

Press Release

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PV Modules Measured with Uniform Quality Worldwide

Fraunhofer ISE Initiates Round Robin Test with four Leading Measurement Laboratories

In a round robin test, the Fraunhofer ISE CalLab PV Modules compared their results with three other top international measurement labs for photovoltaic (PV) modules: NREL in the USA, AIST in Japan and the JRC/ESTI of the European Commission in Ispra, Italy. The results of the round robin showed that the measurement precision in all four leading laboratories was comparable, namely with a deviation of $\pm 1\%$ from the mean. For investors in the growing global PV market, this is good news with consideration to quality assurance.

Currently, the annual volume of the global PV market is over 30 gigawatts and the trend is growing. Against this backdrop and in light of the fact that photovoltaics is still a young technology, the measures employed to increase product quality on the international level have high importance. The round robin, initiated by the Fraunhofer Institute for Solar Energy Systems ISE in Freiburg in cooperation with its long-standing international partners, tests the different measurement procedures and methods with the focus on comparability. "In spite of the different techniques and equipment, all four laboratories demonstrate measurements with a high precision with a deviation of ± 1 percent from the mean," says Daniela Dirnberger, Team Leader at Fraunhofer ISE and initiator of the project. "We are well on our way towards being able to provide comparable measurements worldwide."

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For over 25 years, the calibration laboratory of Fraunhofer ISE is considered one of the top laboratories of its kind worldwide. The researchers in Freiburg calibrate reference modules for production lines and carry out spot checks to verify the guaranteed power output in accordance with international standards. The module measurements include current-voltage curves as well as other electrical characteristics measured under standard test conditions (1000 W/m², 25°C and AM1.5). In addition to highly accurate power measurements, the researchers at Fraunhofer ISE also offer services in the development of measurement standards for new technologies as well as in the production line qualification of solar simulators. More information about the Callab PV Modules of Fraunhofer ISE can be found at: www.callab.de

Informational Material

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The text of the PR and photos can be downloaded from our web page: www.ise.fraunhofer.de

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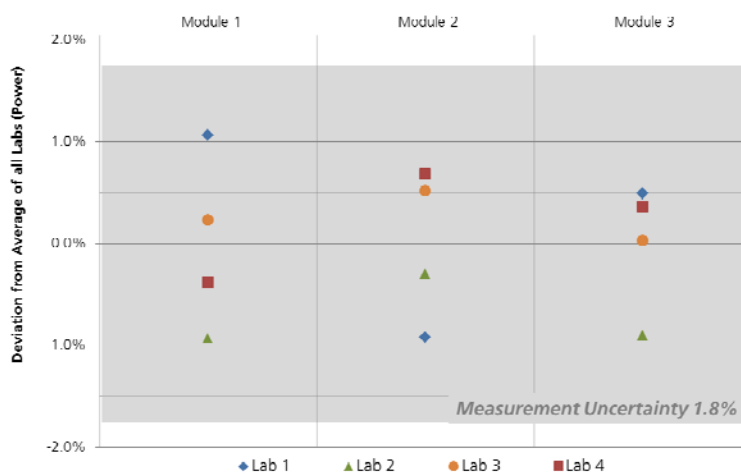
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The round robin tests of the four internationally top calibration laboratories for PV modules all had measurements with deviations of $\pm 1\%$ from the mean, and thus well within the measurement precision of 1.8% at the Callab PV Modules of Fraunhofer ISE ©Fraunhofer ISE

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