange (net of taxes of $1,429)					2,144	2,144	2,144
Foreign currency translation and other adjustments					521	521	521
Total Comprehensive Income							$ 186,062
Balance at March 31, 2012	118,331	$1,183	$ 131,563	$ 198,995	$ (187)	$ 331,554	

The accompanying notes are an integral part of these consolidated financial statements.

GT Advanced Technologies Inc.

Consolidated Statements of Cash Flows

(In thousands)

	Fiscal Years Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
Cash flows from operating activities:			
Net income	$ 183,397	$ 174,755	$ 87,256
Adjustments to reconcile net income to net cash provided by operating activities:			
Amortization expense	8,198	4,500	3,164
Depreciation expense	9,650	5,167	3,706
Contingent consideration expense	2,271	1,834	—
Deferred income tax expense	8,486	36,090	(38,723)
Provision for excess and obsolete inventory	10,447	2,081	6,899
Share-based compensation expense	14,727	8,224	5,682
Excess tax benefits from share-based awards	(3,651)	(2,541)	(469)
Amortization of deferred financing costs	9,594	1,087	359
Other adjustments, net	(1,138)	220	458
Changes in operating assets and liabilities (excluding impact of acquired assets and assumed liabilities):			
Accounts receivable	20,206	(32,976)	4,838
Inventories	(75,778)	(57,787)	27,722
Deferred costs	154,073	(56,855)	13,353
Vendor advances	(68,561)	(2,472)	103,119
Prepaid expenses and other assets	5,496	(12,404)	(2,429)
Accounts payable and accrued expenses	(45,396)	60,474	(22,406)
Customer deposits	187,641	23,809	(103,038)
Deferred revenue	(249,357)	111,170	(13,780)
Income taxes	23,020	5,949	36,968
Refundable income taxes	20,264	(20,264)	35,307
Other, net	4,084	1,713	(710)
Net cash provided by operating activities	217,673	251,774	147,276
Cash flows from investing activities:			
Purchases and maturities of short-term investments	—	20,000	(19,967)
Purchases and deposits on property, plant and equipment	(48,152)	(31,263)	(4,573)
Other investing activities	597	—	
Acquisitions, net of acquired cash	(60,428)	(22,770)	
Net cash used in investing activities	(107,983)	(34,033)	(24,540)
Cash flows from financing activities:			
Borrowings under credit facility	75,000	125,000	
Principal payments under credit facility	(120,313)	(4,687)	
Proceeds and related excess tax benefits from exercise of share-based awards	10,561	11,777	1,550
Payments of contingent consideration from business combinations	(4,884)	(3,107)	
Payments related to share repurchases to satisfy statutory minimum tax withholdings	(3,082)	(1,533)	(687)
Repurchase of common stock	(75,000)	(203,476)	
Deferred financing costs	(3,553)	(9,922)	
Other financing activities	(372)	—	
Net cash (used in) provided by financing activities	(121,643)	(85,948)	863
Effect of foreign exchange rates on cash	107	208	1
(Decrease) increase in cash and cash equivalents	(11,846)	132,001	123,600
Cash and cash equivalents at beginning of year	362,749	230,748	107,148
Cash and cash equivalents at end of year	$ 350,903	$ 362,749	$ 230,748
Supplemental cash flow information:			
Cash paid for interest	$ 3,418	$ 1,548	$ 407
Cash paid for income taxes, net of refunds	34,176	75,332	18,196
Non-cash investing and financing activities:			
Increase in accounts payable and accrued expenses for property, plant and equipment	$ 8,421	$ 1,738	$ —

Contingent consideration from acquisitions	13,858	12,500	—
Property, plant and equipment acquired under capital lease	1,021	—	—

See accompanying notes to these consolidated financial statements.

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements

(In thousands, except per share data)

1. Organization

GT Advanced Technologies Inc. (the "Company"), through its subsidiaries is a global provider of polysilicon production technology and crystalline ingot growth systems and related photovoltaic manufacturing services for the solar industry, and sapphire growth systems and material for the LED and other specialty markets. The Company's customers include several of the world's largest solar companies as well as companies in the photonics and LED industries.

The Company's principal products are:

- Silicon Deposition Reactors (SDR) and related equipment used to produce polysilicon, the key raw material used in silicon-based solar wafers and cells;
- Directional solidification (DSS) furnaces and related equipment used to cast multicrystalline and MonoCast crystalline silicon ingots. These ingots are used to make photovoltaic (PV) solar wafers and cells;
- Sapphire crystallization furnaces (ASF), which are sold directly to customers and used to crystallize sapphire boules. These sapphire boules are used to make sapphire wafers, the preferred substrate for manufacturing light emitting diode (LED) device; and

The Company also produces sapphire material at its pilot production facility in Massachusetts which is sold directly to customers and used to make a variety of products such as epitaxial-ready wafers for use in the LED and other specialty markets. In addition, we produce on a limited basis, HiCz monocrystalline material that is manufactured at our HiCz pilot production facility in Missouri.

The Company is headquartered in Nashua, New Hampshire and sells its products worldwide. The Company also has locations in Merrimack, New Hampshire; Salem, Massachusetts; Missoula, Montana; Hazelwood, Missouri; Shanghai and Beijing, China; Hong Kong; and Chupei City, Taiwan. The Company operates through three business segments: the photovoltaic, or PV segment, the polysilicon segment and the sapphire segment.

The Company was originally incorporated in Delaware in September 2006. On September 27, 2006, it completed an internal reorganization through which GT Solar International, Inc. became the parent company of GT Solar Incorporated, its principal operating subsidiary. On August 8, 2011, the Company changed its name to GT Advanced Technologies Inc. The name change was effected pursuant to Section 253 of the General Corporation Law of the State of Delaware by the merger of a wholly owned subsidiary of the Company into the Company.

In July 2008, the Company completed an initial public offering of 30,300 shares of common stock by GT Solar Holdings, LLC. In March 2010, the Company completed a secondary public offering of 28,750 shares of common stock by GT Solar Holdings, LLC.

On July 29, 2010, the Company acquired privately-held Crystal Systems, Inc., ("Crystal Systems"), a crystal growth technology company that produces sapphire material used for LED applications, as well as other specialty markets, such as medical, research, aerospace industries and defense.

In September 2010, the Company completed a secondary offering of 11,000 shares of common stock by GT Solar Holdings, LLC. At the same time the Company completed an additional secondary offering of 14,000 shares of common stock by GT Solar Holdings, LLC, such sale was made to UBS AG and UBS Securities LLC in connection with an offering by UBS AG of its Mandatorily Exchangeable Notes due 2013.

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

1. Organization (Continued)

On November 12, 2010, the Company repurchased 26,500 shares of its common stock from GT Solar Holdings, LLC using cash.

On August 24, 2011, the Company acquired privately-held Confluence Solar, Inc., ("Confluence Solar"), a developer of HiCz^{TM}, a continuously-fed Czochralski (Cz) growth technology that is designed to enable the production of high efficiency monocrystalline solar cells.

On November 18, 2011, the Company entered into an accelerated share repurchase ("ASR") agreement with UBS AG. In connection with this agreement, in November 2011 the Company paid $75,000 to UBS AG and at such time received 7,823 shares. Upon settlement of the accelerated share repurchase agreement, the Company received 1,615 additional shares of the Company's common stock from UBS AG.

2. Significant Accounting Policies

The accompanying consolidated financial statements reflect the application of certain significant accounting policies, as described in this note and elsewhere in these notes.

Fiscal Year End. The Company's prior reporting periods are based on a 52-week year that ends on the Saturday closest to March 31, which in certain years results in a 53-week fiscal year. The fiscal year ended April 3, 2010 had 53 weeks, with the extra week occurring in the fourth quarter. The fiscal year ended March 31, 2012 had 52 weeks. The Company uses the terms quarterly, monthly, and annual in describing its financial results.

Principles of Consolidation. The accompanying consolidated financial statements include the accounts of the Company and all of its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated.

Foreign Currency Translation. For foreign subsidiaries where the functional currency is the local currency, assets and liabilities are translated into U.S. dollars at the current exchange rate on the balance sheet date. Revenue and expenses are translated at average rates of exchange prevailing during each period. Translation adjustments for these subsidiaries are included in accumulated other comprehensive loss.

For foreign subsidiaries where the functional currency is the U.S. dollar, monetary assets and liabilities are translated into U.S. dollars at the current exchange rate on the balance sheet date. Nonmonetary assets and liabilities are remeasured into U.S. dollars at historical exchange rates. Revenue and expense items are translated at average rates of exchange prevailing during each period.

Realized and unrealized foreign currency gains and losses arising from transactions denominated in currencies other than the subsidiary's functional currency are reflected in earnings.

For the fiscal years ended March 31, 2012, April 2, 2011, and April 3, 2010, net foreign currency transaction losses of $1,866, $85 and $2,411, respectively, are included in other, net.

Use of Estimates. The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the related disclosure of contingent assets and liabilities. Management evaluates estimates on an ongoing basis, including those related to revenue recognition, allowance for doubtful accounts, inventory valuation, deferred tax assets

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

2. Significant Accounting Policies (Continued)

and liabilities, property and equipment, goodwill and other intangible assets, warranty obligations, contingent consideration, other contingencies and share-based compensation. Management bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the then current circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. The intent is to accurately state assets and liabilities given facts known at the time. These assumptions may prove incorrect as facts change in the future. Actual results may differ materially from these estimates under different assumptions or conditions.

Cash Equivalents. The Company considers all highly liquid investments with an original maturity of three months or less when purchased to be cash equivalents.

Accounts Receivable and Allowance for Doubtful Accounts. The Company carries its accounts receivable at their face amounts less an allowance for doubtful accounts. On a periodic basis, the Company evaluates its accounts receivable and establishes the allowance for doubtful accounts based on a combination of specific customer circumstances, credit conditions and a history of write-offs and collections. Where the Company is aware of a customer's inability to meet its financial obligations, it specifically reserves for the potential bad debt to reduce the net recognized receivable to the amount it reasonably believes will be collected. The Company's policy is generally not to charge interest on trade receivables after the invoice becomes past due. A receivable is considered past due if payments have not been received within agreed-upon invoice terms. Accounts are reviewed regularly for collectability and those deemed uncollectible are written off. The allowance for doubtful accounts was $5,422 and $2,536 as of March 31, 2012 and April 2, 2011, respectively.

Fair Value of Financial Instruments. The fair value of a financial instrument is the price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. The carrying values of cash and cash equivalents, accounts receivable, accounts payable, accrued liabilities and long-term debt approximate their respective fair values due to their short-term maturities or market interest rates. Foreign currency derivatives are carried at fair value based on quoted market prices for financial instruments with similar characteristics.

Concentration of Credit Risk. Financial instruments that potentially subject the Company to significant concentration of credit risk would include its money market fund investments (categorized as cash and cash equivalents). The Company's policy is to invest only with high quality issuers and has policies limiting, among other things, the amount of credit exposure to any one issuer. As of March 31, 2012, the Company held all of its cash and cash equivalents in deposit accounts with its financial institutions.

In addition, the Company has credit risk from derivative financial instruments used in hedging activities and accounts receivable. The Company invests in a variety of financial instruments and limits the amount of financial exposure to any one financial institution. The Company has a comprehensive credit policy in place and exposure to credit risk is monitored on an ongoing basis. Credit evaluations are performed on all customers requiring credit over a certain amount. Credit risk is mitigated through collateral such as letter of credit, bank guarantees or payment terms like cash in advance. The credit risk from derivative financial instrument is described further under the following caption—*Derivative Financial Instruments and Hedging Instruments*.

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

2. Significant Accounting Policies (Continued)

Inventories. Inventories are stated at the lower of cost or market. The cost of inventory is determined using the first-in, first-out (FIFO) method. The Company records excess and obsolete inventory charges for both inventories on site as well as inventory at contract manufacturers and suppliers when the carrying amount exceeds the net realizable value.

Purchase Commitments. The Company enters into commitments to purchase material from various suppliers in the ordinary course of business. These commitments are entered into to satisfy the material requirements of a specific contract or the overall production plan and often require the Company to make payments in advance. The Company evaluates these advances for recoverability on a periodic basis and more frequently if indicators of asset impairment arise.

In the event the Company reschedules and/or cancels a portion of these commitments due to customer delivery delays, customer contract terminations or changes to its production plans, the Company may be liable for cancellation penalties or be required to purchase material in excess of its current expected demand. In such instances, the Company reviews the contractual terms of its purchase commitments and seeks to negotiate with the vendor to minimize any potential loss. In cases where the cancellation is the result of a customer contract termination or delay in customer delivery, the Company may seek to recover the costs incurred.

The Company accrues as cost of revenue losses estimated on advances which are not considered recoverable because of a deterioration in the financial condition of the vendor or because the advances are expected to be forfeited as part of a planned order termination and any termination fees which may be paid to vendors when the Company terminates the contract in accordance with the contract terms.

Property, Plant and Equipment. Land, land improvements, leasehold improvements, buildings, manufacturing equipment and computer equipment are stated at cost. Depreciation is provided, primarily using the straight-line method, over estimated useful lives, ranging from 3 to 15 years for manufacturing equipment and furniture and fixtures, and up to 40 years for buildings. Leasehold improvements are capitalized and depreciated over the lesser of the useful life or the initial lease term. The Company capitalizes certain computer software and software development costs incurred in connection with developing our computer software for internal use. Capitalized software costs are included in property, plant and equipment, net, on the Company's consolidated balance sheet and depreciated on a straight-line basis over the estimated useful lives of the software. Expenditures for repairs and maintenance are charged to expenses as incurred.

Intangibles and other Long-Lived Assets. The Company periodically assesses its intangible and other long-lived assets for impairment whenever events or changes in circumstances suggest that the carrying value of an asset may not be recoverable. The Company recognizes an impairment loss for intangibles and other long-lived assets if the carrying amount of a long-lived asset is not recoverable based on its undiscounted future cash flows. Any such impairment loss is measured as the difference between the carrying amount and the fair value of the asset.

Goodwill. Goodwill represents the excess of the cost of acquired businesses over the fair value of identifiable net assets acquired. The Company performs an annual assessment of its goodwill as of the beginning of the last quarter of the fiscal year for impairment or whenever events or changes in circumstances indicate there might be impairment.

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

2. Significant Accounting Policies (Continued)

Goodwill is evaluated at the reporting unit level and is attributable to the Company's PV and Sapphire businesses. To test for impairment, the Company compares the carrying value of the reporting unit to its fair value. If the reporting unit's carrying value exceeds its fair value, the Company would record an impairment loss to the extent that the carrying value of goodwill exceeds its implied fair value.

Warranty. The Company's polysilicon products are sold with a standard warranty typically for a period not exceeding twenty-four months from delivery. The Company's PV and sapphire equipment are generally sold with a standard warranty for a period equal to the shorter of: (i) twelve months from the date of acceptance by the customer; or (ii) fifteen months from the date of shipment. The warranty is typically provided on a repair or replacement basis and is not limited to products or parts manufactured by the Company. The Company's sapphire material products and HiCz material products are generally sold with a standard warranty for a period not greater than thirty days, but may be for longer periods in certain circumstances. The Company accrues an estimate of the future costs of meeting warranty obligations when products are shipped. The Company makes and revises this estimate based on the number of units under warranty and historical experience with warranty claims.

Derivative Financial Instruments and Hedging Agreements. The Company enters into forward foreign currency exchange contracts to hedge cash flow exposures from the impact of changes in foreign exchange rates. Such exposures result primarily from purchase orders for inventory and equipment that are denominated in currencies other than the U.S. dollar, primarily the Euro. These foreign forward currency exchange contracts are entered into to support purchases made in the normal course of business and to hedge operational rights, and accordingly, are not speculative in nature. The Company does not enter into any hedging arrangements for speculative purposes. The Company's hedges relate to anticipated transactions, are designated and documented at the inception of the respective hedges as cash flow hedges and are evaluated for effectiveness quarterly.

The Company records all derivative financial instruments in the consolidated financial statements in other current assets or accrued liabilities, depending on their net position, at fair value. Changes in the fair value of the derivative financial instruments are either recognized periodically in earnings or in stockholders' equity as a component of accumulated other comprehensive income ("AOCI") or loss depending on whether the derivative financial instrument qualifies for hedge accounting. The effective portion of any changes in the fair value of forward contracts that have been designated and qualify as cash flow hedges is recorded in AOCI until the hedged transaction occurs or the recognized currency transaction affects earnings. Once the hedged transaction occurs or the recognized currency transaction affects earnings, the effective portion of any related gains or losses on the cash flow hedge is reclassified from AOCI to earnings. Changes in fair values of derivatives not qualifying for hedge accounting are reported in earnings as they occur. The Company classifies the cash flows from hedging transactions in the same categories as the cash flows from the respective hedged items.

Hedge accounting is discontinued when it is determined that a derivative instrument is no longer an effective hedge. Any gains or losses that were in AOCI from hedging a forecasted transaction no longer considered probable of occurring will be recognized immediately in current period earnings due to changes in expectations on the original forecasted transaction.

Derivative financial instruments involve, to a varying degree, elements of market and credit risk not recognized in consolidated financial statements. The market risk associated with these instruments resulting from currency exchange rate or interest rate movements is expected to offset the market risk

2. Significant Accounting Policies (Continued)

of the underlying transactions, assets and liabilities being hedged. The counterparties to the agreements relating to the Company's foreign exchange instruments are major international financial institutions with high credit ratings. The Company does not believe that there is significant risk of nonperformance by the counterparties because the Company monitors the credit rating of such counterparties. While the contract or notional amounts of derivative financial instruments provide one measure of the volume of these transactions, they do not represent the amount of the Company's exposure to credit risk. The amounts potentially subject to credit risk (arising from the possible inability of the counterparty to meet the terms of the contracts) are generally limited to the amounts, if any, by which the counterparty's obligations under the contracts exceed the obligations of the Company to the counterparty.

Income Taxes. The Company provides for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial statements and tax basis of assets and liabilities using enacted tax rates in effect for the year in which differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

The Company records net deferred tax assets to the extent it believes these assets will more likely than not be realized. All available positive and negative evidence is reviewed in making a determination. The evidence includes future reversals of existing taxable temporary differences, projected future taxable income, tax planning strategies and recent financial operations. In the event the Company determines that it would be able to realize deferred income tax assets in the future in excess of their net recorded amount, an adjustment to the valuation allowance would be recorded which would reduce the provision for income taxes.

The Company assesses its income tax positions and records tax benefits based upon management's evaluation of the facts, circumstances, and information available at the reporting date. For those tax positions where it is more-likely-than-not that a tax benefit will be sustained, the Company records the largest amount of tax benefit with a greater than 50 percent likelihood of being realized upon ultimate settlement with a taxing authority having full knowledge of all relevant information. For those income tax positions where it is not more-likely-than-not that a tax benefit will be sustained, no tax benefit is recognized in the financial statements. The Company classifies liabilities for uncertain tax positions as non-current liabilities unless the uncertainty is expected to be resolved within one year. The Company classifies charges for interest and penalties on uncertain tax positions as income tax expense.

The Company classifies tax benefits realized upon the exercise of stock options in excess of that which is associated with the expense recognized for financial reporting purposes, along with any deficiencies to the extent of prior period gains, within additional paid-in capital. The excess tax benefits realized from stock compensation deductions are presented as a financing cash inflow rather than as a reduction of income taxes paid in the consolidated statement of cash flows.

Share-Based Compensation. The Company grants stock options, restricted stock and restricted stock units at the discretion of the Board of Directors or a committee thereof, to certain employees, consultants and members of the Board of Directors.

The Company's stock-based compensation cost is measured at the grant date based on the fair value of the award and is recognized as expense over the requisite service period, which generally

2. Significant Accounting Policies (Continued)

represents the vesting period, and includes an estimate of the awards that will be forfeited. The Company uses the Black-Scholes valuation model for estimating the fair value on the date of grant of stock options. The fair value of stock option awards is affected by the Company's stock price as well as valuation assumptions, including the volatility of the Company's stock price, expected term of the option, risk-free interest rate and expected dividends.

Customer Deposits and Payment Terms. The Company's payment terms with customers typically include a deposit which is recorded as customer deposits until such time as the products are shipped. The Company sometimes is requested by its customers to issue letters of credit, in order to secure customer deposits. Generally, such a letter of credit expires upon shipment to the customer. In addition to cash deposits, customers are also generally required to post a letter of credit at least equal to 90% of the value of the equipment prior to shipment. Upon shipment, the Company will invoice all but a final portion (typically 10%) for each product shipped with the remainder due upon customer acceptance. The Company's contracts with customers do not provide for any refunds for services or products and therefore no specific reserve for such is maintained. In instances where customers raise concerns over delivered products or services, the Company has endeavored to remedy the concern and all costs related to such matters have been insignificant in all periods presented.

At March 31, 2012 and April 2, 2011, the Company had $126,478 and $21,763, respectively, of standby letters of credit outstanding representing primarily performance guarantees issued against customer deposits. These standby letters of credit have not been included in the consolidated financial statements and have been issued under the Company's Revolving Credit Facility.

Revenue Recognition. The majority of the Company's contracts involve the sale of equipment and services under multiple element arrangements. The Company recognizes revenue when persuasive evidence of an arrangement exists, the sale price is fixed or determinable, collectability is reasonably assured through historical collection results and regular credit evaluations, and delivery has occurred and there are no uncertainties regarding customer acceptance.

On April 3, 2011, the Company prospectively adopted the provisions of *Accounting Standards Update ("ASU") 2009-13, Revenue Recognition (Topic 605)—Multiple-Deliverable Revenue Arrangements ("ASU 2009-13")* for new and materially modified arrangements originating on or after April 3, 2011. The adoption of *ASU 2009-13* did not have a material impact on the Company's financial results for the fiscal year ended March 31, 2012.

ASU 2009-13 amended the accounting standards for multiple-deliverable revenue arrangements to require an entity to allocate revenue in an arrangement on the basis of the relative selling price of deliverables at the inception of the arrangement. When applying the relative selling price method, the selling price for each deliverable is determined using vendor-specific objective evidence of selling price ("VSOE"), if it exists, or third-party evidence of selling price ("TPE"). If neither VSOE nor TPE exists, then the Company uses its best estimate of the selling price ("ESP") for that deliverable. The use of the residual method was eliminated by *ASU 2009-13*.

The multiple-deliverable revenue guidance outlined in *ASU 2009-13* requires that the Company evaluate each deliverable in an arrangement to determine whether such deliverable would represent a separate unit of accounting. The product or service constitute a separate unit of accounting when it fulfills the following criteria: (a) the delivered item(s) has value to the customer on a standalone basis and (b) if the arrangement includes a general right of return relative to the delivered item, delivery or

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

2. Significant Accounting Policies (Continued)

performance of the undelivered item(s) is considered probable and substantially in the control of the Company. The Company's sales arrangements do not include a general right of return and the majority of the Company's products and services qualify as separate units of accounting.

Prior to the adoption of *ASU 2009-13*, the Company's products or services constitute separate units of accounting when it fulfilled the following criteria: (a) the delivered item(s) has value to the customer on a standalone basis, (b) there is objective and reliable evidence of the fair value of the undelivered item(s), and (c) if the arrangement includes a general right of return relative to the delivered item, delivery or performance of the undelivered item(s) is considered probable and substantially in the control of the Company. Given the differences created in the pre *ASU 2009-13* accounting model in comparison to the *ASU 2009-13*accounting model, for transactions entered into prior to the adoption of *ASU 2009-13*, where objective evidence of fair value exists for all undelivered elements, but not delivered elements, the Company applies the residual method for recognizing revenue. If objective evidence of fair value does not exist for the undelivered elements of the arrangement, all revenue is deferred until such evidence does exist, or until all elements for which the Company does not have objective evidence of fair value are delivered, whichever is earlier assuming all other revenue recognition criteria are met. In certain arrangements, the Company provided customers with contractual rights that extend for a specific period of time. The Company considered these rights a separate element, for which objective evidence of fair value did not exist. Revenue for these arrangements is being recognized ratably over the period commencing when all other elements had been delivered through the period when such rights expire.

The Company has and continues to establish VSOE based upon the price charged when the same element is sold separately or established by management having the relevant pricing authority. When VSOE exists, it is used to determine the selling price of a deliverable. Objective evidence of fair value for installation and training services is based upon the estimated time to complete the installation and training at the established fair value hourly rates that the Company charges for similar professional services on a stand-alone basis. The Company has not been able to establish VSOE for certain of its products and for certain of its services because the Company has not sold such products or services on a stand-alone basis.

When VSOE is not established, the Company attempts to establish the selling price of each element based on TPE. The Company's products and services differ from that of its competitors and therefore, comparable pricing of competitors' products and services with similar functionality generally cannot be obtained. Accordingly, the Company is generally not able to determine TPE for its products or services.

For transactions entered into subsequent to the adoption of *ASU 2009-13*, when the Company is unable to establish selling price using VSOE or TPE, the Company uses ESP in its allocation of arrangement consideration for the relevant deliverables. The objective of ESP is to determine the price at which the Company would transact a sale if a product or service was sold on a stand-alone basis. The Company determines ESP for its products and certain services by considering multiple factors including, but not limited to, overall market conditions, profit objectives and historical pricing practices for such deliverables.

The Company's ASF and DSS equipment contracts contain customer-specified acceptance provisions. Polysilicon reactors contracts do not contain customer-specified acceptance provisions, and

2. Significant Accounting Policies (Continued)

are generally deemed to be contractually accepted at the time the reactor is initially delivered to the customer's facility. For arrangements containing products that the Company considers to be "established," revenue is recognized for the product deliverable upon delivery, assuming all other revenue recognition criteria are met. For arrangements containing products considered to be "new" or containing customer acceptance provisions that are deemed to be more than perfunctory, product revenue is recorded upon customer acceptance or at the time the product is determined to be "established".

Products are classified as "established" products if post-delivery acceptance provisions and the installation process have been determined to be routine and there is a demonstrated history of achieving the predetermined contractual objective specifications.

In determining when a "new" product is considered "established", the Company considers the following factors: (i) the stability of the product's technology, (ii) the test results of products prior to shipment, (iii) successful installations at customer's sites and (iv) the performance results once installed. The Company generally believes that the satisfaction of the first two criteria, coupled with the satisfaction of final two criteria for multiple product units in the facilities of at least three to five separate customers that, in each case, results in acceptance in accordance with the standard contract terms are necessary to support the conclusion that there are no uncertainties regarding customer acceptances of the standard objective specifications and therefore the installation process can be considered perfunctory.

The Company's contracts generally do not contain cancellation provisions. When a customer fails to perform its contractual obligations and such failure continues after notice of breach and a cure period the Company may terminate the contract. and the customer may be liable for contractual damages. At the time of termination, the Company records as revenues any non-refundable deposits or deferred revenue amounts and records as cost of revenue any previously deferred cost as well as any related costs to terminate the contract including excess or obsolete inventory or unrecoverable vendor advances or other purchase commitment costs as a result of the termination. During the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010 the Company recognized $35,519, $44,352 and $21,111 in revenue as a result of contract terminations, respectively.

Spare parts revenue is generally recognized upon shipment and services revenue is generally recognized as the services are provided.

The Company records reimbursable out-of-pocket expenses and shipping as both revenue and as a direct cost of revenue, as applicable. The Company records revenue net of applicable sales and value added taxes collected. Taxes collected from customers are recorded as part of accrued expenses on the consolidated balance sheet and are remitted to state and local taxing jurisdictions based on the filing requirements of each jurisdiction.

Deferred Revenue and Deferred Costs. Deferred revenue includes amounts that have been billed per the contractual terms but have not been recognized as revenue. Deferred costs represent direct costs related to deferred revenues and include the cost of manufactured or acquired inventory items, capitalized labor and related overhead for engineering services, and in certain cases shipping costs. The Company classifies as long-term the portion of deferred revenue and deferred costs that are expected to be recognized beyond the next fiscal year.

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

2. Significant Accounting Policies (Continued)

Research and Development Costs. Research and development costs are expensed as incurred.

Business Combinations. The Company accounts for business combinations at fair value. All changes that do not qualify as measurement period adjustments are included in current period earnings. Significant judgment is required to determine the estimated fair value for assets and liabilities acquired and to assigning their respective useful lives. The fair values assigned to tangible and intangible assets acquired and liabilities assumed, including contingent consideration, are based on management's estimates and assumptions, as well as other information compiled by management, including available historical information and valuations that utilize customary valuation procedures and techniques.

The Company employs the income method to estimate the fair value of intangible assets, which is based on forecasts of the expected future cash flows attributable to the respective assets. Significant estimates and assumptions inherent in the valuations reflect a consideration of other marketplace participants, and include the amount and timing of future cash flows (including expected growth rates and profitability), the underlying product life cycles, economic barriers to entry, a brand's relative market position and the discount rate applied to the cash flows, among others.

If the actual results differ from the estimates and judgments used in these estimates, the amounts recorded in the financial statements could result in a possible impairment of the intangible assets and goodwill, or require acceleration of the amortization expense of finite-lived intangible assets.

The consideration for our acquisitions often include future payments that are contingent upon the occurrence of a particular event. We record a contingent consideration obligation for such contingent consideration payments at fair value on the acquisition date. We estimate the acquisition date fair value of contingent consideration obligations through valuation models that incorporate probability adjusted assumptions related to the achievement of the milestones and the likelihood of making related payments. Each period the Company revalues the contingent consideration obligations associated with the acquisition to fair value and records changes in the fair value as contingent consideration expense. Increases or decreases in the fair value of the contingent consideration obligations can result from changes in assumed discount periods and rates, changes in the assumed timing and amount of revenue and expense estimates and changes in assumed probability with respect to the attainment of certain financial and operational metrics. Significant judgment is employed in determining these assumptions as of the acquisition date and for each subsequent period. Accordingly, future business and economic conditions, as well as changes in any of the assumptions described above, can materially impact the amount of contingent consideration expense recorded in any given period.

Reclassifications. Certain reclassifications have been made to prior year financial statements to conform to the current year presentation. Specifically, amortization of deferred financing fees of $1,087 and $359 and excess tax benefits for share-based awards of $2,541 and $469 for the fiscal years ended April 2, 2011 and April 3, 2010, respectively, were previously included in the change in other, net, and deferred income tax expense (benefit), respectively, but are now stated separately in the Company's consolidated statement of cash flows.

2. Significant Accounting Policies (Continued)

Recent Accounting Pronouncements

Recently Adopted Accounting Pronouncements

On April 3, 2011, the Company adopted ASU 2009-13, *Multiple-Deliverable Revenue Arrangements.* The impact of the Company's adoption of this pronouncement is discussed above in the significant accounting policies within Note 2 to these consolidated financial statements.

In January 2012, the Company prospectively adopted Accounting Standards Update No. 2011-04, *Fair Value Measurement (Topic 820): Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRSs*. This accounting standard clarifies the application of certain existing fair value measurement guidance and expands the disclosures for fair value measurements that are estimated using significant unobservable (Level 3) inputs. This amendment is effective on a prospective basis for annual and interim reporting periods beginning on or after December 15, 2011. The adoption of this update did not have a material impact on the Company's consolidated financial statements.

Accounting Pronouncements Not Yet Adopted

In June 2011, the Financial Accounting Standards Board ("FASB"), issued Accounting Standards Update No. 2011 05, *Presentation of Comprehensive Income*. This standard eliminates the current option to report other comprehensive income and its components in the statement of changes in stockholders' equity. The amendment requires that all non-owner changes in stockholders' equity be presented either in a single statement of comprehensive income or in two separate but consecutive statements. The standard is intended to enhance comparability between entities that report under U.S. GAAP and those that report under International Financial Reporting Standards, and to provide a more consistent method of presenting non-owner transactions that affect an entity's equity. The amendments in this update are to be applied retrospectively. The amendments are effective for fiscal years, and interim periods within those years, beginning after December 15, 2011, which for the Company would be the fiscal year beginning April 1, 2012. The Company has not yet determined which method it will elect to present comprehensive income under the new standard.

In September 2011, the FASB issued Accounting Standards Update No. 2011-08, *Testing Goodwill for Impairment*, which amends the guidance on testing goodwill for impairment. Under the revised guidance, entities testing goodwill for impairment have the option of performing a qualitative assessment before calculating the fair value of the reporting unit. If entities determine, on the basis of qualitative factors, that the fair value of the reporting unit is more likely than not less than the carrying amount, the two-step impairment test would be required. This amendment does not change how goodwill is calculated or assigned to reporting units, nor does it revise the requirement to test goodwill annually for impairment. In addition, it does not amend the requirement to test goodwill for impairment between annual tests if events or circumstances warrant; however, it does revise the examples of events and circumstances that an entity should consider. This update is effective for fiscal years beginning after December 15, 2011, and early adoption is permitted. The Company plans to adopt this new standard for the fiscal year beginning on April 1, 2012. The adoption of this standard is not expected to have a material impact on our consolidated financial position or results of operations.

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

3. Acquisitions

Acquisition of Confluence Solar, Inc.

On August 24, 2011, the Company acquired 100% of the outstanding shares of stock of privately-held Confluence Solar, Inc. ("Confluence Solar") the developer of HiCz , a continuously-fed Czochralski (HiCz) growth technology, that is designed to enable the production of high efficiency monocrystalline solar ingots. The purchase consideration consisted of $61,090 in cash and a potential additional $20,000 of contingent consideration. The fair value of the contingent consideration was estimated at $13,858 at the date of acquisition. During the fiscal year ended March 31, 2012, the Company recorded a purchase price adjustment resulting in a reduction in the fair value of consideration by $511.

The acquisition of Confluence Solar is intended to expand the Company's photovoltaic, or PV, product portfolio and expand its business into more advanced crystal growth technologies that are designed to increase cell efficiencies and enable customers to produce high-performance monocrystalline silicon ingots at lower costs.

The transaction has been accounted for as a business combination and is included in the Company's results of operations from August 24, 2011, the date of acquisition. The acquired business did not contribute material revenues from the acquisition date to March 31, 2012. The results of the acquired business are included in the Company's PV business reporting segment.

During the fiscal year ended March 31, 2012, the Company continued to refine the fair value of the net assets acquired from the acquisition of Confluence Solar. The impact of these changes decreased the fair value of amounts allocated to goodwill by $13,447 and increased the amount allocated to deferred tax assets. These changes were attributable to the ongoing determination of the facts and circumstances related to the assumptions applied in the determination of the relative tax basis of net assets acquired.

As of March 31, 2012, the purchase price (including the estimated contingent consideration) and related allocations for the acquisition are preliminary. As a result of the preliminary purchase price allocation, the Company recognized approximately $17,346 of goodwill, which is primarily due to expected synergies between the Company's experience in equipment development and the acquired technology which is expected to drive new product development. The goodwill created by the transaction is nondeductible for tax purposes. A summary of the preliminary purchase price allocation for the acquisition of Confluence Solar is as follows:

Fair value of consideration transferred:

Cash	$	61,090
Contingent consideration obligations		13,858
Purchase price adjustment		(511)
Total fair value of consideration	$	74,437

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

3. Acquisitions (Continued)

Fair value of assets acquired and liabilities assumed:

Cash	$	151
Inventories		320
Prepaid expenses and other assets		1,080
Property, plant and equipment		6,616
Intangible assets		71,850
Deferred tax assets		13,570
Goodwill		17,346
Accounts payable		(3,627)
Accrued expenses and other non-current liabilities		(452)
Customer deposits		(2,000)
Capital lease liability		(735)
Deferred tax liabilities		(29,682)
Total net assets acquired	$	74,437

The purchase consideration includes contingent consideration payable by the Company upon the attainment of a financial target, an operational target and technical targets through the period ending June 30, 2013. Specifically, the contingent consideration is based upon the achievement of (i) a certain revenue target during the period from September 1, 2011 through March 31, 2013, (ii) operational target related to the commissioning of a certain number of monocrystalline ingot pullers by August 31, 2012, (iii) demonstration of certain technical processes related to Czochralski growth processes by June 30, 2013 and (iv) achievement of technical acceptance and commercial delivery on volume orders of certain materials by September 30, 2012. The Company determined the fair value of the contingent consideration obligations based on a probability-weighted income approach derived from financial performance estimates and probability assessments of the attainment of the technical and operational targets. The undiscounted probable outcome that the Company initially used to value the contingent consideration arrangement was $15,000. During the fiscal year ended March 31, 2012, the Company recorded contingent consideration expense related to this transaction of $750 as general and administrative expenses.

The $71,850 of acquired intangible assets is comprised of technology of $66,200, customer relationships of $950 and trademarks of $4,700, with weighted average amortization periods of 10 years, 3 years and 10 years, respectively.

The acquisition of Confluence Solar did not have a material impact on the Company's results of operations. Pro forma results of operations have not been presented due to the immaterial nature of those amounts.

The Company incurred transaction costs of $1,372 in connection with the acquisition of Confluence Solar for the fiscal year ended March 31, 2012 which consisted primarily of advisory services and due diligence. These costs have been recorded as general and administrative expense.

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

3. Acquisitions (Continued)

Acquisition of Crystal Systems, Inc.

On July 29, 2010, the Company acquired 100% of the outstanding shares of common stock of Crystal Systems, a crystalline growth technology company that manufactures sapphire materials used in LED applications, and other sapphire components used in other specialty markets ("Crystal Systems"). The acquisition of Crystal Systems provides the Company access to certain technologies and an expanded product portfolio. The purchase consideration consisted of $24,798 in cash, 5,445 shares of the Company's common stock valued at $30,938 (on the date of acquisition) and potential additional $18,650 contingent consideration based on the attainment of certain financial and technical targets through the period ending March 31, 2012. The fair value of the contingent consideration was estimated at $12,500 at the date of acquisition.

The transaction has been accounted for as a business combination. The acquired business contributed revenues of $216,881 and $15,305 for the fiscal years ended March 31, 2012 and April 2, 2011, respectively. The results of the acquired business are included in the Company's sapphire business segment.

The Company recorded approximately $42,206 of goodwill which is primarily due to the expected future cash flows from yet undeveloped intangible assets such as future technology and the assembled workforce. The goodwill created by the transaction is nondeductible for tax purposes. A summary of the purchase prices allocation for the acquisition of Crystal Systems is as follows:

Fair value of consideration transferred:

Cash	$	24,798
Common stock		30,938
Contingent consideration obligations		12,500
Purchase price adjustment	$	(392)
Total fair value of consideration	$	67,844

Fair value of assets acquired and liabilities assumed:

Cash	$	2,028
Accounts receivable		1,405
Inventories		2,841
Prepaid expenses and other assets		589
Property, plant and equipment		7,467
Intangible assets		24,000
Deferred tax assets		726
Goodwill		42,206
Customer deposits		(974)
Accounts payable, accrued expenses and other non-current liabilities		(1,530)
Deferred tax liabilities		(10,914)
Total net assets acquired	$	67,844

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

3. Acquisitions (Continued)

The purchase consideration included contingent consideration payable by the Company upon the achievement of (i) a revenue target for calendar year 2010, (ii) revenue and gross margin targets for the fiscal year ending March 31, 2012, (iii) a technical target relating to the commissioning of a predetermined number of crystal-growth furnaces, and (iv) the development of an ingot growth process. All four targets have been achieved, and during the fiscal years ended March 31, 2012 and April 2, 2011, the Company paid $7,071 and $3,534, respectively, to the shareholders of Crystal Systems in connection with the attainment of these targets. The final payment is expected to be paid in fiscal 2013.

During the fiscal years ended March 31, 2012 and April 2, 2011, the Company recorded contingent consideration expense of $3,708 and $2,262, respectively, as general and administrative expenses. The fair value of the Company's contingent consideration obligations was $7,865 at March 31, 2012 and $11,228 at April 2, 2011. The undiscounted range of probable outcomes that the Company initially used to value the contingent consideration arrangement was between $16,000 and $18,650.

The Company incurred transaction costs of $837 in connection with the acquisition, which consisted primarily of legal and accounting fees. These costs have been recorded as general and administrative expense within the fiscal year ended April 2, 2011.

4. Goodwill and Other Intangible Assets

The following table contains the change in the Company's goodwill during the fiscal year ended March 31, 2012:

	Photovoltaic Business	Sapphire Business	Total
Balance as of April 3, 2010	$ 42,600	—	$ 42,600
Acquisition of Crystal Systems	—	$ 42,578	42,578
Balance as of April 2, 2011	42,600	42,578	85,178
Adjustment related to the acquisition of Crystal Systems, Inc.	—	(372)	(372)
Acquisition of Confluence Solar, Inc.	17,346	—	17,346
Balance as of March 31, 2012	$ 59,946	$ 42,206	$ 102,152

No impairment losses have been recorded on the Company's goodwill.

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

4. Goodwill and Other Intangible Assets (Continued)

Acquired intangible assets subject to amortization at March 31, 2012 and April 2, 2011 consisted of the following:

	Weighted Average Amortization Period	March 31, 2012			April 2, 2011		
		Gross Amount	Accumulated Amortization	Net	Gross Amount	Accumulated Amortization	Net
Photovoltaic & Polysilicon:							
Customer relationships	5.4 years	$ 5,150	$ 4,391	$ 759	$ 4,200	$ 3,675	$ 525
Technology	9.4 years	74,200	11,986	62,214	8,000	8,000	—
Trade names/ Trademarks	8.6 years	7,100	2,683	4,417	2,400	2,100	300
Supplier relationships	5.0 years	1,100	1,100	—	1,100	1,100	—
Subtotal:		87,550	20,160	67,390	15,700	14,875	825
Sapphire:							
Customer relationships	6.0 years	$ 4,100	$ 1,139	$ 2,961	$ 4,100	$ 456	$ 3,644
Technology	10.0 years	17,300	2,883	14,417	17,300	1,153	16,147
Order backlog	1.2 years	500	483	17	500	300	200
Trade names	8.0 years	1,100	229	871	1,100	92	1,008
Non-compete agreements	5.8 years	1,000	299	701	1,000	119	881
Subtotal:		24,000	5,033	18,967	24,000	2,120	21,880
		$111,550	$ 25,193	$86,357	$39,700	$ 16,995	$22,705

Amortization expense for intangible assets was $8,198, $4,500 and $3,164, for the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010, respectively.

The weighted average remaining amortization periods for the (i) photovoltaic & polysilicon and (ii) sapphire intangibles were 7.64 and 7.21 years, respectively, as of March 31, 2012. As of March 31, 2012, the estimated future amortization expense for the Company's intangible assets is as follows:

Fiscal Year Ending	Amortization Expense
2013	$ 10,153
2014	10,137
2015	9,913
2016	9,770
2017	9,237
Thereafter	37,147

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

5. Customer Concentrations

The following customers comprised 10% or more of the Company's total accounts receivable or revenues as of or for the periods indicated:

	Fiscal Years Ended						As of			
	March 31, 2012		April 2, 2011		April 3, 2010		March 31, 2012		April 2, 2011	
	Revenue	% of Total	Revenue	% of Total	Revenue	% of Total	Accounts Receivable	% of Total	Accounts Receivable	% of Total
Photovoltaic Customers										
Customer #1	*	*	$172,627	19%	*	*	*	*	*	*
Customer #2	*	*	*	*	*	*	*	*	$ 11,821	14%
Customer #3	*	*	*	*	*	*	*	*	$ 11,100	13%
Customer #4	*	*	*	*	*	*	*	*	$ 9,743	11%
Polysilicon Customers										
Customer #5(1)	$187,336	20%	*	*	*	*	$ 6,704	10%	*	*
Customer #6	*	*	*	*	$185,249	34%	*	*	*	*
Sapphire Customers										
Customer #7	*	*	*	*	*	*	20,084	31%	*	*
Customer #8	*	*	*	*	*	*	12,852	20%	*	*

* Amounts from these customers were less than 10% of the total as of or for the respective period.

(1) Total revenue recognized from this customer for the fiscal year ended March 31, 2012 was $223,723, or 23% of total revenue. Not included in the table above is $36,387, or 4% of total revenue, of revenue recorded from this customer in our sapphire business segment.

The Company requires most of its customers to either post letters of credit and/or make advance payments of a portion of the selling price prior to delivery. Approximately $50,833 (or 77%) and $76,548 (or 88%) of total accounts receivable as of March 31, 2012 and April 2, 2011, respectively, were secured by letters of credit.

6. Inventories

Inventories consisted of the following:

	March 31, 2012	April 2, 2011
Raw materials	$ 165,725	$ 97,607
Work-in-process	7,837	4,130
Finished goods	19,733	25,835
	$ 193,295	$ 127,572

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

7. Property, Plant and Equipment

Property, plant and equipment consisted of the following:

	Estimated Useful Life	March 31, 2012	April 2, 2011
Leasehold improvements	Lesser of useful life or initial lease term	$ 28,313	$ 11,769
Land	—	1,074	1,074
Land improvements	15 years	326	326
Building	40 years	17,054	10,424
Machinery and equipment	3 to 7 years	58,776	31,992
Computer equipment and software	3 to 5 years	12,147	8,713
Furniture and fixtures	5 to 7 years	2,703	2,018
		120,393	66,316
Less accumulated depreciation		(20,411)	(11,875)
		$ 99,982	$ 54,441

Software costs incurred as part of an enterprise resource systems project of $2,067 and $510 were capitalized during the fiscal years ended March 31, 2012 and April 2, 2011, respectively. Depreciation and amortization expense for the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010, was $9,650, $5,167 and $3,706, respectively.

8. Valuation and Qualifying Accounts

Warranty

The following table presents warranty activities:

	Fiscal Year Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
Product warranty liability, beginning of the year	$ 6,943	$ 1,280	$ 2,231
Accruals for new warranties issued	5,984	10,982	1,067
Payments under warranty	(6,702)	(5,319)	(2,018)
Product warranty liability, end of year	$ 6,225	$ 6,943	$ 1,280

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

8. Valuation and Qualifying Accounts (Continued)

Allowance for Doubtful Accounts

The following table presents allowance for doubtful account activities:

	Fiscal Year Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
Allowance for doubtful accounts, beginning of year	$ 2,536	$ 2,620	$ 401
Charges to expense	671	205	93
Reclassification from deferred revenue	2,249	932	2,554
Write offs	(34)	(1,221)	(428)
Allowance for doubtful accounts, end of the year	$ 5,422	$ 2,536	$ 2,620

9. Long Term Debt and Revolving Credit Facility

Credit Suisse Credit Agreement

On December 13, 2010, the Company entered into a credit agreement, with Credit Suisse AG, Cayman Islands Branch, ("Credit Suisse") as administrative agent and collateral agent, and the lenders from time to time, party to the credit agreement. This credit agreement consisted of a term facility, in an aggregate maximum principal amount of $125,000 with a final maturity date of December 13, 2013 and a revolving facility, in an aggregate maximum principal amount of $75,000 with a final maturity date of December 13, 2013.

In November 2011, the Company terminated this credit agreement with Credit Suisse, as amended, and the Guarantee and Collateral Agreement which was entered into at the time the credit agreement was executed in order to secure the obligations under such credit agreement. On November 15, 2011, the Company paid $91,267 to settle amounts owed under the term facility, which included principal of $90,938 and accrued interest of $329. There were no amounts outstanding under the revolving facility at the time this credit facility was terminated.

Interest expense recorded in connection with the credit facility with Credit Suisse was $12,281 for the fiscal year ended March 31, 2012, which includes amortization of debt fees, as well as the associated commitment fees. Included in this amount is an interest expense charge of $6,103 related to the unamortized portion of deferred financing costs, which were written off in connection with the termination of this credit agreement.

Bank of America Credit Agreement

On January 31, 2012, the Company, its U.S. operating subsidiary (the "U.S. Borrower") and its Hong Kong subsidiary (the "Hong Kong Borrower") entered into a credit agreement (the "2012 Credit Agreement"), with Bank of America, N.A., as administrative agent, Swing Line Lender and L/C Issuer (or "Bank of America") and the lenders from time to time party thereto. The 2012 Credit Agreement consists of a term loan facility (the "2012 Term Facility") provided to the U.S. Borrower in an aggregate principal amount of $75,000 with a final maturity date of January 31, 2016, a revolving credit facility (the "U.S. Revolving Credit Facility") available to the U.S. Borrower in an aggregate principal amount of $25,000 with a final maturity date of January 31, 2016 and a revolving credit facility (the

9. Long Term Debt and Revolving Credit Facility (Continued)

"Hong Kong Revolving Credit Facility"; together with the U.S. Revolving Credit Facility, the "2012 Revolving Credit Facility"; and together with the 2012 Term Facility, the "2012 Credit Facilities") available to the Hong Kong Borrower in an aggregate principal amount of $150,000 with a final maturity date of January 31, 2016. The 2012 Credit Facilities are available in the form of base rate loans based on Bank of America's prime rate plus a margin of 2.00% or Eurodollar rate loans based on LIBOR plus a margin of 3.00%. The 2012 Term Facility amortizes in equal quarterly amounts which in the aggregate equal 5% of the original principal amount of the 2012 Term Facility in each of years 1 and 2 of the loan and 10% of the original principal amount of the 2012 Term Facility in each of years 3 and year 4 of the loan, with the balance payable on January 31, 2016. The 2012 Credit Facilities are subject to mandatory prepayment in the event that the Company has excess cash flow or receives cash proceeds from any asset sale, casualty event or issuance of indebtedness not otherwise permitted under the 2012 Credit Agreement during any fiscal year, subject to certain thresholds and other exceptions. The 2012 Credit Facilities also requires us to comply with certain covenants, including financial ratio covenants (as described further below). Proceeds of the 2012 Term Facility and 2012 Revolving Credit Facility are available for use by us and certain of our subsidiaries for general corporate purposes. The full amount of the 2012 Term Facility was drawn by us on January 31, 2012 and no amounts have been drawn on the 2012 Revolving Credit Facility as of such date. The Company may use the 2012 Revolving Credit Facility in connection with the issuance of letters of credit up to the aggregate principal amount of the 2012 Revolving Credit Facility.

The proceeds of the 2012 Term Facility and the U.S. Revolving Credit Facility are secured by a lien on substantially all of the tangible and intangible property of the Company and its wholly-owned domestic subsidiaries (including the U.S. Borrower), including but not limited to accounts receivable, inventory, equipment, general intangibles, certain investment property, certain deposit and securities accounts, certain owned real property and intellectual property, and a pledge of the capital stock of each of the Company's wholly-owned domestic subsidiaries (limited in the case of pledges of capital stock of any foreign subsidiaries, to 65% of the capital stock of any first-tier foreign subsidiary), subject to certain exceptions and thresholds, and the repayment of such proceeds is guaranteed by the Company and its wholly-owned domestic subsidiaries. The proceeds of the Hong Kong Revolving Facility are secured by a lien on substantially all of the tangible and intangible property of the Hong Kong Borrower, including but not limited to accounts receivable, inventory, equipment, general intangibles, certain investment property, certain deposit and securities accounts, certain owned real property and intellectual property, and a pledge of the capital stock of the Hong Kong Borrower, subject to certain exceptions and thresholds, and the repayment of such proceeds is guaranteed by the Company and its wholly-owned domestic subsidiaries.

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

9. Long Term Debt and Revolving Credit Facility (Continued)

Over the next four fiscal years, the Company will be required to repay the following principal amounts under the 2012 Term Facility:

Fiscal Year Ending	Principal Payments	
2013	$	3,750
2014		3,750
2015		7,500
2016		60,000
Total	$	75,000

The Company may, at its option, prepay borrowings under the 2012 Credit Agreement (in whole or in part), at anytime without penalty subject to conditions set forth in the 2012 Credit Facility. The Company is required to make mandatory prepayments:

- of the lesser of (i) 25,000 or (ii) 50% of excess cash flow (as defined in the 2012 Credit Agreement) in any fiscal year (with the first mandatory prepayment scheduled to be made following the end of the Company's transition period ending December 31, 2012) (as reduced by voluntary repayments of the Term Facility), subject to certain exceptions;

- 100% of the net cash proceeds (as defined in the 2012 Credit Agreement) of all asset sales or other dispositions of property (as described in the 2012 Credit Agreement) by the Company and its subsidiaries in excess of $5,000, subject to certain exceptions;

- 100% of the net cash proceeds (as defined in the 2012 Credit Agreement) of extraordinary receipts (as described in the 2012 Credit Agreement) by the Company and its subsidiaries in excess of $5,000, subject to certain exceptions; and

- 100% of the net cash proceeds (as defined in the 2012 Credit Agreement) from non-permitted indebtedness (as described in the 2012 Credit Agreement) by the Company, subject to certain exceptions.

The 2012 Credit Agreement imposes certain financial covenants on the Company and its subsidiaries, including, (i) minimum ratio of consolidated adjusted EBITDA (as defined in the 2012 Credit Agreement) to consolidated interest charges (as defined in the 2012 Credit Agreement) of 3.50 to 1.00 at the end of any period of four consecutive fiscal quarters and (iii) maximum leverage ratio (as defined in the Credit Agreement) of 2.0 to 1.0 at the end of any period of four consecutive fiscal quarters.

The 2012 Credit Agreement requires that the Company and its subsidiaries comply with covenants relating to customary matters (in addition to the financial covenants described above), including with respect to incurring indebtedness and liens, using the proceeds received under the 2012 Credit Agreement, transactions with affiliates, making investments and acquisitions, effecting mergers and asset sales, prepaying indebtedness, and restrictions on the Company's ability to pay dividends to shareholders. Events of default can trigger, among other things, acceleration of payment of all outstanding principal and interest under the 2012 Credit Agreement.

9. Long Term Debt and Revolving Credit Facility (Continued)

The 2012 Credit Agreement includes events of default relating to customary matters, including, among other things, nonpayment of principal, interest or other amounts; violation of covenants; inaccuracies in the representations and warranties in any material respect; cross default and cross acceleration with respect to indebtedness in an aggregate principal amount of $10,000 or more; bankruptcy or similar proceedings or events; judgments involving liability of $10,000 or more that are not paid; ERISA events; actual or asserted invalidity of guarantees or security documents; and change of control. Events of default can trigger, among other things, acceleration of payment of all outstanding principal and interest under the 2012 Credit Agreement.

Interest expense related to 2012 Term Facility and 2012 Revolving Credit Facility was $729 for the fiscal year ended March 31, 2012, which includes amortization of debt fees related to both facilities, as well as the associated commitment fees. The carrying value of the amounts drawn under the 2012 Term Facility and the associated accrued interest total $75,209 as of March 31, 2012. The outstanding principal and accrued interest on the 2012 Term Facility approximate its fair value. Interest capitalized on construction-in-process contracts for the fiscal year ended March 31, 2012 was not material. The balance of deferred financing costs at March 31, 2012 was $3,273 and is included in other assets on the consolidated balance sheet.

The Company uses amounts available under the 2012 Revolving Facilities in connection with standby letters of credit related to customer deposits. As of March 31, 2012, the Company had $126,478 of outstanding letters of credit pursuant to the 2012 Revolving Facilities resulting in $48,522 of available credit under the 2012 Revolving Facilities. The Credit Agreement allows the Company to cash collateralize letters of credit up to an amount of $35,000 to the extent that outstanding standby letters of credit exceed the amount of our collective 2012 Revolving Credit Facility in the U.S. and Hong Kong.

10. Employee Benefit Plan

The Company has a 401(k) employee savings plan for its eligible employees. Eligible employees may elect to contribute a percentage of their salaries up to the annual Internal Revenue Code maximum limitations. The 401(k) employee savings plan allows the Company to make discretionary matching contributions for its participating employees. For the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010, the Company made discretionary contributions of $2,036, $1,004 and $711, respectively.

(In thousands, except per share data)

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11. Income Taxes

The provision for income taxes is comprised of:

	Fiscal Year Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
Current:			
Federal	$ 42,569	$ 38,895	$ 74,571
State	7,533	537	17,038
Foreign	27,953	22,862	201
Total current	$ 78,055	$ 62,294	$ 91,810
Deferred:			
Federal	$ 11,202	$ 26,417	$ (31,066)
State	(1,271)	6,834	(7,683)
Foreign	(1,445)	298	(443)
Total deferred	$ 8,486	$ 33,549	$ (39,192)
Total provision for income taxes	$ 86,541	$ 95,843	$ 52,618

A component of the current tax provision for the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010 includes an accrual for noncurrent tax related to uncertain tax benefits of $8,339, $16,287 and $279, respectively.

Income before provision for income taxes is as follows:

	Fiscal Year Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
Domestic	$ 126,422	$ 135,002	$ 139,553
Foreign	143,516	135,596	321
Total	$ 269,938	$ 270,598	$ 139,874

The U.S. federal income tax rate is reconciled to the Company's effective tax rate as follows:

	Fiscal Year Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
Tax at federal statutory rate	$ 94,478	$ 94,709	$ 48,956
State income tax, net of U.S. federal benefit	4,071	4,791	6,081
IRC Section 199 deduction	(624)	(1,346)	(1,345)
Foreign income taxes at rates different than domestic rates	(28,793)	(24,552)	(318)
Effect of foreign operations included in U.S. federal provision	9,327	3,802	(26)
Reserves for uncertain tax benefits	8,185	17,564	137
Research credits	(798)	(1,585)	(805)
Other	695	2,460	(62)
	$ 86,541	$ 95,843	$ 52,618

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

11. Income Taxes (Continued)

Significant components of the Company's deferred tax assets and liabilities are as follows:

	March 31, 2012	April 2, 2011
Deferred tax assets:		
Deferred revenue	$ 40,671	$ 86,666
Reserves not currently deductible	6,774	5,642
Equity compensation	5,258	2,697
Allowance for doubtful accounts	1,256	1,003
State credits and fixed assets	1,746	—
Other	338	1,255
Total deferred tax assets	$ 56,043	$ 97,263
Deferred tax liabilities:		
Deferred costs	$ 37,829	$ 81,893
Fixed assets	17,365	3,622
Intangibles	25,910	8,289
	81,104	93,804
Net deferred tax assets (liabilities)	$ (25,061)	$ 3,459
Reported as:		
Deferred income taxes—current	$ 13,857	$ 62,539
Deferred income taxes—long-term	(38,918)	(59,080)
	$ (25,061)	$ 3,459

In the prior year financial statements, the Company had presented the temporary differences related to deferred revenue and deferred costs as deferred profit. The deferred profit amount in prior year table of $4,773 has been reclassified to conform to the current year presentation as deferred revenue of $86,666 and deferred costs of $81,893 as of April 2, 2011.

As of March 31, 2012, the Company had state investment tax and research credit carryforwards of approximately $548 and $377, respectively. These credits begin to expire in fiscal 2015, unless converted to unlimited status.

It is the practice and intention of the Company to reinvest the earnings of its non-US subsidiaries in those operations. As of March 31, 2012, the Company has not made a provision for US or additional foreign withholding taxes on its undistributed earnings of approximately $237,547, as these are considered permanently reinvested. Such earnings could become subject to US taxation if they were either remitted as dividends and under certain other circumstances. It is not practicable to estimate the amount of deferred tax liability related to investments in these foreign subsidiaries.

The Company's effective tax rate for the fiscal year ended March 31, 2012 has changed from that of fiscal year ended April 2, 2011 owing principally to increased levels of income in lower tax jurisdictions. The Company continues to increase its activities in Asia to accommodate the new sapphire equipment business as well as its global operations center to Hong Kong.

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

11. Income Taxes (Continued)

As of March 31, 2012, the Company had $25,295 of unrecognized tax benefits, all of which, if recognized, would affect the effective tax rate. A reconciliation of the beginning and ending amount of the unrecognized income tax benefits during the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010 are as follows:

	Fiscal Years Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
Balance at beginning of year	$ 17,653	$ 579	$ 442
Increases related to current year tax positions	7,823	16,211	137
Decreases related to prior year tax positions	(158)	—	—
Increases related to prior year tax positions	—	863	—
Decreases related to settlements with tax authorities	(23)	—	—
Balance at end of year	$ 25,295	$ 17,653	$ 579

The Company also recognizes interest and penalties related to unrecognized tax benefits as a component of income tax expense. The Company recorded interest and penalties of $516 as part of income tax expense for the fiscal year ended March 31, 2012. The Company has recorded accruals for interest and penalties of $1,057 and $541 as of March 31, 2012 and April 2, 2011, respectively. These amounts were insignificant for the fiscal year ended April 3, 2010.

The Company files income tax returns in the U.S. federal jurisdiction and various state jurisdictions. The Company is subject to examination by federal, state, and foreign tax authorities. The Company's U.S. tax returns are currently in appeals for fiscal years ending March 31, 2007 and 2008 and the Company plans to vigorously defend all tax positions taken. The Company is also under examination by the Internal Revenue Service, or IRS for its fiscal years ending March 28, 2009 and April 3, 2010. In addition, the statute of limitations is open for all state and foreign jurisdictions. As of March 31, 2012, the Company has classified approximately $1,089 of unrecognized tax benefits as short-term. These unrecognized tax benefits relate to positions under appeals for the fiscal 2007 and fiscal 2008 tax years.

12. Comprehensive Income

Comprehensive income is defined as the change in equity during a period from non-owner sources. The Company's comprehensive income for each period presented is comprised of (i) the Company's net income; (ii) foreign currency translation adjustment of the Company's wholly-owned foreign subsidiaries whose assets and liabilities are translated from their respective functional currencies at exchange rates in effect at the balance sheet date, and revenues and expenses are translated at average exchange rates prevailing during the applicable period; and (iii) changes in unrealized gains or losses, net of tax, for derivatives designated as cash flow hedges. Comprehensive income is presented in the Consolidated Statements of Changes in Stockholders' Equity.

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

12. Comprehensive Income (Continued)

The components of the Company's accumulated other comprehensive loss as of March 31, 2012 and April 2, 2011, net of taxes were as follows:

	March 31, 2012	April 2, 2011
Cash flow hedges of foreign exchange, net of tax	$ (1,378)	$ (3,522)
Foreign currency translation adjustment	1,191	670
Total	$ (187)	$ (2,852)

13. Commitments and Contingencies

Lease commitments

The Company has entered into operating leases for office and warehouse facilities in the United States, China, Hong Kong and Taiwan. The terms of these leases range from 12 months to 13 years. Rent expense for the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010, was $4,770, $3,740 and $2,075, respectively. As of March 31, 2012, minimum annual payments under these agreements are as follows:

Fiscal Year	Minimum Annual Payments
2013	$ 4,187
2014	3,843
2015	2,758
2016	1,910
2017	1,781
Thereafter	8,500

Purchase Commitments

The Company's commitments to purchase raw materials, research and development and other services from various suppliers are approximately $418,198 as of March 31, 2012. The majority of these commitments are due within the next twelve months. In addition, in connection with the acquisition of Confluence Solar, the Company agreed to fund at least $25,000, of which $22,440 has been spent as of March 31, 2012, of capital purchases related to the Confluence Solar operations.

Pledged Collateral

In connection with the acquisition of Confluence Solar, the Company has acquired certain assets which are pledged as collateral against customer deposits of $2,000 as of March 31, 2012.

Litigation Contingencies

Beginning on August 1, 2008, seven putative securities class action lawsuits were commenced in the United States District Court for the District of New Hampshire, or the Court, against the Company, certain of its officers and directors, certain underwriters of its July 24, 2008 initial public offering and

13. Commitments and Contingencies (Continued)

others, including certain of its investors, together called the "federal class actions." In addition, on September 18, 2008 a putative securities class action was filed in New Hampshire state court in the Superior Court for Hillsborough County, Southern District, or the State Court, under the caption *Hamel v. GT Solar International, Inc., et al.*, against the Company, certain of its officers and directors and certain underwriters of its July 24, 2008 initial public offering, called the "state class action." Both the federal class actions and the state class action asserted claims under various sections of the Securities Act of 1933, as amended. The plaintiffs in these actions alleged, among other things, that the defendants made false and materially misleading statements and failed to disclose material information in certain SEC filings, including the registration statement and prospectus for the Company's July 24, 2008 initial public offering, and other public statements, regarding its business relationship with LDK Solar, Ltd., one of its customers, JYT Corporation, one of its competitors, and certain of its products, including the DSS furnaces.

On March 7, 2011, the Company announced that it had reached an agreement in principle to settle both the federal class actions and the state class action. The parties subsequently memorialized their agreement in a stipulation of settlement (the "Settlement Agreement") that was filed with the Court. The Settlement Agreement provided, among other things, that: (i) the Company and all other defendants made no admission of liability or wrongdoing, (ii) the Company and all other defendants would receive a full and complete release of all claims that were or could have been brought against all defendants in both the federal and state securities actions, (iii) the Company would pay $10,500 into a settlement fund. Of this amount, the Company contributed $1,000 and the Company's liability insurers contributed the remaining $9,500. The Company's contribution represented its contractual indemnification obligation to its underwriters.

On September 27, 2011, after a hearing to consider the fairness and adequacy of the settlement, the court entered a final judgment (the "Order") approving the settlement and dismissing the federal class actions. Pursuant to the Settlement Agreement, the state class action was also dismissed as a result of the entry of the Order.

A derivative suit, captioned *Fan v. GT Solar Int'l, Inc., et al.*, was filed in New Hampshire State Court on January 14, 2009, called the "derivative action." The derivative complaint is asserted nominally on the Company's behalf against certain of its directors and officers and alleges various claims for breach of fiduciary duty, unjust enrichment, abuse of control and gross mismanagement. The derivative action is premised on the same purported misconduct alleged in the federal class actions. On April 10, 2009, the court granted the Company's motion to stay the derivative action, pending resolution of a motion to dismiss then pending in the federal action. The derivative action, which remains stayed, is not included in the settlement of the federal and state class actions.

The Company intends to defend the derivative action vigorously. The Company is currently unable to estimate a range of payments, if any, it may be required to pay, or may agree to pay, with respect to the derivative action. However, the Company believes that the resolution of this suit will not result in a material effect to its consolidated financial statements. However, due to the inherent uncertainties that accompany litigation of this nature, there can be no assurance that the Company will be successful, and the resolution of the lawsuit could have a material effect on its consolidated financial statements.

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

13. Commitments and Contingencies (Continued)

The Company is subject to various other routine legal proceedings and claims incidental to its business, which management believes will not have a material effect on the Company's financial position, results of operations or cash flows.

Customer Indemnifications

In the normal course of business, the Company indemnifies, under pre-determined conditions and limitations, its customers for infringement of third-party intellectual property rights by the Company's products or services. The Company seeks to limit its liability for such indemnity to an amount not to exceed the sales price of the products or services subject to its indemnification obligations, but not all agreements contain such limitations on liability. The Company does not believe, based on information available, that it is probable that any material amounts will be paid under these indemnification provisions.

14. Stockholders' Equity

Common Stock

The Company has authorized 500,000 shares of common stock, $0.01 par value, of which 118,331 shares were issued and outstanding at March 31, 2012.

On November 12, 2010, the Company repurchased 26,500 shares of its common stock from GT Solar Holdings, LLC ("Holdings") at a per share price of $7.66, or an aggregate of approximately $203,476. The shares were retired and the cost of the repurchase has been allocated to retained earnings and additional paid-in capital based on the additional paid-in capital related to the issue of common stock with the excess charged to retained earnings.

Share Repurchase Program

In November 2011, the Company's board of directors authorized a $100,000 share repurchase program consisting of the purchase of $75,000 of its common stock which was financed with existing cash through an accelerated share repurchase program, and the purchase of an additional $25,000 of its common stock that may be made from time to time through open market repurchases or privately negotiated transactions, as determined by the Company's management. On November 18, 2011, the Company entered into an accelerated share repurchase agreement ("ASR") with UBS AG, under which the Company repurchased $75,000 of its common stock. The effective per share purchase price was based on the average of the daily volume weighted average prices per share of the Company's common stock, less a discount, calculated during the term of the ASR. In connection with this agreement, in November 2011 the Company paid $75,000 to UBS AG and at such time received 7,823 shares of the Company's common stock, of which:

- $60,000, or 80%, represented the value, based on the closing price of the Company's common stock on November 18, 2011, of the 7,823 shares of Company common stock that UBS AG delivered to the Company in November 2011; and

- $15,000, or 20%, represented an advance payment that, depending on the effective per share purchase price, either will cover additional shares UBS AG may be required to deliver to the

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

14. Stockholders' Equity (Continued)

Company or will be applied towards any additional amount that may be owed by the Company. This advanced payment was accounted for as a forward share repurchase contract in the statement of stockholders' equity, as a reduction to additional paid-in capital.

On March 6, 2012, the Company received notice from UBS of its intent to exercise and finalize the ASR transaction with a valuation date of March 5, 2012. Prior to this notice, on March 5, 2012, UBS delivered 900 shares of the Company's common stock in anticipation of having to deliver shares to the Company as part of the final settlement. UBS delivered these shares early, as was their right under the ASR contract. On March 8, 2012, UBS delivered another 715 shares of the Company's common stock pursuant to its notice of exercise to fully settle its obligations under the ASR agreement.

The total number of shares received by the Company under the ASR was 9,438. This amount is comprised of the 7,823 initial shares, 900 early delivery shares and 715 final settlement shares. The effective per share repurchase price was $7.95 per share based on the volume-weighted average share price of the company's common stock, less a discount, during the ASR period. All of the shares received by the Company under the ASR program were canceled and retired upon receipt by the Company.

To account for changes in the fair value of the share repurchase contract from the trade date of November 18, 2011 to settlement date of November 23, 2011, the Company recorded a gain of $3,344 to other income to reflect an appreciation of the fair value of the share repurchase contract over the three day settlement period.

The excess of the cost of shares acquired over the par value was allocated to additional paid-in capital and retained earnings. As a result of the share repurchases, the Company reduced common stock and additional paid-in capital by an aggregate of $13,744 and charged $64,599 to retained earnings for the fiscal year ended March 31, 2012.

Preferred Stock

The Company has authorized 10,000 shares of undesignated preferred stock, $0.01 par value, none of which was issued and outstanding at March 31, 2012 or April 2, 2011. The Company's board of directors is authorized to determine the rights, preferences and restrictions on any series of preferred stock to be issued.

15. Share-Based Compensation

The Company has established equity compensation plans that provide share-based compensation to eligible employees, directors, officers, as well as independent contractors performing services for the Company. The terms of awards made under the Company's equity compensation plans are generally determined by the Compensation Committee. On January 1, 2006, the Company adopted the 2006 Stock Option Plan (the "2006 Plan"). Under the 2006 Plan, options were granted to persons who were, at the time of grant, employees, officers or directors of, or consultants or advisors to, the Company. All of the options granted under the 2006 Plan were awarded prior to the Company's initial public offering and therefore the option price at the date of grant was determined based upon contemporaneous valuations. On June 30, 2008, in connection with the Company's initial public offering, the Company adopted the 2008 Equity Incentive Plan (the "2008 Plan"). The Company does not intend to issue any

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

15. Share-Based Compensation (Continued)

further equity awards under the 2006 or 2008 Plans. On August 24, 2011, the Company adopted the 2011 Equity Incentive Plan (the "2011 Plan"). The 2011 Plan reserves up to 12,500 shares of common stock for grants of stock options, restricted stock, restricted stock units and other share-based awards. The principal awards outstanding under these equity plans consist of grants of restricted stock units and stock options. As of March 31, 2012, an aggregate of 12,215 shares were authorized for future grant under our 2011 Plan.

Restricted stock units deliver the recipient a right to receive a specified number of shares of the Company's common stock upon vesting. The restricted stock units vest upon the passage of time or upon the completion of performance goals as it relates to the Company's performance based awards, as defined at the grant date. Unlike stock options, there is no cost to the employee at share issuance. The Company values the restricted stock units at the fair value of the Company's common stock on the grant date, which is the closing price of the Company's common stock on the grant date.

Shares of common stock are issued to the holders of restricted stock units on the date the restricted stock units vest. The majority of shares issued are net of the statutory withholding requirements, which the Company pays on behalf of our participants. Prior to vesting, restricted stock units do not have dividend equivalents rights and do not have voting rights, and the shares underlying the restricted stock units are not considered issued and outstanding. Restricted stock units awarded typically vest 25% on each anniversary of the award over a 4 year period and expire ten years after grant.

The stock options issued under the Company's equity plans were issued with an exercise price equal to 100% of the market price of the Company's common stock on the date of grant and typically vest 25% on the first anniversary of the award of the remaining vesting 1/48th per month during the subsequent three years and expire ten years after grant. None of the Company's stock options were granted outside of the 2006 Plan, the 2008 Plan or the 2011 Plan. The Company grants options that allow for the settlement of vested stock options on a net share basis ("net settled stock options"), instead of settlement with a cash payment ("cash settled stock options"). With net settled stock options, the employee does not surrender any cash or shares upon exercise. Rather, the Company withholds the number of shares to cover the option exercise price and the minimum statutory tax withholding obligations from the shares that would otherwise be issued upon exercise.

The following table presents stock-based compensation expenses and related income tax benefits included in the Company's consolidated statement of operations:

	Fiscal Years Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
General administrative expenses	$ 9,967	$ 5,816	$ 3,637
Selling and administrative expenses	784	504	412
Research and development expenses	2,210	762	722
Cost of sales	1,766	1,142	911
Stock-based compensation expense	$ 14,727	$ 8,224	$ 5,682
Income tax benefit of stock-based compensation expense	$ 5,418	$ 3,218	$ 1,972

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

15. Share-Based Compensation (Continued)

As of March 31, 2012, the Company had unamortized share-based compensation expense related to stock options and restricted stock unit awards and performance-based restricted stock units of $6,015, $21,531 and $3,320, respectively, after estimated forfeitures, which will be recognized over an estimated weighted-average remaining requisite service period of 2.33 years, 2.53 years and 2.13 years, respectively. Share-based compensation cost capitalized as part of inventory was not significant and therefore, not separately disclosed for all periods presented.

Stock Option Activity

The following table summarizes stock option activity for the fiscal year ended March 31, 2012:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding at April 2, 2011	4,285	$ 4.89		
Granted	759	$ 12.00		
Exercised	(1,321)	$ 5.23		
Forfeited	(204)	$ 5.61		
Outstanding at March 31, 2012	3,519	$ 6.25	$ 7.33	$ 9,899
Vested or expected to vest at March 31, 2012	3,367	$ 6.10	$ 7.27	$ 9,747
Exercisable at March 31, 2012	1,484	$ 4.03	$ 5.96	$ 6,301

The aggregate intrinsic value in the table above represents the total pre-tax intrinsic value, based on the Company's closing common stock price of $8.27 on March 31, 2012, which would have been received by the option holders had all option holders exercised their options and immediately sold their shares on that date. The Company settles employee stock options exercises with newly issued common shares.

	Fiscal Years Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
Total intrinsic value of stock options exercised	$ 8,914	$ 10,588	$ 2,014

The weighted-average estimated fair value per share of stock options granted during the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010, was determined to be $5.71, $2.90 and $2.61, respectively, using the Black-Scholes option-pricing model with the following underlying assumptions:

	Fiscal Years Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
Weighted average expected volatility	48%	49.5%	51%
Weighted average risk-free interest rate	1.98%	2.4%	2.8%
Expected dividend yield	—%	—%	—%
Weighted average expected life (in years)	6.0	6.0	6.1

(In thousands, except per share data)

15. Share-Based Compensation (Continued)

The Company estimates the expected volatility of its future stock price on that of similar publicly-traded companies, and expects to continue to estimate its expected stock price volatility in this manner until such time as there is adequate historical data to refer to from its own traded share prices. The weighted-average risk free interest rate reflects the rates of U.S. government securities appropriate for the term of the Company's stock options at the time of grant.

The Company estimated the expected life, which represents the best estimate of the period of time from the grant date that the stock option will remain outstanding, using the simplified method (the mid-point between the time to vest and the contractual terms). The Company applies the simplified method because of insufficient historical exercise data to provide a reasonable basis upon which to estimate expected life due to the limited period of time the equity shares have been publicly traded. For options granted to non-employees the remaining contractual term is used for measurement purposes.

Restricted Stock Unit Activity

The following table summarizes restricted stock unit activity for the fiscal year ended March 31, 2012:

	Restricted Stock Units	
	Restricted Stock Units	Weighted Average Grant Date Fair Value
Outstanding at April 2, 2011	3,332	$ 6.65
Granted	1,610	$ 11.57
Vested	(1,066)	$ 6.38
Forfeited	(284)	$ 6.06
Outstanding at March 31, 2012	3,592	$ 8.99

The total fair value of restricted stock units vested for the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010 was $10,881, $6,011 and $2,466, respectively. The estimated weighted-average grant date fair values of restricted stock units granted during the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010 was $11.57, $7.93 and $5.19, respectively.

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

15. Share-Based Compensation (Continued)

Performance-Based Restricted Stock Unit Activity

The following table summarizes performance-based restricted stock unit activity for the fiscal year ended March 31, 2012:

	Performance-Based Restricted Stock Units	
	Performance-Based Restricted Stock Units	Weighted Average Grant Date Fair Value
Outstanding at April 2, 2011	—	$ —
Granted	488	$ 11.97
Vested	—	$ —
Forfeited	(1)	$ 12.03
Outstanding at March 31, 2012	487	$ 11.97

The estimated weighted-average grant date fair values of performance-based restricted stock units granted during the fiscal years ended March 31, 2012 was $11.97.

Cash received and income tax benefits from stock option exercises and restricted stock unit vesting was $6,901 and $7,384, respectively, for the fiscal year ended March 31, 2012, $9,223 and $5,489, respectively, for fiscal year ended April 2, 2011 and $1,066 and $218, respectively, for the fiscal year ended April 3, 2010.

16. Earnings Per Share

Basic earnings per share is computed by dividing the Company's earnings by only the weighted average number of common shares outstanding during the period. Diluted earnings per share is computed by dividing the Company's earnings by the weighted average number of common shares and, when dilutive, the weighted average number of potential common shares outstanding during the period, as determined using the treasury stock method. Potential common shares consist of common stock issuable upon the exercise of outstanding stock options and the vesting of restricted stock units.

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

16. Earnings Per Share (Continued)

The following table sets forth the computation of the weighted average shares used in computing basic and diluted earnings per share:

	Fiscal Years Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
Weighted average common shares—basic(1)	123,924	138,673	143,409
Dilutive common stock options and restricted stock unit awards	2,127	2,229	1,981
Weighted average common and common equivalent shares—diluted	126,051	140,902	145,390

(1) On November 18, 2011, the Company entered into an agreement to effect an accelerated share repurchase (see Note 14 above for additional information about the Company's accelerated share repurchase program). Under the agreement the Company received a total of 9,438 shares during the period of November 18, 2011 through March 8, 2012. On November 12, 2010, the Company repurchased 26,500 shares of the Company's common stock from GT Solar Holdings, LLC. The impact of these repurchases on the weighted average shares was a reduction of 2,989, and 10,265 for the years ended March 31, 2012 and April 2, 2011, respectively.

Potential common stock equivalents excluded from the calculation of dilutive earnings per share because the effect would have been anti-dilutive are as follows:

	Fiscal Years Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
Weighted average restricted stock units and common stock options having no dilutive effect	700	573	3,262

17. Segment and Geographical Information

Segment Information

The Company reports its results in three segments: the PV business, the polysilicon business and the sapphire business. The Company presents segment information in a manner consistent with the method used to report this information to management.

The PV business manufactures and sells directional solidification, or DSS, crystallization furnaces and ancillary equipment used to cast crystalline silicon ingots by melting and cooling polysilicon in a precisely controlled process. These ingots are used to make photovoltaic wafers which are, in turn, used to make solar cells. On August 24, 2011, the Company acquired 100% of the outstanding shares of common stock of privately-held Confluence Solar. Confluence Solar is the developer of HiCz, a continuously-fed Czochralski growth technology, that is designed to enable the production of high efficiency monocrystalline solar ingots. The Company has not yet commercialized the HiCz monocrystalline equipment, it does, however, expect to continue to sell HiCz monocrystalline

(In thousands, except per share data)

17. Segment and Geographical Information (Continued)

material, manufactured at its pilot production plant in Hazelwood, Missouri, into select markets. The results of the acquired business are included in the Company's PV business reporting segment.

The polysilicon business manufactures and sells Silicon Deposition Reactors (SDR) and related equipment used to produce polysilicon, the key raw material used in silicon-based solar wafers and cells, while also providing engineering services and related equipment.

On July 29, 2010, the Company acquired 100% of the outstanding shares of stock of Crystal Systems. The sapphire business manufactures and sells advanced sapphire crystal growth systems, as well as sapphire materials used in LED applications, and sapphire components used in other specialty markets.

The Company evaluates performance and allocates resources based on revenues and operating income (loss) of each segment. Operating income (loss) for each segment includes selling, general and administrative expenses directly attributable to the segment including the amortization of acquired intangible assets. Corporate services include non-allocable overhead costs, including human resources, legal, finance, information technology, general and administrative, certain corporate integration expenses and corporate marketing expenses.

Financial information for the Company's reportable segments is as follows:

	Photovoltaic Business	Polysilicon Business	Sapphire Business	Corporate Services	Total
Fiscal Year Ended March 31, 2012					
Revenue	$ 375,546	$ 363,278	$ 216,881	$ —	$ 955,705
Gross profit	183,512	157,420	85,868	—	426,800
Depreciation and amortization	6,839	679	7,933	2,397	17,848
Income (loss) from operations	139,413	140,892	63,292	(63,205)	280,392
Fiscal Year Ended April 2, 2011					
Revenue	$ 740,088	$ 143,591	$ 15,305	$ —	$ 898,984
Gross profit	314,609	59,873	3,513	—	377,995
Depreciation and amortization	3,090	841	2,889	2,847	9,667
Income (loss) from operations	279,555	46,962	(4,533)	(48,682)	273,302
Fiscal Year Ended April 3, 2010					
Revenue	$ 186,726	$ 357,519	$ —	$ —	$ 544,245
Gross profit	62,771	156,211	—	—	218,982
Depreciation and amortization	3,091	1,629	—	2,150	6,870
Income (loss) from operations	36,569	141,046	—	(33,653)	143,962
Assets:					
March 31, 2012	$ 275,798	$ 219,468	$ 256,667	$ 380,657	$ 1,132,590
April 2, 2011	$ 315,433	$ 236,781	$ 111,847	$ 462,231	$ 1,126,292
April 3, 2010	$ 198,451	$ 195,134	$ —	$ 338,496	$ 732,081

(In thousands, except per share data)

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17. Segment and Geographical Information (Continued)

Geographic Information

The following table presents net revenue by geographic region, which is based on the destination of the shipments:

	Fiscal Years Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
China	$ 495,283	$ 635,789	$ 340,478
Korea	238,780	119,346	68,961
Other Asia	176,476	80,150	30,008
Europe	29,816	51,356	95,855
United States	11,490	9,364	8,926
Other	3,860	2,979	17
Total	$ 955,705	$ 898,984	$ 544,245

A summary of long-lived assets by geographical region is as follows:

	Fiscal Years Ended		
	March 31, 2012(1)	April 2, 2011(1)	April 3, 2010(1)
United States	$ 214,778	$ 160,005	$ 64,020
Luxembourg	69,102	—	—
China	2,863	1,953	1,019
Taiwan	175	74	125
Hong Kong	1,573	292	—
Total	$ 288,491	$ 162,324	$ 65,164

(1) Long-lived assets for the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010, include intangible assets and goodwill of $188,509, $107,883 and $45,805, respectively, all located in the United States, with the exception of $1,711 and $67,391 of goodwill and intangibles, respectively, for the year ended March 31, 2012, which are located in Luxembourg.

18. Other, net

The components of other income, net are as follows:

	Fiscal Years Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
Offering costs	$ —	$ (539)	$ (790)
Foreign currency loss	(478)	(85)	(357)
Loss on derivatives—ineffective portion	(1,388)	—	(2,054)
Other	3,924	240	76
Total other income (expense), net	$ 2,058	$ (384)	$ (3,125)

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

18. Other, net (Continued)

During the fiscal year ended March 31, 2012, to account for changes in the fair value of the share repurchase contract from the trade date of November 18, 2011 to settlement date of November 23, 2011, the Company recorded a gain of $3,344 to other income to reflect an appreciation of the fair value of the share repurchase contract over the three day settlement period.

During the fiscal years ended April 2, 2011 and April 3, 2010, the Company incurred costs related to public offerings of its common stock. As the Company did not receive proceeds from these offerings, these costs are expensed in the periods incurred.

In March 2010, the Company completed a secondary public offering of 28,750 shares of common stock held by GT Solar Holdings, LLC. In September 2010, GT Solar Holdings, LLC sold 25,650 shares of the Company's common stock in two concurrent secondary offerings. During the fiscal year ending April 2, 2011, the Company and GT Solar Holdings, LLC agreed that GT Solar Holdings, LLC would reimburse the Company for certain of the expenses incurred in connection with the September 2010 secondary offering. During the fiscal year ended April 2, 2011, the Company was reimbursed approximately $390. As the Company did not receive proceeds from these offerings, costs are expensed in the periods incurred.

19. Fair Value Measurements

Fair value is an exit price, representing the amount that would be received from the sale of an asset or paid to transfer a liability in an orderly transaction between market participants based on assumptions that market participants would use in pricing an asset or liability. As a basis for classifying such assumptions, a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value, is applied as follows: (Level 1) observable inputs such as quoted prices in active markets for identical assets or liabilities; (Level 2) inputs other than the quoted prices in active markets that are observable either directly or indirectly; and (Level 3) significant unobservable inputs in which there is little or no market data, which requires the Company to develop its own assumptions. This hierarchy requires the Company to use observable market data, when available, and to minimize the use of unobservable inputs when determining fair value. There were no transfers between such levels in the fiscal year ended March 31, 2012.

The following table provides the assets and liabilities carried at fair value measured on a recurring basis at March 31, 2012 and April 2, 2011:

	March 31, 2012			
	Total Carrying Value	Fair Value Measurements Using		
		(Level 1)	(Level 2)	(Level 3)
Assets:				
Forward foreign exchange contracts—assets	$ 74	$ —	$ 74	$ —
Liabilities:				
Forward foreign exchange contracts—liabilities	$ 637	$ —	$ 637	$ —
Contingent consideration	$ 22,473	$ —	$ —	$ 22,473

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

19. Fair Value Measurements (Continued)

	April 2, 2011			
	Total Carrying Value	Fair Value Measurements Using		
		(Level 1)	(Level 2)	(Level 3)
Assets:				
Money market mutual funds	$ 196,118	$ 196,118	$ —	$ —
Forward foreign exchange contracts—assets	$ 374	$ —	$ 374	$ —
Liabilities:				
Contingent consideration	$ 11,228	$ —	$ —	$ 11,228

The Company's money market mutual funds are valued using readily available market prices.

The Company's counterparties to its forward foreign currency exchange contracts are financial institutions. These forward foreign exchange contracts are measured at fair value using a valuation which represents a good faith estimate of the midmarket value of the position, based on estimated bids and offers for the positions, which are updated each reporting period. The Company considers the effect of credit standings in these fair value measurements. There have been no changes in the valuation techniques used to measure the fair value of the Company's forward foreign exchange contracts (see Note 20 below for additional information about the Company's derivatives and hedging activities).

The Company has classified contingent consideration related to its acquisitions within Level 3 of the fair value hierarchy because the fair value is derived using significant unobservable inputs, which include discount rates and probability-weighted cash flows. The Company determined the fair value of its contingent consideration obligations based on a probability-weighted income approach derived from financial performance estimates and probability assessments of the attainment of certain targets. The Company establishes discount rates to be utilized in its valuation models based on the cost to borrow that would be required by a market participant for similar instruments. In determining the probability of attaining certain technical and operation targets, the Company utilizes data regarding similar milestone events from our own experience, while considering the inherent difficulties and uncertainties in developing a product. On a quarterly basis, the Company reassesses the probability factors associated with the financial, operational and technical targets for its contingent consideration obligations. Significant judgment is employed in determining the appropriateness of these assumptions as of the acquisition date and for each subsequent period.

The key assumptions as of March 31, 2012 related to the contingent consideration from the acquisition of Confluence Solar used in the model include: (i) discount rates of 4.41% for the purpose of discounting the expected cash flows; and (ii) probability factors related to the attainment of the financial target, operational target and certain technical targets. The probabilities range from 67% to 99% with a weighted average probability of 75%. An increase or decrease in the probability of achievement of any target could result in a significant increase or decrease to the estimated fair value of the contingent consideration liability.

As of March 31, 2012, the final contingent consideration target from the acquisition of Crystal Systems has been achieved. A discount rate of 4.41% has been used to present value the expected cash flows. The Company expects to pay the remaining consideration in the next fiscal year.

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

19. Fair Value Measurements (Continued)

Changes in the fair value of the Company's Level 3 contingent consideration obligations during the fiscal years ended April 3, 2011 to March 31, 2012 were as follows:

	Fiscal Years Ended	
	March 31, 2012	April 2, 2011
Fair value as of the beginning of the year	$ 11,228	$ —
Acquisition date fair value of contingent consideration obligations related to acquisitions	13,858	12,500
Changes in the fair value of contingent consideration obligations	4,458	2,262
Payments of contingent consideration obligations	(7,071)	(3,534)
Fair value at the end of the year	$ 22,473	$ 11,228

The carrying amounts reflected in the Company's consolidated balance sheets for cash, accounts receivable, prepaid expenses and other current assets, accounts payable, accrued expenses and customer deposits approximate fair value due to their short-term maturities. The Company did not hold any short-term investments at March 31, 2012 or April 2, 2011. The carrying amount of the Company's long-term debt approximates its fair value due to market related interest rates and is classified as a Level 2 liability.

Assets not recorded at fair value on a recurring basis, such as property and equipment, and intangible assets are recognized at fair value when they are impaired. During the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010, the Company did not recognize any nonrecurring fair value measurements from impairments. The Company recorded assets acquired and liabilities assumed related to its acquisitions of Crystal Systems and Confluence Solar at fair value.

20. Derivative and Hedging Activities

The Company enters into forward foreign currency exchange contracts to hedge portions of foreign currency denominated inventory purchases. These contracts typically expire within 12 months of entering into the contract. As of March 31, 2012, the Company had foreign currency exchange contracts with notional amounts of €24,914, or $33,803, all of which qualified as cash flow hedges.

The following table summarizes activity in accumulated other comprehensive income (loss) related to derivatives classified as cash flow hedges held by the Company during the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010:

	Fiscal Years Ended		
	March 31, 2012	April 2, 2011	April 3, 2010
Balance at beginning of year	$ (3,522)	$ (5,264)	$ (8,503)
Net gain (loss) on changes in fair value of derivatives, net of tax effect of $(1,429), $(1,234) and $(1,189), respectively	2,144	1,742	3,239
Balance at end of year	$ (1,378)	$ (3,522)	$ (5,264)

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

20. Derivative and Hedging Activities (Continued)

During the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010, the Company recognized (losses) gains of $(4,258), $(2,992) and $236, respectively, against cost of revenue with respect to cash flow hedges where the underlying hedged transaction had affected earnings. Approximately $997 of accumulated loss is expected to be reclassified into earnings over the next twelve months.

During the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010, $1,388, $0 and $2,054, respectively, was recognized as expense on certain forward foreign currency exchange contracts that no longer qualified as cash flow hedges.

During the year ended April 3, 2010, the Company determined that certain forward foreign currency exchange contracts to purchase €26,000 that were scheduled to mature by the end of the fiscal year no longer qualified as an effective hedge due to changes in delivery schedules requested by a customer. At the time the determination was made, the Company entered into forward foreign currency exchange contracts to sell €26,000 scheduled to mature at the same time as the original purchase contracts to offset any further financial exposure for these contracts.

The following table sets forth the balance sheet location and fair value of the Company's forward foreign exchange contracts, all of which were designated as hedging instruments at March 31, 2012 and April 2, 2011:

	Balance Sheet Location	March 31, 2012 Fair Value	April 2, 2011 Fair Value
Instruments Designated as Cash Flow Hedges			
Forward foreign currency exchange contracts—assets	Other current assets	$ 74	$ 374
Forward foreign currency exchange contracts—liabilities	Accrued expenses	$ 637	$ —

The following table sets forth the effect of the Company's forward foreign currency exchange contracts designated as hedging instruments on the consolidated statements of operations for the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010:

Instruments Designated as Cash Flow Hedges

Fiscal Years Ended	Amount of (Gain) or Loss Recognized in OCI on Derivative (Effective Portion)	Location of Gain or (Loss) Reclassified from AOCI into Income (Effective Portion)	Amount of Gain or (Loss) Reclassified from AOCI into Income (Effective Portion)	Location of Gain or (Loss) Recognized in Income on Derivative (Ineffective Portion)	Amount of Gain or (Loss) Recognized in Income on Derivative (Ineffective Portion)
March 31, 2012	$ 2,074	Cost of revenue / Research and Development	$ (4,258)	Other, net	$ (1,388)
April 2, 2011	$ 16	Cost of revenue	$ (2,992)	Other, net	$ —
April 3, 2010	$ (2,610)	Cost of revenue	$ 236	Other, net	$ —

(In thousands, except per share data)

20. Derivative and Hedging Activities (Continued)

The following table sets forth the effect of the Company's forward foreign exchange contracts not designated as hedging instruments on the consolidated statements of operations for the fiscal years ended March 31, 2012, April 2, 2011 and April 3, 2010:

Derivatives Not Designated as Hedging Instruments

Fiscal Years Ended	Location of Gain or (Loss) Recognized in Income on Derivative	Amount of Gain or (Loss) Recognized in Income on Derivative	
March 31, 2012	Other, net	$	—
April 2, 2011	Other, net	$	—
April 3, 2010	Other, net	$	(2,054)

The interest component of forward foreign exchange contracts that does not qualify for hedge accounting treatment has been expensed and is not significant.

21. Quarterly Financial Information (unaudited)

Unaudited financial results by quarter for the fiscal years ended March 31, 2012 and April 2, 2011 are summarized below. The Company's quarterly reporting includes 13 week periods, unless otherwise noted.

	Quarterly Period Ended				
Fiscal year ended March 31, 2012	July 2, 2011	October 1, 2011	December 31, 2011	March 31, 2012	Total
Revenue	$231,096	$217,691(2)	$ 153,028	$353,890(2)	$955,705
Gross profit	113,389	95,085	65,998	152,328	426,800
Net income	52,069	36,915	15,340	79,073	183,397
Income per common share (basic)(1)	0.41	0.29	0.12	0.66	1.48
Income per common share (diluted)(1)	0.41	0.29	0.12	0.65	1.45

GT Advanced Technologies Inc.

Notes to Consolidated Financial Statements (Continued)

(In thousands, except per share data)

21. Quarterly Financial Information (unaudited) (Continued)

	Quarterly Period Ended				
Fiscal year ended April 2, 2011	July 3, 2010	October 2, 2010	January 1, 2011	April 2, 2011	Total
Revenue	$ 135,166(2)	$ 229,293	$ 262,898(2)	$ 271,627	$898,984
Gross profit	45,923	93,125	122,083	116,864	377,995
Net income	16,498	42,779	63,584	51,894	174,755
Income per common share (basic) (3)	0.11	0.29	0.47	0.41	1.26
Income per common share (diluted)(3)	0.11	0.28	0.46	0.41	1.24

From time to time, operating results are significantly affected by unusual or infrequent transactions or events. The following significant and unusual items have affected the comparison of operating results during the periods presented:

(1) On November 18, 2011, the Company entered into an accelerated share repurchase agreement with UBS AG, under which the Company repurchased $75,000 of its common stock. The effective per share repurchase price was $7.95 per share based on the volume-weighted average share price of the company's common stock, less a discount, during the ASR period. In connection with this agreement, in November 2011 the Company paid $75,000 to UBS AG and at such time received 7,823 shares. Upon settlement, the Company received notice from UBS of its intent to exercise and finalize the ASR transaction with a valuation date of March 5, 2012 and received 1,615 shares of the Company's common stock. The total number of shares received by the Company under the ASR was 9,438.

(2) During the fiscal year ended April 2, 2011, the Company recorded revenue from terminated contracts as follows: first quarter—$41,714, of which $40,377 related to a turnkey contract that was substantially delivered but was terminated due to non-payment of an outstanding receivable; third quarter—$2,638. During the fiscal year ended March 31, 2012, the Company recorded revenue from terminated contracts as follows: second quarter—$29,066; fourth quarter—$6,453.

(3) On November 12, 2010, the Company purchased from GT Solar Holdings, LLC 26,500 shares of its common stock at a per share price of $7.66, or $203,476. The Company funded the repurchase of these shares with its available cash. In addition, the Company issued 5,445 shares of the Company's common stock in connection with the acquisition of Crystal Systems on July 29, 2010.

22. Subsequent Event

On April 16, 2012, the board of directors of the Company voted to amend the Company's amended and restated by-laws to provide that the Company's fiscal year will end on December 31 of each year. Prior to this amendment, the Company's by-laws had provided that fiscal years ended on the Saturday closest to March 31st of each year. As a result of this change to the fiscal year end, the Company will report a nine-month transition period consisting of the period from April 1, 2012 to December 31, 2012, and the 2013 fiscal year will begin on January 1, 2013 and end on December 31, 2013.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of GT Advanced Technologies Inc.
Nashua, New Hampshire

We have audited the accompanying consolidated balance sheets of GT Advanced Technologies Inc. and subsidiaries (the "Company") as of March 31, 2012 and April 2, 2011, and the related consolidated statements of operations, stockholders' equity, and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of GT Advanced Technologies Inc. and subsidiaries as of March 31, 2012 and April 2, 2011, and the results of their operations and their cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of March 31, 2012, based on the criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated May 24, 2012 expressed an unqualified opinion on the Company's internal control over financial reporting.

/s/ Deloitte & Touche LLP

Boston, Massachusetts
May 24, 2012

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of GT Advanced Technologies Inc.

We have audited the accompanying consolidated statements of operations, changes in stockholders' equity, and cash flows of GT Advanced Technologies Inc. (formerly GT Solar International, Inc.) and subsidiaries for the fiscal year ended April 3, 2010. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated results of operations and cash flows of GT Advanced Technologies Inc. and subsidiaries for the fiscal year ended April 3, 2010, in conformity with U.S. generally accepted accounting principles.

/s/ Ernst & Young LLP

Boston, Massachusetts
June 4, 2010

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Item 9. ***Changes in and Disagreements with Accountants on Accounting and Financial Disclosure***

None.

Item 9A. ***Controls and Procedures***

The certifications of our principal executive officer and principal financial officer required in accordance with Rule 13a-14(a) under the Exchange Act and Section 302 of the Sarbanes-Oxley Act of 2002 are attached as exhibits to this Annual Report on Form 10-K. The disclosures set forth in this Item 9A contain information concerning the evaluation of our disclosure controls and procedures, and changes in internal control over financial reporting, referred to in paragraph 4 of the certifications. Those certifications should be read in conjunction with this Item 9A for a more complete understanding of the matters covered by the certifications.

Disclosure Controls and Procedures

Evaluation of Disclosure Controls and Procedures. Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, as of March 31, 2012.

Disclosure controls and procedures are designed to ensure that information required to be disclosed by a company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and that such information is accumulated and communicated to the Company's management, including the principal executive and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on this evaluation, as of March 31, 2012, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, these disclosure controls and procedures are effective at the reasonable assurance level and designed to ensure that the information required to be disclosed in our reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the requisite time periods.

Management's Report on Internal Control over Financial Reporting

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. A company's internal control over financial reporting is a process designed by, or under the supervision of, the Company's principal executive and principal financial officers, or persons performing similar functions, and effected by the Company's board of directors, management, and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that:

(1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company;

(2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting

principles, and that receipts and expenditures of the Company are being made in accordance with authorizations of management and directors of the company; and

(3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

To assist management, we have established an internal audit function to verify and monitor our internal controls and procedures. Because of its inherent limitations, however, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting as of March 31, 2012. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control—Integrated Framework*.

Based on this assessment, our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has concluded that, as of March 31, 2012, our internal control over financial reporting was effective based on those criteria at the reasonable assurance level.

Our independent registered public accounting firm has issued an attestation report on our internal control over financial reporting. This report appears below.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the fourth quarter of our fiscal year ended March 31, 2012 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of GT Advanced Technologies Inc.
Nashua, New Hampshire

We have audited the internal control over financial reporting of GT Advanced Technologies Inc. and subsidiaries (the "Company") as of March 31, 2012, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of March 31, 2012, based on the criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended March 31, 2012 of the Company and our report dated May 24, 2012 expressed an unqualified opinion on those financial statements.

/s/ Deloitte & Touche LLP

Boston, Massachusetts
May 24, 2012

Item 9B. ***Other Information***

On May 22, 2012, the Compensation Committee (the "Committee") of the Board of Directors of GT Advanced Technologies Inc. (i) determined the satisfaction of and the payment to be made to participants in the Company's 162(m) Performance Incentive Plan (the "162(m) Plan") and (ii) approved a special bonus for certain of the Company's executive officers. All participants in the 162(m) Plan are eligible to receive the special bonus payment, including all of the Company's named executive officers (excluding David Keck, who is not eligible to receive any bonus under the 162(m) Plan or the special bonus).

The Committee also determined that there would be no increases in annual base salary for any named executive officer for the nine-month transition period ending December 31, 2012 (which reflects the Company's recent change in fiscal year end to December 31).

The Committee determined that, based on the performance criteria established by the Committee earlier in the 2012 fiscal year pursuant to the 162(m) Plan, the participants in the 162(m) Plan would be entitled to receive 34.7% of the target payment amount for each executive officer under such plan. This payment was based on incentive operating income achieved for fiscal 2012 of $295.1 million. Incentive operating income is defined as income (loss) from operations, on a consolidated basis, as reported in the Company's Form 10-K for the fiscal year ending March 31, 2012 adjusted to exclude the effect of stock compensation expense.

The Committee further determined that, with respect to performance-based restricted stock units ("RSUs") issued to the Company's named executive officers in June 2011, such named executive officers will not be eligible to receive 33% of the shares of common stock underlying the performance-based RSU at the period ended March 31, 2012 due to the fact that the incentive operating income metric had not been achieved. The definition of incentive operating income for the purposes of the performance-based RSUs was the same as that used in the 162(m) Plan.

In making the determination to award a special bonus, the Committee considered the following factors: (i) the Company's performance in a challenging economic environment as evidenced by objective financial metrics, (ii) significant strategic accomplishments during the fiscal year and (iii) the Company's performance against a select group of companies in the solar industry. The Committee took into account the Company's strong overall financial performance in industry segments that, as the fiscal year progressed, were experiencing either significant declines in demand or overcapacity. In the face of these trends that were posing challenges industry-wide and causing certain other companies that we compete against to record poor financial results, the Company was able to increase revenues, gross margins, net income and earnings per share compared to the prior year (and the annual revenue, net income and earnings per share for the fiscal year ended March 31, 2012 were the highest the Company had recorded in its history). In addition, the Company ended the fiscal year with a backlog of approximately $1.8 billion (an increase of approximately 50% compared to the prior fiscal year end) and, assuming no contracts in our backlog at March 31, 2012 are modified or terminated, we expect that the Company would recognize revenue on these contracts alone of approximately $587.0 million in the twelve months ended March 31, 2013 and $1.19 billion thereafter. In addition, even after completing a $75 million share buy-back during the fiscal year, the Company had $350.9 in cash and cash equivalents on its balance sheet that provides the Company with strategic flexibility to broaden its product portfolio through internal research and development or acquisitions of businesses or technologies. In taking a longer term view of Company performance, the Committee also considered that the Company's revenue had increased approximately 75% compared to the fiscal year ended April 3, 2010 and, over the same period, net income increased by approximately 110% to $183.4 million. The Committee believed that this performance is an example of the strength of the business model the management team has put in place that has provided solid performance in good and bad economic times.

Second, the Committee considered the following key strategic accomplishments: (A) the management team accelerated its execution to strategically diversify revenue streams, including successfully acquiring a monocrystalline technology to meet the expected future demand of the solar market, and increasing the percentage of Company revenue coming from sources other than solar, (B) marked advancements in internal research and development efforts that are intended to broaden the Company's product portfolio, including making advancements in the development of a silicon carbide equipment product that is expected to be sold into the power electronic market, and (C) strengthening and developing the management team to position the Company to meet the demands of a more diversified business.

Third, the Committee noted that given the challenges that all companies were facing in the solar industry, the Committee sought to assess the Company's performance against the performance of those companies that operate in the same markets (as opposed to a comparison to a peer group based upon a global industry classification standard (or GICS) which includes companies that do not operate in the same industries as the Company, for example, the semiconductor industry). After identifying the appropriate industry competitors, the Committee identified those performance metrics that it considered to the best indicators of performance in these industries; (i) gross margin, (ii) operating margin, (iii) EBITDA and (iv) sales, general and administrative expenses as a percentage of revenue. Based on these factors, the Committee's research found that the Company's performance was overall significantly stronger than most of those companies that it competes with in the solar industry. In light of this performance and the other factors noted above, the Committee determined to award a special bonus of approximately 50% of each named executive officers' target bonus.

The following are the aggregate payments to be made to the named executive officers under the 162(m) Plan and the special bonus:

Named Executive Officers	Bonus Payment($)		Bonus Payment (% of Target)
Thomas Gutierrez	$	767,594	84.7
Richard Gaynor	$	271,037	84.7
David Gray	$	238,216	84.7
Jeff Ford	$	238,216	84.7

The 162(m) Plan bonus and the special bonus payment will be made to the named executive officers during the quarter ending June 30, 2012.

PART III

Item 10. *Directors, Executive Officers and Corporate Governance*

Information required by this Item relating to our directors and nominees is contained in our definitive proxy statement for our 2012 Annual Meeting of Stockholders scheduled to be held August 22, 2012, which will be filed within 120 days of the end of our fiscal year ended March 31, 2012, or the 2012 Proxy Statement, under the caption "Proposal 1—Election of Directors—Certain Information Regarding Directors" and is incorporated herein by reference. Information required by this item relating to our executive officers is contained in our 2012 Proxy Statement under the caption "Executive Officers" and is incorporated herein by reference. Information required by this item relating to compliance with Section 16(a) of the Securities Exchange Act of 1934 is contained in our 2012 Proxy Statement under the caption "Other Information—Section 16(a) Beneficial Ownership Reporting Compliance" and is incorporated herein by reference. The remaining information called for by this item is contained in our 2012 Proxy Statement under the caption "Corporate Governance" and is incorporated herein by reference.

We have adopted a code of ethics that applies to our principal executive, financial and accounting officers and all persons performing similar functions. The code of ethics is published on the Company's website (*www.gtat.com*) under the Corporate Governance section of the Investor Relations page. A printed copy of this Code may be obtained, without charge, by writing to the Secretary, GT Advanced Technologies Inc., 20 Tratalgar Square Nashua, New Hampshire 03063. If we waive any material provisions of our code of ethics or substantively change the code, we will disclose that fact on our website.

Item 11. ***Executive Compensation***

Information required by this Item is contained in our 2012 Proxy Statement under the captions "Executive Compensation," and "Director Compensation," and "Corporate Governance—Committees of the Board of Directors" and "Corporate Governance—Compensation Committee Interlocks and Inside Participation" and is incorporated herein by reference.

Item 12. ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters***

Equity Compensation Plans

The following table sets forth certain information, as of March 31, 2012, concerning securities authorized for issuance under all equity compensation plans of our Company (amounts in thousands, except per share data):

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options and Rights(a)	Weighted-Average Exercise Price of Outstanding Options and Rights(b)(4)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column(a))(c)
Equity compensation plans approved by our stockholders:			
2011 Equity Incentive Plan	357(1)	$ 11.03	12,215
2008 Equity Incentive Plan	6,324(2)	$ 7.29	—
Equity compensation plans not approved by our stockholders:			
2006 Stock Option Plan(3)	917	$ 3.21	—
Total	7,598	$ 6.25	12,215

(1) Includes 332 restricted stock units under our 2011 Equity Incentive Plan.

(2) Includes 3,747 restricted stock units under our 2008 Equity Incentive Plan.

(3) Includes options granted under the Second Amended and Restated GT Solar International, Inc. 2006 Stock Option Plan (the "2006 Plan"). In connection with the reorganization of our holding company structure in September 2006, options to purchase GT Solar Incorporated's common stock were converted into options to purchase shares of our common stock. In July 2006, we granted options to executives, employees, directors and consultants under the 2006 Plan. Following the reorganization of our holding company structure in September 2006, these options were for an aggregate of approximately 3,329 shares of our common stock. Of these option grants, options with respect to approximately 2,913 shares vest as follows: one quarter of the options vested on the first anniversary of the grant date, and $^{1}/_{48}$ of the options vest at the end of each month during the subsequent three years; and options with respect to 416,160 shares vest as follows: one third of the

options vested on the first anniversary of the grant date, and 1/36 of the options vest at the end of each month during the subsequent two years. In December 2007 and January 2008, we granted options to purchase an aggregate of approximately 3,609 shares of our common stock to executives, employees, directors and consultants. One quarter of the options vested on the first anniversary of the grant date, and 1/48 of the options vest at the end of each month during the subsequent three years. Any unexercised option under the 2006 Plan shall immediately expire upon the first to occur of: (i) the tenth anniversary of the grant date; or (ii) subject to the provisions of the relevant option agreement and except as otherwise determined by the compensation committee, termination of the option holder's service to us or one of our subsidiaries. See Note 14 to our consolidated financial statements in Item 8 in this Annual Report on Form 10-K for additional information on the 2006 Plan. In June 2008, our Board of Directors terminated the ability to grant future stock option awards under the 2006 Plan.

(4) The weighted average exercise price does not take into account the shares issuable upon vesting of outstanding restricted stock units which have no exercise price.

Information required by this item relating to security ownership of certain beneficial owners and management is contained in our 2012 Proxy Statement under the caption "Beneficial Stock Ownership of Directors, Executive Officers and Persons Owning More Than Five Percent of Common Stock."

Item 13. ***Certain Relationships and Related Transactions, and Director Independence***

Information required by this item relating to transactions with related persons is contained in our 2012 Proxy Statement under the caption "Related Party Transactions" and is incorporated herein by reference. Information required by this item relating to director independence is contained in our 2012 Proxy Statement under the caption "Corporate Governance—Board Composition" and is incorporated herein by reference.

Item 14. ***Principal Accountant Fees and Services***

Information required by this item is contained in our 2012 Proxy Statement under the caption "Audit Committee Matters" and is incorporated herein by reference.

PART IV

Item 15. ***Exhibits and Financial Statement Schedules***

(a)(1) *Financial Statements.* See "Index to Financial Statements" under Item 8 on page 87 of this Form 10-K.

(a)(2) *Financial Statement Schedules.* Financial statement schedules have been omitted since they are either not required, not applicable or the information is otherwise included.

(a)(3) *Exhibits.* The exhibit filed as part of this Annual Report on form 10-K are listed in the Exhibit Index immediately preceding such exhibits and are incorporated by reference or are filled with this report as indicated below (numbered in accordance with Item 601 of Regulation S-K).

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized.

GT ADVANCED TECHNOLOGIES INC.

BY: /s/ THOMAS GUTIERREZ

Thomas Gutierrez
President and Chief Executive Officer

Date: May 25, 2012

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signatures	Title	Date
/s/ THOMAS GUTIERREZ Thomas Gutierrez	Director, President and Chief Executive Officer (Principal Executive Officer)	May 25, 2012
/s/ RICHARD J. GAYNOR Richard J. Gaynor	Vice President and Chief Financial Officer (Principal Financial Officer)	May 25, 2012
/s/ JOHN R. GRANARA John R. Granara	Vice President Finance and Chief Accounting Officer (Principal Accounting Officer)	May 25, 2012
/s/ J. MICHAL CONAWAY J. Michal Conaway	Director	May 25, 2012
/s/ KATHLEEN A. COTE Kathleen A. Cote	Director	May 25, 2012
/s/ ERNEST L. GODSHALK Ernest L. Godshalk	Director	May 25, 2012
/s/ MATTHEW E. MASSENGILL Matthew E. Massengill	Director	May 25, 2012
/s/ MARY PETROVICH Mary Petrovich	Director	May 25, 2012

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Signatures	Title	Date
/s/ ROBERT E. SWITZ Robert E. Switz	Director	May 25, 2012
/s/ NOEL G. WATSON Noel G. Watson	Director	May 25, 2012

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Exhibit Index

Exhibit Number	Description of Document	Incorporated by Reference Form	Date Filed	Exhibit #	Filed Herewith
3.1(i)	Amended and Restated Certificate of Incorporation of the Registrant.	10-Q	8/27/2008	3.1	
3.1(ii)	Certificate of Ownership and Merger of GT Advanced Technologies, Inc. into GT Solar International, Inc. dated August 1, 2011.	8-K	8/8/2011	1.1	
3.2	Amended and Restated By-laws of the Registrant.	8-K	8/8/2011	1.2	
4.1	Specimen Common Stock certificate.	S-1/A	7/18/2008	4.1	
4.2	Amended and Restated GT Solar International, Inc. Employee Stockholders Agreement, dated as of July 1, 2008, by and among GT Solar International, Inc., GT Solar Holdings, LLC and each individual who executes a counterpart to the agreement as well as any other person who acquires shares of GT Solar International, Inc.'s common stock pursuant to the Second Amended and Restated GT Solar International, Inc. 2006 Stock Option Plan.	S-1/A	7/7/2008	4.4	
10.1*	Employment Agreement, dated as of April 12, 2006, and as amended on January 16, 2007, by and between GT Solar Incorporated and David W. Keck.	S-1	4/26/2007	10.6	
10.2*	Employment Agreement, dated as of June 1, 2006, by and between GT Solar Incorporated and Jeffrey J. Ford.	S-1	4/26/2007	10.7	
10.3*	Second Amended and Restated GT Solar International, Inc. 2006 Stock Option Plan, dated December 30, 2005, and amended July 7, 2006 and January 15, 2008.	S-1/A	4/18/2008	10.9	
10.4	Confidentiality and Non-Competition Agreement, dated as of April 17, 2006, by and between GT Solar Incorporated and David W. Keck.	S-1/A	4/18/2008	10.13	
10.5	Confidentiality and Non-Competition Agreement, dated as of June 1, 2006, by and between GT Solar Incorporated and Jeffrey J. Ford.	S-1/A	4/18/2008	10.14	
10.6	Form of Director Confidentiality Agreement.	S-1/A	7/18/2008	10.17	

Exhibit Number	Description of Document	Incorporated by Reference Form	Date Filed	Exhibit #	Filed Herewith
10.7+	Engineering Agreement, dated as of March 14, 2006, by and between GT Solar Incorporated and Poly Engineering, S.r.l.	S-1/A	4/18/2008	10.18	
10.8*	Amendment to Employment Agreement, dated January 16, 2007, by and between GT Solar Incorporated and David W. Keck.	S-1/A	4/18/2008	10.19	
10.9*	Form of Stock Option Agreement under the GT Solar International, Inc. 2006 Stock Option Plan, as amended.	S-1/A	4/18/2008	10.25	
10.10*	Letter Agreement, dated August 8, 2006, by and between the Registrant and Ernest L. Godshalk.	S-1/A	6/6/2008	10.28	
10.11*	Letter Agreement, dated April 4, 2007, by and between the Registrant and Ernest L. Godshalk.	S-1/A	6/6/2008	10.29	
10.12*	Letter Agreement, dated May 9, 2008, by and between the Registrant and J. Michal Conaway.	S-1/A	6/6/2008	10.30	
10.13*	Form of July 2006 Stock Option Agreement under the GT Solar International, Inc. 2006 Stock Option Plan, as amended.	S-1/A	7/7/2008	10.36	
10.14	Amended and Restated Registration Rights Agreement, dated as of July 1, 2008, among the Registrant and the persons on the signature page thereto.	S-1/A	7/7/2008	10.40	
10.15*	Form of Director Restricted Stock Unit Agreement.	S-1/A	7/18/2008	10.41	
10.16*	Form of Director Proprietary Rights and Confidentiality Agreement.	S-1/A	7/18/2008	10.42	
10.17*	Letter Agreement, dated September 11, 2008, by and between the Company and Matthew E. Massengill	8-K	9/18/2008	10.1	
10.18*	2008 Equity Incentive Plan.	10-Q	11/7/2008	10.1	
10.19*	Letter Agreement, dated November 10, 2008, by and between the Registrant and Noel G. Watson.	8-K	11/12/2008	10.1	
10.20	Confidentiality Agreement, dated as of November 11, 2008, by and between the Registrant and Noel G. Watson	8-K	12/3/2008	10.1	
10.21*	Restricted Stock Unit Agreement, dated as of September 12, 2008, by and between the Registrant and Matthew E. Massengill.	10-Q	2/6/2009	10.4	

Exhibit Number	Description of Document	Incorporated by Reference Form	Date Filed	Exhibit #	Filed Herewith
10.22*	Restricted Stock Unit Agreement, dated as of November 11, 2008, by and between the Registrant and Noel G. Watson.	10-Q	2/6/2009	10.5	
10.23*	Form of Restricted Stock Unit Agreement for employees.	10-Q	2/6/2009	10.6	
10.24*	Form of Restricted Stock Unit Agreement for executive officers.	10-Q	2/6/2009	10.7	
10.25*	Employment Agreement Amendment for Code Section 409A, by and between the Registrant and David W. Keck.	10-K	6/9/2009	10.52	
10.26*	Employment Agreement Amendment for Code Section 409A, by and between the Registrant and Jeffrey J. Ford.	10-K	6/9/2009	10.53	
10.27*	Amendment to Employment Agreement, dated as of June 4, 2009, by and between the Registrant and David W. Keck.	10-K	6/9/2009	10.55	
10.28*	Employment Agreement, dated as of January 19, 2009, by and between the Registrant and David Gray.	10-K	6/9/2009	10.56	
10.29*	Section 162(m) Performance Incentive Plan.	8-K	8/12/2009	10.2	
10.30*	Employment Agreement with Thomas Gutierrez dated October 28, 2009.	8-K	11/2/2009	10.1	
10.31*	Restricted Stock Unit Agreement with Thomas Gutierrez dated October 29, 2009.	8-K	11/2/2009	10.2	
10.32*	Stock Option Grant Agreement with Thomas Gutierrez dated October 29, 2009.	8-K	11/2/2009	10.3	
10.33*	Form of restricted stock unit agreement for executive officers.	10-Q	11/10/2009	10.4	
10.34*	Form of stock option agreement for executive officers.	10-Q	11/10/2009	10.5	
10.35*	Form of restricted stock unit agreement for directors.	10-Q	11/10/2009	10.6	
10.36*	Employment Agreement, dated as of February 23, 2010, by and between the Company and Richard Gaynor.	8-K	3/1/2010	10.1	
10.37*	Offer Letter, dated as of February 1, 2010, by and between the Registrant and Richard Gaynor.	8-K	3/1/2010	10.2	
10.38*	Form of Indemnification Agreement for non-employee directors	8-K	4/20/2010	10.1	

Exhibit Number	Description of Document	Incorporated by Reference Form	Date Filed	Exhibit #	Filed Herewith
10.39*	Form of Indemnification Agreement for executive officers	8-K	6/8/2010	10.1	
10.40*	GT Solar International, Inc. fiscal year 2011 Executive Incentive Plan	8-K	8/17/2010	10.1	
10.41	Share Repurchase Agreement, dated as of November 5, 2010, by and among GT Solar International, Inc. and GT Solar Holdings, LLC	8-K	11/9/2010	10.1	
10.42	Credit Agreement, dated as of December 13, 2010, among GT Solar International, Inc., the Lenders, and Credit Suisse AG, as administrative agent and as collateral agent for the Lenders	8-K	12/17/2010	10.1	
10.43	Guarantee and Collateral Agreement dated as of December 13, 2010, among GT Solar International, Inc., the Lenders, and Credit Suisse AG, as administrative agent and as collateral agent for the Lenders	8-K	12/17/2010	10.2	
10.44	Amendment No. 1 to Credit Agreement, dated as of February 9, 2011, among GT Solar International, Inc., the Lenders, and Credit Suisse, AG, as administrative agent and as collateral agent	8-K	2/10/2011		
10.45*	Letter Agreement, dated May 25, 2011, by and between the Company and Mary Petrovich	8-K	06/01/2011	10.1	
10.46*	Letter Agreement, dated May 25, 2011, by and between the Company and Robert E. Switz	8-K	06/01/2011	10.2	
10.47*	Form of Restricted Stock Unit Agreement for Non-Employee Directors	8-K	06/01/2011	10.3	
10.48*	Offer letter, dated as of May 9, 2011, by and between the Company and John R. Granara, III	8-K	06/01/2011	10.4	
10.49	Amendment No. 2 to Credit Agreement with Credit Suisse AG, Cayman Islands Branch, and the other lenders party thereto dated June 29, 2011	8-K	07/06/2011	10.1	
10.50	Form of Performance-Based Restricted Stock Unit Agreement for executive officers	10-Q	08/05/2011	10.1	
10.51	GT Advanced Technologies, Inc. 2011 Equity Incentive Plan	8-K	08/30/2011	10.1	
10.52	Settlement Agreement dated as of September 27, 2011	8-K	10/03/2011	10.1	

Exhibit Number	Description of Document	Incorporated by Reference Form	Date Filed	Exhibit #	Filed Herewith
10.53	Credit Agreement dated as of January 31, 2012 among GTAT Corporation, GT Advanced Technologies Limited, GT Advanced Technologies and Bank of America, N.A. and the other lenders party thereto	8-K	03/02/2012	10.1	
10.54	Confirmation Agreement between GT Advanced Technologies, Inc. and UBS, AG, London Branch dated November 18, 2011	10-Q	02/07/2012	10.1	
10.55*	Form of Restricted Stock Unit Agreement for Directors	10-Q	02/07/2012	10.2	
10.56*	Letter Agreement, dated March 12, 2012 between the Company and Kathleen A. Cote	8-K	03/23/2012	10.1	
10.57*	Form of Restricted Stock Unit Agreement for Non-Employee Directors	8-K	03/23/2012	99.1	
21.1	Subsidiaries of the Registrant.				X
23.1	Consent of Deloitte & Touche LLP				X
23.2	Consent of Ernst & Young LLP.				X
31.1	Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, Rule 13a-14(a)/15d- 14(a), by Chief Executive Officer.				X
31.2	Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, Rule 13a-14(a)/15d-14(a), by Chief Financial Officer.				X
32.1	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, by Chief Executive Officer and Chief Financial Officer.				X
101.INS	XBRL Instance Document*				X
101.SCH	XBRL Taxonomy Extension Schema Document*				X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document**				X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document**				X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document**				X

Exhibit Number	Description of Document	Incorporated by Reference Form	Date Filed	Exhibit #	Filed Herewith
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document*				X

\+ Certain confidential portions have been omitted pursuant to a confidential treatment request filed separately with the Securities and Exchange Commission.

* Indicates management contract or compensatory plan or arrangement.

** Pursuant to applicable securities laws and regulations, we are deemed to have complied with the reporting obligation relating to the submission of interactive data files in such exhibits and are not subject to liability under any anti-fraud provisions of the federal securities laws as long as we have made a good faith attempt to comply with the submission requirements and promptly amend the interactive data files after becoming aware that the interactive data files fail to comply with the submission requirements. Users of this data are advised pursuant to Rule 406T of Regulation S-T that this interactive data file is deemed not filed or part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Act of 1933, is deemed not filed for purposes of section 18 of the Securities Exchange Act of 1934, and otherwise is not subject to liability under these sections.

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Exhibit 21.1

SUBSIDIARIES OF THE REGISTRANT

Name	State or other Jurisdiction of Incorporation
GT Crystal Systems, LLC	Delaware
GT Advanced Cz LLC	Delaware
GT Equipment Holdings, Inc.	New Hampshire (inactive)
GT Solar China Co., Ltd.	People's Republic of China
GT Advanced Technologies Limited	Hong Kong
GT Advanced Technologies Luxembourg Sarl	Luxembourg
GTAT Corporation	Delaware
GTAT IP Holding LLC	Delaware
GT Solar Mauritius, Ltd.	Republic of Mauritius
GT Solar (Shanghai) Co., Ltd.	People's Republic of China
GT Advanced Technologies Taiwan Co., Ltd.	Republic of China
Lindbergh Acquisition Corp.	Delaware

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Exhibit 21.1

SUBSIDIARIES OF THE REGISTRANT

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 333-161300 on Form S-3 and Registration Statement Nos. 333-153231 and 333-180866 on Form S-8 of our reports dated May 24, 2012, relating to the consolidated financial statements of GT Advanced Technologies Inc., and the effectiveness of GT Advanced Technologies Inc.'s internal control over financial reporting, appearing in this Annual Report on Form 10-K of GT Advanced Technologies Inc. for the year ended March 31, 2012.

/s/ Deloitte Touche LLP

Boston, Massachusetts
May 24, 2012

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Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Exhibit 23.2

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statements (Form S-8 No. 333-153231, Form S-8 No. 333-180866 and Form S-3 No. 333-161300) of GT Advanced Technologies Inc. (formerly GT Solar International, Inc.) and subsidiaries of our report dated June 4, 2010, with respect to the consolidated financial statements of GT Advanced Technologies Inc. (formerly GT Solar International, Inc.) and subsidiaries for the fiscal year ended April 3, 2010 included in this Annual Report (Form 10-K) for the fiscal year ended March 31, 2012 filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Boston, Massachusetts
May 23, 2012

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[Exhibit 23.2](#)

[CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM](#)

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Exhibit 31.1

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO 15 U.S.C. SECTION 7241, AS
ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Thomas Gutierrez certify that:

1. I have reviewed this annual report on Form 10-K of GT Advanced Technologies Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 25, 2012

/s/ THOMAS GUTIERREZ

Thomas Gutierrez

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Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO 15 U.S.C. SECTION 7241, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

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Exhibit 31.2

**CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO 15 U.S.C. SECTION 7241, AS
ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Richard J. Gaynor certify that:

1. I have reviewed this annual report on Form 10-K of GT Advanced Technologies Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 25, 2012

/s/ RICHARD. J. GAYNOR

Richard J. Gaynor

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Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO 15 U.S.C. SECTION 7241, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of GT Advanced Technologies Inc. (the "Company") for the year ended March 31, 2012, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company, certify pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to their knowledge:

1. the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 as amended; and

2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 25, 2012

/s/ THOMAS GUTIERREZ

Thomas Gutierrez
President and Chief Executive Officer
(Principal Executive Officer)

Date: May 25, 2012

/s/ RICHARD J. GAYNOR

Richard J. Gaynor

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[Exhibit 32.1](#)