



Applied Materials Sees Strong Demand for Esatto Double Print Technology for Manufacturing Higher Efficiency, Lower Cost Solar Cells

May 5, 2010

SHANGHAI, May 05, 2010 (BUSINESS WIRE) --Applied Materials, Inc. today announced at the SNEC 2010 PV Power Expo* that its Esatto Technology(TM) is expected to be used in more than 2 gigawatts of annual cell manufacturing capacity in the next few months at customer sites in China, Taiwan and Europe. Customers have demonstrated 0.46% absolute cell efficiency gains with Esatto Technology, and up to a 14% reduction in consumption of silver printing paste. This combination of higher efficiency and reduced material expense is projected to lower manufacturing cost by over 3 cents-per-watt and deliver a return on investment in as little as 8 months.

Esatto Technology is a high precision, multi-step printing capability for Applied's market-leading Baccini(TM) back-end solar cell processing systems. This production-proven screen printing technology is used to fabricate advanced contact structures in crystalline silicon (c-Si) solar photovoltaic (PV) cells.

"Our Esatto Technology demonstrates Applied's unmatched ability to overcome the challenges in integrating new cell technologies and to provide easy-to-implement, cost-effective solutions to our customers," said Davide Spotti, vice president and general manager of Applied's Baccini Cell Systems division. "We're seeing an enthusiastic response from cell makers because they can drive their efficiency roadmaps using their existing production equipment and process flows."

Key to Applied's Esatto Technology is its proprietary illumination and pattern recognition system which provides the critical accuracy and repeatability to enable precise alignment between multiple screen-printed layers. In a study at Germany's prestigious [Fraunhofer Institute](#), Esatto Technology for double-printed front contacts enabled significant out-of-the-box improvements in absolute cell efficiency and printing paste consumption.* Applied's Esatto Technology also offers cell manufacturers a simple path to upgrade their Baccini lines to implement selective emitter structures, which are low-resistivity regions beneath the contacts. By creating these structures, customers can harvest more of the light spectrum and boost cell efficiency even further.

For more information on Applied's solutions for a wide range of advanced contact and selective emitter cell fabrication techniques, visit www.appliedmaterials.com/products/solar_crystal_silicon_3.html.

Applied Materials, Inc. (Nasdaq:AMAT) is the global leader in Nanomanufacturing Technology(TM) solutions with a broad portfolio of innovative equipment, service and software products for the fabrication of semiconductor chips, flat panel displays, solar photovoltaic cells, flexible electronics and energy efficient glass. At Applied Materials, we apply Nanomanufacturing Technology to improve the way people live. Learn more at www.appliedmaterials.com.

*Taking place May 5-7 at the Shanghai New International Expo Center in Shanghai, China

**Reliable double printing of Ag contacts for c-Si cell manufacturing," 2nd Workshop on Metallization for Crystalline Silicon Solar Cells, April 14, 2010, International Solar Energy Research Center at Konstanz, Germany.

Photos/Multimedia Gallery Available: <http://www.businesswire.com/cgi-bin/mmg.cgi?eid=6278003&lang=en>

SOURCE: Applied Materials, Inc.

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