

**GT Advanced Technologies
Frequently Asked Questions
Regarding MonoCast™
*September 19, 2011***

What is MonoCast?

MonoCast is GT's ingot casting technology that produces near-monocrystalline quality material in a GT DSS furnace. Ingots produced by GT's MonoCast technology provide a foundation for higher quality wafers used in the manufacture of solar cells with higher efficiency than cells made from traditional multi-crystalline wafers. As previously reported in April 2011, Georgia Institute of Technology's Center of Excellence for Photovoltaic Research and Education achieved cell efficiencies of greater than 19 percent with a cell processed on GT's MonoCast wafers using the Center's advanced cell architecture. GT's MonoCast technology also contributes to a lower ingot production cost when compared with mono-crystalline ingots fabricated in a traditional batch Czochralski growth process.

GT is offering its MonoCast product both as a new furnace system and as an upgrade to earlier generation GT DSS units. By delivering significant improvements in efficiencies while lowering overall production costs versus traditional batch CZ mono, GT believes the MonoCast solution will further differentiate its DSS multi-crystalline product offering from the competition.

How does MonoCast differ from the HiCz™ mono-crystalline solution from your recently announced acquisition of Confluence Solar?

The market for silicon-based solar cells is split between multi-crystalline and mono-crystalline cells. Today, GT is the market share leader of furnace equipment for the multi-crystalline segment but does not have an equipment solution for the mono-crystalline segment.

The acquisition of Confluence Solar, announced August 24, 2011, marked GT's entry into the mono-crystalline market. GT intends to commercialize the HiCz technology that it acquired and offer a highly competitive HiCz merchant mono-crystalline equipment solution in the second half of CY2012.

This is complementary to GT's MonoCast efforts which are targeted at improving the performance of multi-crystalline materials and further differentiates GT's multi-crystalline product offering from the competition.

Furthermore, the addition of GT's MonoCast and HiCz technologies to its suite of DSS products enables the company to address the full spectrum of silicon-based

solar solutions.

Will the MonoCast upgrade be available for competitor units installed in the field?

The MonoCast upgrade will only be available for GT DSS systems. To date, GT has shipped over 3100 DSS units all of which are candidates for an upgrade.

When will MonoCast be available for commercial shipments?

We are targeting first product shipments in January CY2012.

Will MonoCast sales be reported as part of the PV segment or broken out?

MonoCast sales will be reported as part of PV revenue.

What will the revenue recognition dynamics be with MonoCast? Do you expect to recognize MonoCast revenue in FY12?

As this is a new product, GT is assuming there will be a period of time between shipment and revenue recognition. As such, the company is not currently assuming any MonoCast revenue contribution in its FY12.

What is the ASP for a MonoCast system?

For competitive reasons, GT is not disclosing the specific ASPs for a MonoCast system. However, consistent with GT's long time pricing strategy, pricing for a new MonoCast system is not expected to be meaningfully higher than the previous generation DSS.

What is the ASP for a MonoCast upgrade?

For competitive reasons, GT is not disclosing the specific ASPs for a MonoCast upgrade. However, the MonoCast upgrade will be significantly higher than what we have charged for prior DSS upgrades given the value that we expect such upgrades to deliver. The more than 3100 DSS systems in the field are candidates for a MonoCast upgrade.

What is the margin profile for MonoCast? Will it be different for new units vs. upgrades?

MonoCast will be reported as part of GT's PV segment and as such we are not breaking out this product's margins.

Was there revenue associated with the MonoCast Beta program with Nexolon?

No.

What are the performance specs?

The MonoCast product specs are not being released at this time.

Forward-Looking Statements

This FAQ contains information about management's future expectations, plans and prospects of our business that constitute forward-looking statements for purposes of the safe harbor provisions under The Private Securities Litigation Reform Act of 1995. Such statements are identified by words or phrases such as "will," "anticipate," "estimate," "expect," "project," "believe," "target," "guidance," "forecast," and other words and terms of similar meaning. In particular, forward-looking statements include, but are not limited to: GT's MonoCast technology contributes to a lower ingot production cost when compared with mono-crystalline ingots fabricated in a traditional batch Czochralski growth process, the MonoCast solution will differentiate GT's DSS multi-crystalline product offering from the competition, that GT intends to commercialize HiCz technology and offer a highly competitive HiCz merchant mono-crystalline equipment solution in the second half of CY2012, GT's MonoCast product will be available for commercial sale beginning in October of CY2011 and that GT is targeting first product shipments in January CY2012, GT is not currently assuming any MonoCast revenue contribution in its FY12, the pricing for a new MonoCast system will not be meaningfully higher than the previous generation DSS, the price for the MonoCast upgrade will be significantly higher than what GT has charged for prior DSS upgrades given the value that GT expect such upgrades to deliver. These statements are based on management's current expectations or beliefs. These forward-looking statements are not a guarantee of performance and are subject to a number of uncertainties and other factors, many of which are outside the Company's control, which could cause actual events to differ materially from those expressed or implied by the statements. These factors may include the possibility that the Company is unable to execute on its sapphire equipment strategy or is unable to recognize revenue on contracts in its order backlog. Factors that may cause actual events to differ materially from those expressed or implied by our forward-looking statements include the possibility that changes in government incentives may reduce demand for solar products, which would, in turn, reduce demand for our equipment, technological changes could render existing products or technologies obsolete, growth of competition in all business segments, GT may be unable to protect its intellectual property rights, competition from other manufacturers may increase, exchange rate fluctuations and conditions in the credit markets and economy may reduce demand for the Company's products and various other risks as outlined in GT Advanced Technologies Inc.'s filings with the Securities and Exchange



Commission, including the statements under the heading “Risk Factors” in the Company’s quarterly report on Form 10-Q for the fiscal quarter ended July 2, 2011. Statements in this presentation should be evaluated in light of these important factors. GT Advanced Technologies Inc. is under no obligation to, and expressly disclaims any such obligation to, update or alter its forward-looking statements, whether as a result of new information, future events, or otherwise.

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