

SolarPaq

... for profiling the lamination process

BUILDING ON THE BEST

Datapaq® has been supplying temperature profiling solutions into the solar photovoltaic manufacturing industry for many years. As part of our continuing product innovation, Datapaq now offers two solutions for profiling the vacuum lamination process.



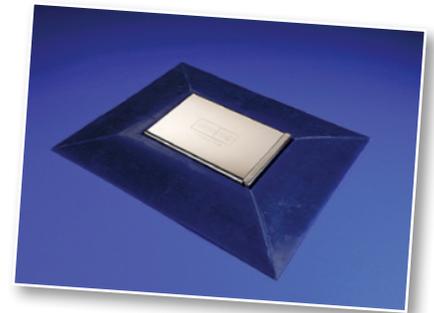
The temperature profile that the module is subjected to during the lamination process is critical to the correct curing of the ethylene vinyl acetate (EVA) and as such, has a direct effect on module lifetime. Datapaq SolarPaq temperature profiling systems enable the process to be monitored without disrupting normal production. The logger and its associated thermocouples are placed into the laminator, along with the module to be monitored.

The system passes through the laminator and on exiting, the temperature profile information can be downloaded and analyzed.

A COMPLETE SOLUTION

By monitoring temperatures at up to 10 points across the entire surface of the module, the Datapaq system provides the engineer with the information needed to set up and optimize their process.

This system has been designed to eliminate the need for trailing long leads in and out of the laminator press and is therefore, significantly safer in operation than existing methods of profiling. The barrier and its surrounding frame have been designed, following consultation with equipment manufacturers, to ensure minimal stress on the laminator transport and membranes.

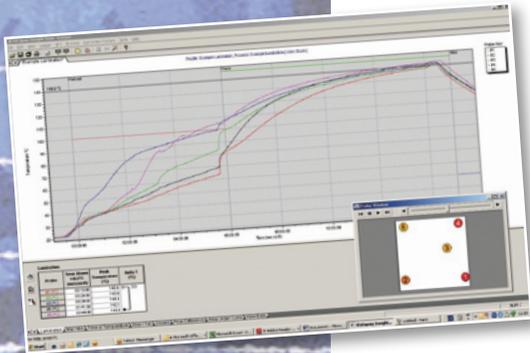


BENEFITS

- Safely profile the lamination process
- Obtain accurate repeatable results, enabling process optimization
- Save time and money setting up or adjusting process throughput
- Enable regular monitoring of process performance to be conducted quickly and easily

SOLAR INSIGHT™ SOFTWARE

This all new software has been designed specifically for use within the photovoltaic (PV) solar industry and contains many process-specific analysis displays. Wizards guide the users step-by-step to quickly obtain the data and analysis of the required results. This ensures that both experienced and novice users can obtain maximum benefit in the shortest possible time.



TECHNICAL SPECIFICATIONS

THERMAL BARRIERS AND FRAMES

The thermal barriers and frames have been designed to protect the logger from temperature and pressure during the process, and to ensure that no extra stress points are created on the laminator membrane.

TB7100

Dimensions (H x W x L) 20 mm x 150 mm x 225 mm (0.79 in x 5.91 in x 8.86 in)

Weight 1.25 kg (2.76 lb)

Material Stainless steel outer with microporous ceramic insulation

TB7110

Dimensions (H x W x L) 20 mm x 150 mm x 263 mm (0.79 in x 5.91 in x 10.35 in)

Weight 2.3 kg (5.0 lb)

Material Stainless steel outer with microporous ceramic insulation

Silicone protection frames (TB7160 and 7170)

TB7160

Dimensions (H x W x L) 20 mm x 365 mm x 445 mm (0.79 in x 14.37 in x 17.51 in)

Weight 650 g (1.43 lb)

Material Silicone Rubber

TB7170

Dimensions (H x W x L) 20 mm x 365 mm x 485 mm (0.79 in x 14.37 in x 19.09 in)

Weight 650 g (1.43 lb)

Material Silicone Rubber

DATA LOGGER

The Datapaq Q18 logger features rugged, reliable and accurate data acquisition circuits, clear status indicators and an intelligent battery management system.

Model DQ 1800 6 channels

Model DQ 1850 10 channels

Sampling interval 0.05 seconds to 10 minutes

Accuracy $\pm 0.5^{\circ}\text{C}$ ($\pm 0.9^{\circ}\text{F}$)

Resolution 0.1°C (0.2°F)

Maximum internal operating temperature 85°C (185°F)

Temperature range -200°C to 1370°C (-328°F to 2498°F)

Memory 55,000 readings per channel (6 channels active)

Data collection start Start/stop buttons, time or temperature trigger

Battery NiMH rechargeable

Thermocouples Type K

RECOMMENDED THERMOCOUPLES

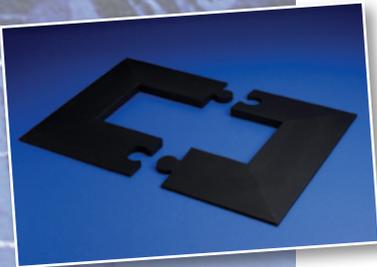
Type K fine wire adhesive patch probe

PA0060 1.5 m (5 ft)

PA0061 1.0 m (3.25 ft)

PA0062 3.0 m (10 ft)

PTFE insulated cable Fast response 0 to 265°C (32°F to 509°F) Max



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Worldwide Service

Fluke Process Instruments offers services, including repair and calibration. For more information, contact your local office.

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