

Oerlikon Solar's "Amorph High Performance" hits the market

50 percent increase in fab capacity

- 16% increase in power output
- More than 7% stabilized efficiency
- 95 W average output per panel
- TÜV certified IEC standard

Truebbach, 11 November 2008 – Oerlikon Solar, the global leader in Thin Film Silicon Solar Equipment and Modules, today announced the availability of its next generation technology: "Amorph High Performance". With more than 500,000 panels already produced from the previous "Amorph Basic" technology, Oerlikon Solar has now made a major leap forward in panel performance. Achieving more than 7% stabilized efficiency has enabled a 16% increase in panel power output. At the same time, fab capacity is up by more than 50% without an increase in fab cost. This has significantly raised economic viability for this high growth PV technology. In addition, Oerlikon has already been granted the requisite master certificates from TÜV.

"The ability to lead the market with pre-certified, leading edge technology reflects our success in creating a scalable, technology leading organization. We are now able to leverage technological advances into successful business for our customers in a very timely manner", says Jeannine Sargent, CEO Oerlikon Solar.

Record breaking performance

The new a-Si panel utilizes an advanced Oerlikon Solar Zinc Oxide TCO layer, which significantly increases the performance characteristics of the panel through better light trapping properties. The importance of optimizing the panel design from a system viewpoint is being demonstrated in this generation of the technology. How the various layers in the panel interact with each other can have a profound effect on the system performance.

Page 2 **Performance improvement and cost reduction go hand in hand**

Optimization of the process elements in the end to end fabrication system have resulted in considerable increase in the plant throughput capability. Experience with the first generation amorphous end-to-end lines has lead to important yield, line uptime and TACT time optimization. All together these improvements have resulted in an astounding 50% increase in the output capacity of the line. Remarkably, this is achieved without an increase in the total capital cost. The resulting cost per Watt benefit is clearly significant. "We have established that the 1.4 m² panel is the optimum size for the flexibility needed to achieve improvements in the fabrication process", comments Dr. Juerg Henz, Head of the Thin Film Business Unit.

Reduced time to market

TÜV Rhineland announced that Oerlikon Solar passed all tests required for the certification of its "Amorph High Performance" thin film silicon modules. All Module Performance (IEC 61646:2008) and Module Safety (IEC 61730-1:2004/61730-2:2004) criteria were satisfied.

Issued as a Master Certificate, it allows Oerlikon Solar to offer all end-to-end production line customers a reduced time-to-market. This is the second certification within the year and it confirms both the technological lead and the viability of Oerlikon Solar's end-to-end production technology. Dr. Henz pointed to the investment that created this certification: "In recent months, we've made enormous progress in the development of a scaleable, high-performing and low-cost PV module production system. The certification awards from TÜV reflect this success and will bring great benefits to our customers."

The certification is valid across the entire globe and forms just one part of the stable platform upon which Oerlikon Solar is now scaling-up its production and services



Page 3 **Ready to roll out across the globe**

Already recognized as the market leader in installed thin film silicon PV applications, Oerlikon Solar is now demonstrating that the quality of the second generation will be as robust and durable as the first generation while providing a new level in cost/performance capability. Oerlikon Solar remains committed to manufacturing techniques that provide extended endurance and built-in product safety, while meeting all important standards.

This is just one more milestone in Oerlikon Solar's mission to make Solar Power economically viable.

For further information, please contact:

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About Oerlikon Solar

Oerlikon Solar offers cost-effective, field proven end-to-end solutions for the mass production of thin-film silicon solar modules. These fully automated manufacturing solutions are focused on reducing device cost and maximizing productivity. They are available as modular end-to-end solutions with metrology and upgradeability in throughput and process technology.

Oerlikon Solar has developed a unique and innovative technology based on its leadership in thin film technology and in close cooperation with its customers. An in-house pilot line allows producing, testing and optimizing the solar modules in full production size.

Headquartered in Truebbach, Switzerland, Oerlikon Solar maintains an R&D lab in Europe, as well as global customer support and training through sales and service centers in the United States, Europe and Asia.



Page 4 **About Oerlikon**

Oerlikon (SWX: OERL) is one of the world's most successful high-tech industrial groups specializing in machine and plant engineering. The company is a leader in the field of industrial solutions and innovative technologies for textile manufacture, thin-film solar and thin-film coating, drive, precision and vacuum systems. With roots in Switzerland and a long tradition stretching back 100 years, Oerlikon is a global player with a workforce of more than 19,000 at 170 locations in 35 different countries. The company's sales amounted to CHF 5.6 billion and it ranks either first or second in the respective global markets. In 2007, approx. 5 percent of the turnover was invested in research and development (CHF 274 million).