

Press information

**Outstanding quality and reliability make Kyocera one of only four manufacturers to pass Fraunhofer's high-voltage stress test with zero degradation**

## **KYOCERA Solar Modules Confirmed as PID Resistant by Fraunhofer CSP Testing**

**Kyoto/Neuss, 10 July 2012 — Kyocera Corporation announced that its solar modules have again passed independent quality testing with flying colors after the non-profit Fraunhofer Center for Silicon Photovoltaics CSP (Halle, Germany) disclosed the results of its potential induced degradation (PID) test which demonstrated that Kyocera's modules did not show any degradation after being subjected to high voltage stress testing. The results of this third-party test illustrate the high quality and high reliability of Kyocera's modules — which are born of the company's more than 35 years of experience in the industry and its quality-focused manufacturing process.**

Potential induced degradation (PID) is a phenomenon where the power output of a solar module is reduced when exposed to high negative voltage bias between the cells and ground. PID can potentially affect the performance of individual modules as well as the overall power output and efficiency of an entire solar power generating system. The resistance to, or intensity of, power output degradation in different companies' modules can vary greatly, as shown by Fraunhofer CSP's testing.

Earlier this year, Fraunhofer CSP anonymously acquired and independently tested modules from 13 well-known manufacturers;

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subjecting the modules to a high voltage stress test (50 deg. C, 50% relative humidity, -1000V, aluminum film at the front side, 48 hours). Kyocera was one of only four manufacturers whose modules passed the test without showing any degradation, while other companies' modules showed partial to significant degradation. These results highlight a stark divide between different companies' modules — while distinguishing Kyocera among a select number to be proven as PID resistant.

“As a pioneer in the industry Kyocera has been involved in R&D and manufacturing of solar power generating systems for more than 35 years, and in that time we have developed numerous innovations and manufacturing technologies to ensure the high quality and long-term durability of our products,” said Tatsumi Maeda, general manager of the Kyocera Corporate Solar Energy Group. “With Kyocera's solar modules having been the first in the world to be certified by TUV Rheinland's Long-Term Sequential Test, the Fraunhofer CSP test results further demonstrate the industry-leading technology and reliable performance of Kyocera modules.”

Kyocera has decades of experience in every phase of the solar module manufacturing process, from raw materials (silicon casting), to cell production (wafer slicing), to the finished product (module assembly). The company draws upon this experience in all phases of its R&D, procurement and manufacturing activities to deliver solar modules of outstanding quality and reliability.

For more information about Kyocera: [www.kyocerasolar.eu](http://www.kyocerasolar.eu)

### About Kyocera

Headquartered in Kyoto, Japan, Kyocera Corporation is one of the world's leading

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manufacturers of fine ceramic components for the technology industry. The strategically important divisions in the Kyocera Group, which is comprised of 235 subsidiaries (as of April 1, 2012), are information and communications technologies, products which increase quality of life, and environmentally friendly products. The technology group is also one of the largest producers of solar energy systems worldwide, with more than 3.0 gigawatts of solar power having been installed around the world to date.

With a global workforce of about 71,000 employees, Kyocera posted net sales of approximately €10.83 billion in fiscal year 2011/2012. The products marketed by the company in Europe include laser printers, digital copying systems, microelectronic components, finoceramic products and complete solar power systems. The Kyocera Group has two independent companies in the Federal Republic of Germany: Kyocera Finoceramics GmbH in Neuss and Esslingen and Kyocera Document Solutions in Meerbusch.

The company also takes an active interest in cultural affairs. The Kyoto Prize, a prominent international award, is presented each year by the Inamori Foundation — established by Kyocera founder Dr. Kazuo Inamori — to individuals and groups worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind (converted at present €500,000 per prize category).

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