



**Photon**  
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## Raytek® & Ircon® IR Temperature Measurement for the Solar Equipment Industry

*Solutions for silicon and wafer production, photovoltaic cell and module manufacturing*

**Berlin, Germany, April 2010** — At the 6th Photovoltaic Technology Show 2010 Europe held April 27-29 in Stuttgart, Raytek® and Ircon®, the two leading names in infrared (IR) noncontact temperature measurement, are exhibiting a complete line of infrared sensors, linescanners and process imaging systems designed for temperature monitoring applications in the solar manufacturing industry. The Raytek / Ircon solutions will also be on display at the 25th EU PVSEC in Valencia, Spain, in September 2010.

Raytek and Ircon infrared thermometers provide an effective solution for online process monitoring, where measuring and controlling temperature is critical to productivity and product quality. Solar applications range from silicon and wafer production, to photovoltaic cell and module manufacturing.

In polysilicon production, for example, the Raytek/Ircon IR solution is ideal for noncontact temperature measurement in CVD reactor environments. The Modline® 5, Marathon MR and FR two-colour ratio thermometers are insensitive to sight path obstructions, including deposits on reactor windows and cloudy process conditions inside the reactor. Employing variable focus, high-resolution optics, they allow users to properly target small diameter polysilicon rods.

The high performance Modline 5, 5R, Marathon MR and Marathon MM thermometers offer critical features for single crystal silicon production. These short wavelength, single-color and two-colour ratio thermometers include variable focus, high resolution optics, and provide a very small measurement spot size at the silicon liquid/solid interface. This is necessary for controlling the crystal pulling process.

During thin film deposition/lamination, improper process temperatures can lead to voids or delaminations, and poor PV module performance and failure. In this application, the GS150 Linescanning System with complete image capture and analysis software provides a dedicated spectral response — allowing the linescanner to accurately measure the process temperature of the underlying film. The system's high-resolution scan rate helps to detect the smallest process anomalies or defects. Advanced measurement software allows easy image capture, analysis and archiving, and Ethernet communications with OPC connectivity ensures fast, low cost process control system integration.

## PRESS RELEASE



In addition, thermal imaging systems with image analysis software enable users to identify bad cell interconnects in thin film silicon PV modules. Defects in the cell interconnection can be readily identified by a precise thermal signature.

Throughout the solar industry, Raytek/Ircon IR noncontact temperature measurement solutions help manufacturers to recognize equipment malfunctions and process problems before they result in costly downtime. This makes them valuable additional tools for plant and equipment maintenance and repair prevention.

### About Raytek and Ircon

Raytek, a Fluke company, designs, manufactures and markets the industry's most complete line of infrared sensors, linescanners and process imaging systems including both Raytek and Ircon branded instruments for industrial, maintenance and quality control applications. Headquartered in Santa Cruz, California, Raytek distributes its products worldwide with subsidiaries located in Europe and China.

Raytek and Ircon are part of the Fluke Automation group which includes also Datapaq – worldwide leader in temperature profiling systems.

For more information, visit



[www.raytek.com](http://www.raytek.com)



[www.ircon.com](http://www.ircon.com)

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