

SolarPaq

...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 a solution for the vacuum lamination process.

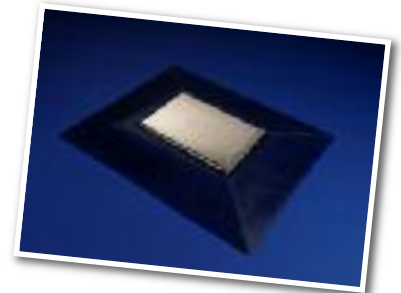
The temperature profile that the module is subjected to during the lamination process is critical to the correct curing of the ethylene vinyl acetate (EVA) and as such, has a direct affect on the module lifetime. Datapaq temperature profiling systems enable the process to be monitored without disrupting normal production. The logger and its associated thermocouples are placed into the laminator along with the sheet 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 a number of points across the entire surface surface of the module, the Datapaq system provides the engineer with the information needed to set up and optimize the process.

The system has been designed to obviate 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 the equipment manufacturers, to ensure minimal stress on the laminator transport and membranes.

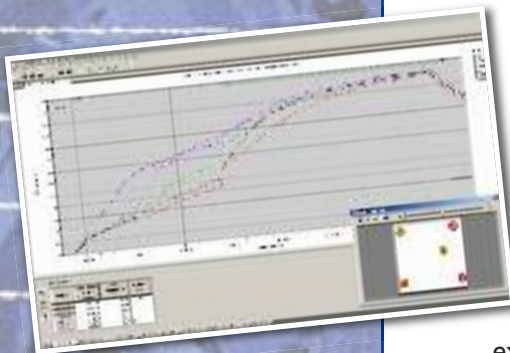


BENEFITS

- Safely profile the lamination process
- Obtain accurate repeatable results enabling process optimization
- Save time and money setting up or adjusting process throughput
- Enables regular monitoring of the 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. The wizards guide the users step-by-step to quickly obtain the data and the analysis of the results that are required. This ensures that both experienced and novice users can obtain maximum benefit in the shortest possible time.



TECHNICAL SPECIFICATIONS

THERMAL BARRIER AND FRAME SPECIFICATIONS

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

TB7100

Dimensions (HxWxL): 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.

Silicone protection frame (TB7150)

Dimensions (HxWxL): 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

DATALOGGER SPECIFICATIONS

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

Model Number: DQ1860

No. of Channels: 6

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 $1,370^{\circ}\text{C}$ / -328 to 2498°F

Memory: 18,000 readings per channel

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

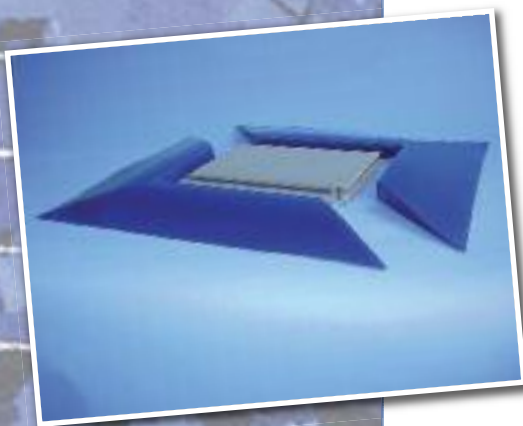
PA0060 1.5 m / 5ft

PA0061 1.0 m 3.25 ft



PA0062 3.0 m / 10 ft

PTFE insulated cable

Fast Response 0 to 265°C / 32 to 509°F Max



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Due to continuing product improvements, specifications are subject to change without prior notice.

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