

# 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.**



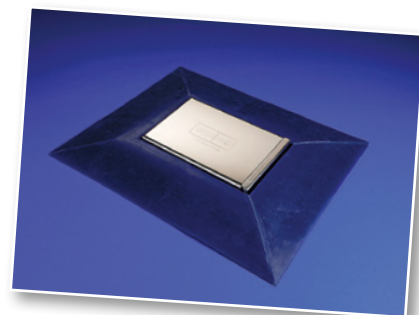
The temperature profile that the module is subjected to during the lamination process is critical to the correct curing of the ethylene vinyl acetate (EVA) and as such, has a direct effect on module lifetime. Datapaq SolarPaq temperature profiling systems enable the process to be monitored without disrupting 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.

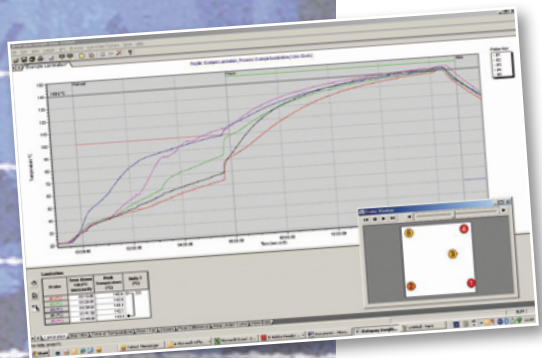


## BENEFITS

- 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

<b>Dimensions (H x W x L)</b>	20 mm x 150 mm x 225 mm (0.79 in x 5.91 in x 8.86 in)
<b>Weight</b>	1.25 kg (2.76 lb)
<b>Material</b>	Stainless steel outer with microporous ceramic insulation

### TB7110

<b>Dimensions (H x W x L)</b>	20 mm x 150 mm x 263 mm (0.79 in x 5.91 in x 10.35 in)
<b>Weight</b>	2.3 kg (5.0 lb)
<b>Material</b>	Stainless steel outer with microporous ceramic insulation

### Silicone protection frames (TB7160 and 7170)

#### TB7160

<b>Dimensions (H x W x L)</b>	20 mm x 365 mm x 445 mm (0.79 in x 14.37 in x 17.51 in)
<b>Weight</b>	650 g (1.43 lb)
<b>Material</b>	Silicone Rubber

#### TB7170

<b>Dimensions (H x W x L)</b>	20 mm x 365 mm x 485 mm (0.79 in x 14.37 in x 19.09 in)
<b>Weight</b>	650 g (1.43 lb)
<b>Material</b>	Silicone Rubber

## DATA LOGGER

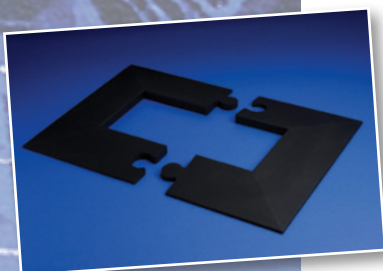
The Datapaq Q18 logger features rugged, reliable and accurate data acquisition circuits, clear status indicators and an intelligent battery management system.

<b>Model DQ 1800</b>	6 channels
<b>Model DQ 1850</b>	10 channels
<b>Sampling interval</b>	0.05 seconds to 10 minutes
<b>Accuracy</b>	±0.5°C (±0.9°F)
<b>Resolution</b>	0.1°C (0.2°F)
<b>Maximum internal operating temperature</b>	85°C (185°F)
<b>Temperature range</b>	-200°C to 1370°C (-328°F to 2498°F)
<b>Memory</b>	55,000 readings per channel (6 channels active)
<b>Data collection start</b>	Start/stop buttons, time or temperature trigger
<b>Battery</b>	NiMH rechargeable
<b>Thermocouples</b>	Type K

## RECOMMENDED THERMOCOUPLES

Type K fine wire adhesive patch probe

<b>PA0060</b>	1.5 m (5 ft)
<b>PA0061</b>	1.0 m (3.25 ft)
<b>PA0062</b>	3.0 m (10 ft)
<b>PTFE insulated cable Fast response</b>	0 to 265°C (32°F to 509°F) Max



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11/2016 SolarPaq Lamination RevC

