

# LA80-12S

## High-efficiency PV Module

### Technology

The LORENTZ LA-Series of PV modules with monocrystalline silicon solar cells offer a high conversion efficiency due to the unique back-contact technology.

The low voltage-temperature coefficient guarantees a superior battery charging performance, even at high operating temperatures.

Exceptional low-light performance and broad spectral response further enhance energy delivery in all weather conditions, year round.

### Applications

- water pumping
- water purification systems
- remote village lighting
- solar home systems
- street and camp lights
- traffic signals
- medical facilities in remote areas
- microwave/radio repeater stations
- battery charging

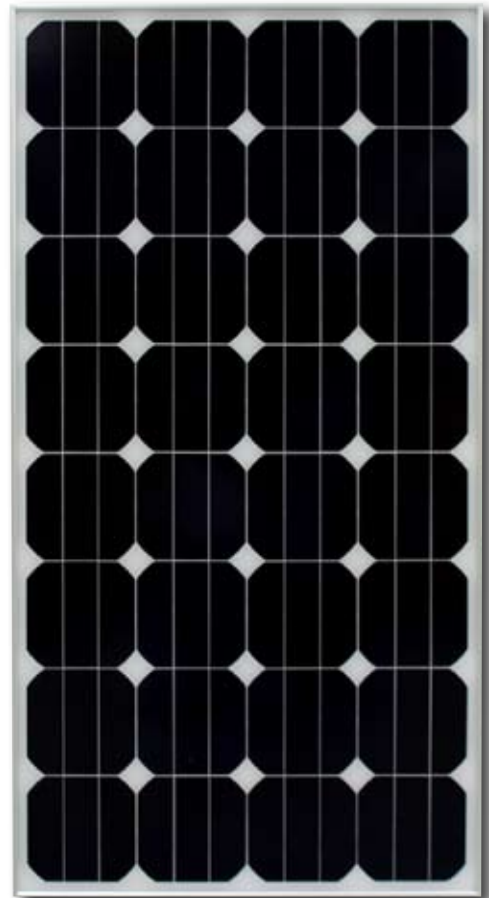


photo may differ

### Features

- aerospace style cell interconnects with in-plane strain relief
- advanced EVA encapsulation system with multi-layer backsheet for long-term package durability
- bypass diodes to minimize the power drop caused by shade
- high reliability

### Warranty

- Warranty: 2 years
- Performance guarantee:
  - up to 10 years (90% power output)
  - up to 20 years (80% power output)

Details according to warranty issued by LORENTZ

### Standards

LA80-12S meets the requirements for IEC and CE.



### Specifications

#### Electrical Data

Peak power	P <sub>max</sub>	[Wp]	80
Tolerance		[%]	+ 15/- 5
Max. power current	I <sub>mp</sub>	[A]	4.8
Max. power voltage	V <sub>mp</sub>	[V]	16.8
Short circuit current	I <sub>sc</sub>	[A]	5.3
Open circuit voltage	V <sub>oc</sub>	[V]	20.2
Temperature co-efficient for P <sub>max</sub>		[%/°C]	- 0.38
Temperature co-efficient for V <sub>oc</sub>		[mV/°C]	- 58.7
Temperature co-efficient for I <sub>sc</sub>		[mA/°C]	5.3
Max. system voltage		[V]	600

All technical data at standard test condition:  
AM = 1.5, E = 1,000W/m<sup>2</sup>, cell temperature: 25 °C

#### Cells

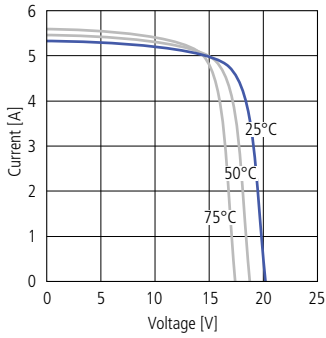
Number of cells in series	32*
Number of cells in parallel	3
Cell technology	monocrystalline
Cell shape	rectangular

\* Due to the back-contact cell technology only 32 cells are required to yield the same V<sub>mp</sub> voltage as traditional SI products with 36 cells.

### Electrical Performance

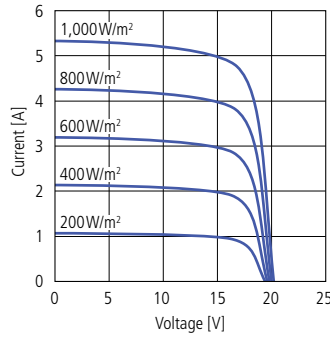
#### Electrical Performance

for different temperatures, at AM=1.5, E=1,000W/m<sup>2</sup>



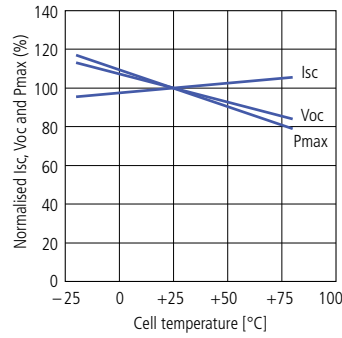
#### Electrical Performance

for different irradiation, at 25 °C



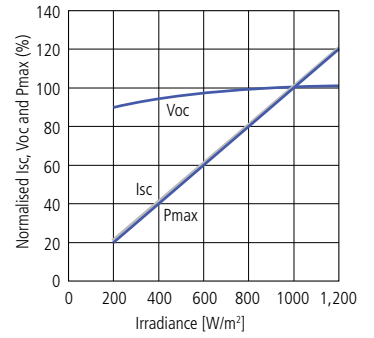
#### Temperature Dependence

of I<sub>sc</sub>, V<sub>oc</sub> and P<sub>max</sub>

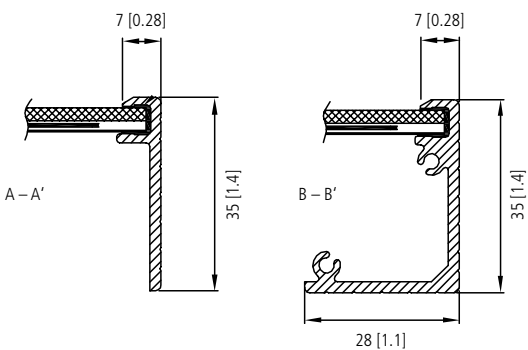
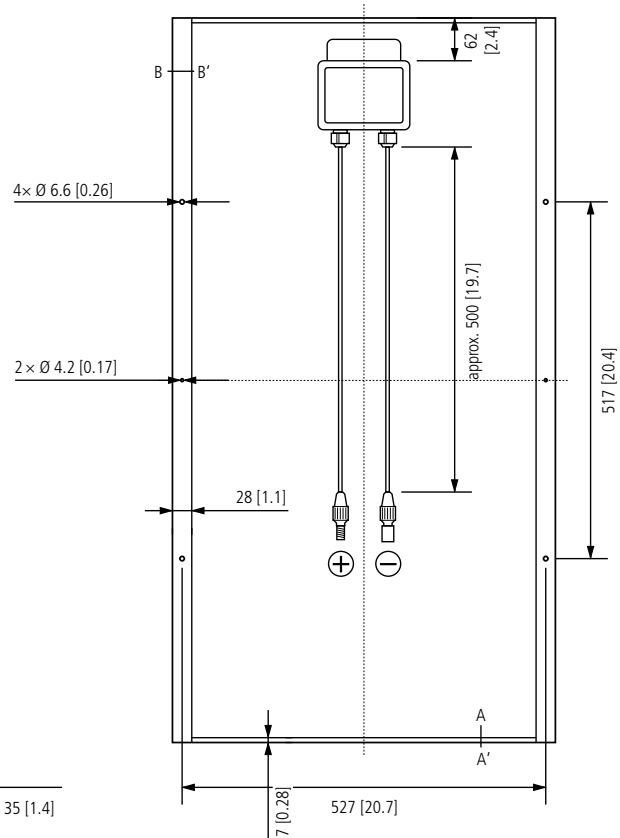
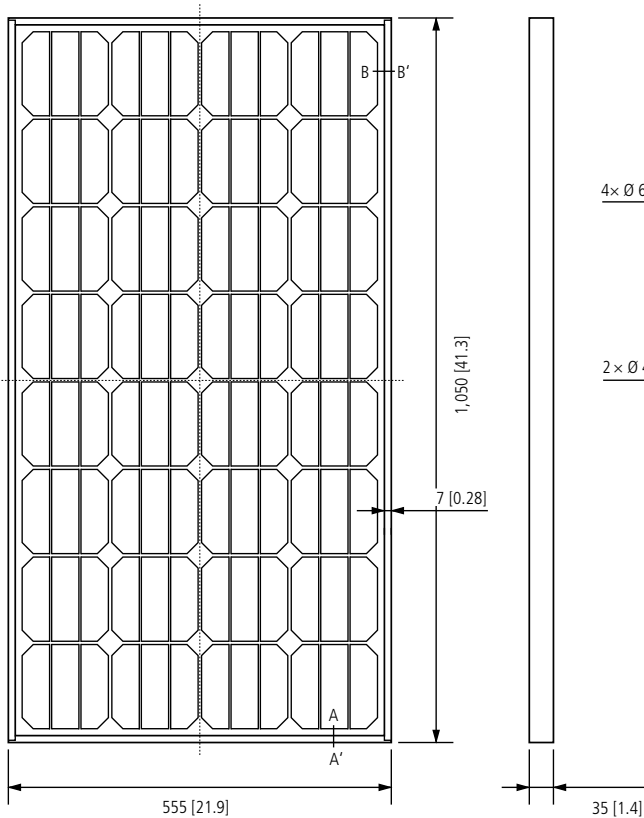


#### Irradiation Dependence

of I<sub>sc</sub>, V<sub>oc</sub> and P<sub>max</sub> at 25 °C



### Physical Specifications mm [in]



Weight	[kg]	8.0
Dimension	[mm]	555 × 1,050 × 35
Cable		approx. 500 mm / 19.7 in, 4 mm <sup>2</sup> / AWG12
Connectors		ZJRH Cixi Renhe 05-1