

# Press Release

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## Solar Cells in Direct Comparison

### Fraunhofer ISE Charts the Efficiency of Different Types of Solar Cells

Great advances in research and development over the last few years have led to increasingly higher solar cell power outputs. With new cell concepts and production technologies, the solar cell efficiencies, especially those for large-format solar cells, have increasingly improved. Now the Fraunhofer Institute for Solar Energy Systems ISE offers solar cell manufacturers the possibility to enter their cells into a comprehensive list, so-called "Fraunhofer ISE PV-Charts", which compares the performance of different solar cell types.

Technological innovations which increase the solar cell power output are highly relevant for competitiveness in the solar industry. Together scientists and manufacturers have achieved decisive advances and brought new, more efficient solar cells onto the market. With PV-Charts, Fraunhofer ISE now plans to make it easier for people outside the branch to compare the various technologies and solar cells and to give them transparency. In Fraunhofer ISE PV-Charts, record results measured at the accredited CalLab PV Cells will be published upon the manufacturer's permission. Fraunhofer ISE PV-Charts will rank the solar cells according to the cell efficiency as well as provide information from the manufacturer on the different cell technologies.

The solar cell calibration laboratory at Fraunhofer ISE has been a renowned name within the solar industry for many years. Manufacturers commission CalLab PV Cells to calibrate their solar cells or to make reference cells. Fraunhofer ISE PV-Charts will be compiled in close cooperation with the solar cell industry. Fraunhofer ISE calls on solar cell manufacturers, long-term partners and new customers to name record-

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breaking solar cell results for publication in the PV-Charts. With the permission of the manufacturers, the measurement results from the Callab PV Cells together with the further information on the different cell types will be presented in Fraunhofer ISE PV-Charts in the form of tables and graphs. These will be published on the Fraunhofer ISE website for viewing. A template for presenting the records and further information can be found at [www.pv-charts.com](http://www.pv-charts.com).

Already at the end of the 1980s, Fraunhofer ISE published an overview of the efficiencies of industrially relevant solar cell types and continued this publication into the 1990s. Today a well-established overview of peak efficiencies exists. This listing, however, is not intended to encompass the entire range of different manufacturing technologies. "The goal of our PV-Charts is to compile a comprehensive list for comparing all types of solar cells. This list keeps up with the newest technologies, with a continually expanding collection of benchmarks. Over and above the cell efficiency, Fraunhofer ISE PV-Charts also will present an overview on the different cell designs that are used in the solar cell production by the various manufacturers," says Dr. Stefan Glunz, Division Director Silicon Solar Cells – Development and Characterization at Fraunhofer ISE.

## **About Callab PV Cells**

Callab PV Cells was started at Fraunhofer ISE about 25 years ago. Its service offer includes the measurement of solar cells having different PV technologies. The lab is performing on-going work worldwide with manufacturers and institutes on the development of precision measurements for the new technologies in the field. In 2008, the calibration laboratory for solar cells was accredited by the Deutsche Kalibrierdienst DKD (now called the Deutsche Akkreditierungsstelle DakkS). Today the Callab PV Cells is one of leading calibration laboratories for solar cells worldwide – [www.callab.de](http://www.callab.de).

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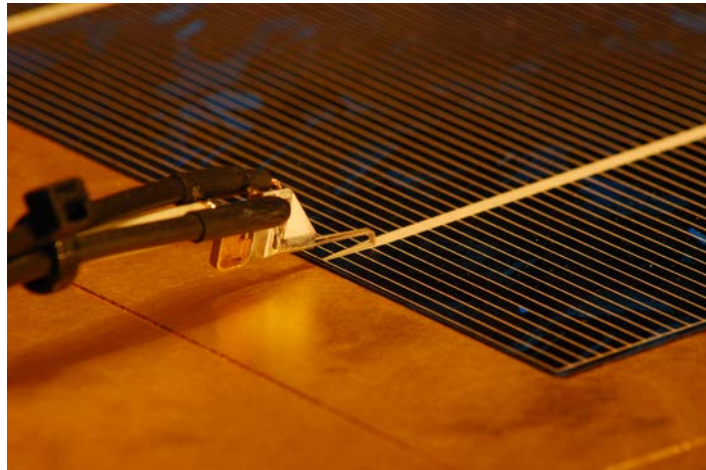
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**The text of the PR and photos** can be downloaded from our web page: [www.ise.fraunhofer.de](http://www.ise.fraunhofer.de)

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The accredited Callab PV Cells at Fraunhofer ISE has been measuring solar cells for customers for many years. ©Fraunhofer ISE