

PSL HE

Load and Measuring Device for **HIGH EFFICIENCY** cells



PC controlled load simulation and IV curve measurement for high efficiency solar cells
includes 1000 W/m², 500 W/m², Dark Reverse and Dark Forward test

BERGER
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PSL HE

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The PSL HE is optimized for fully automated production lines. It records four complete IV curves at 1000 W/m², 500 W/m², Dark Reverse and Dark Forward in one measurement cycle. In combination with the PSS 10 HE and the software package HE hysteresis effects during measurements of high efficiency cells are eliminated. Options are available to further enhance functionality for production. A customized "Plug&Play" manual test station is also offered.

Product Specification

- › Full passive load simulation
- › Fully integrated current source for optional electroluminescence and thermal imaging systems
- › Fully integrated dark forward and dark reverse measurement
- › Eliminates hysteresis effects in slow reacting cells (e.g. high efficiency cells)
- › Serial resistance measurement via two-step irradiance
- › 3 synchronously triggered data acquisition channels with precision A/D converters for I, V and Ref.
- › Data acquisition time 20 to 500 ms
- › Can be easily integrated into a manufacturing environment
- › Password protected setup and calibration
- › Connection via a fiber optic converter to a RS232 COM port
- › Software package includes classification, binning and handling interface
- › Database and data tracking systems according to customer requirements



Technical Data

Mechanical Data

Weight: approximately 4.5 kg

Dimensions: 120 x 260 x 330 (H x W x L in mm)

Electrical Data

Voltage: 12 V DC

(external mains adaptor 100–240 V, 50/60 Hz)

Power: 18 W

Measurement

Measurement range V: 1 V*

Measurement range I: 12 A*

Measurement range Ref.: 80 mV*

A/D Converters: 3 x 12 Bit unipolar

Max. number of measuring points: 512

Accuracy per range: < 0.1 %

Reverse range V: 15 V

Reverse range I: 12 A

* measuring range can be adjusted to customer request

Communication

Fiber optic cable (PFO)

19200 baud, 1 stop bit, no parity

Options

IR-Imager and analyzing software

EL-Imaging and analyzing software

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