

LA100-12S

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



picture may differ from actual product

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

LA100-12S meets the requirements for IEC and CE.



Specifications

Electrical Data

Peak power	P _{max}	[Wp]	100
Tolerance		[%]	+ 10/- 5
Max. power current	I _{mp}	[A]	5.7
Max. power voltage	V _{mp}	[V]	17.7
Short circuit current	I _{sc}	[A]	6.1
Open circuit voltage	V _{oc}	[V]	21.4
Temperature co-efficient for P _{max}		[%/°C]	- 0.38
Temperature co-efficient for V _{oc}		[mV/°C]	- 58.7
Temperature co-efficient for I _{sc}		[mA/°C]	5.3
Max. system voltage		[V]	600

All technical data at standard test condition:
AM = 1.5, E = 1,000W/m², cell temperature: 25 °C

Cells

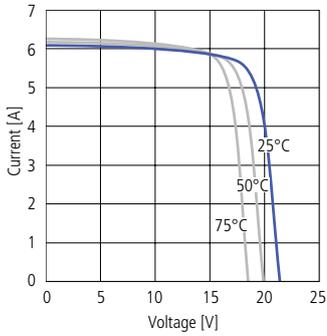
Number of cells in series	32*
Number of cells in parallel	1
Cell technology	monocrystalline
Cell shape	rectangular

* Due to the back-contact cell technology only 32 cells are required to yield the same V_{mp} voltage as traditional SI products with 36 cells.

Electrical Performance

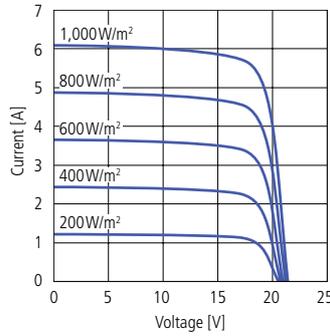
Electrical Performance

for different temperatures, at AM=1.5, E=1,000W/m²



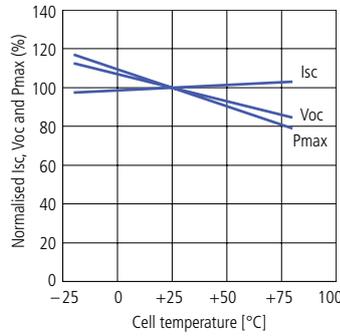
Electrical Performance

for different irradiation, at 25 °C



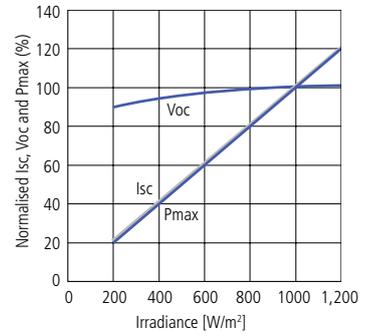
Temperature Dependence

of I_{sc}, V_{oc} and P_{max}

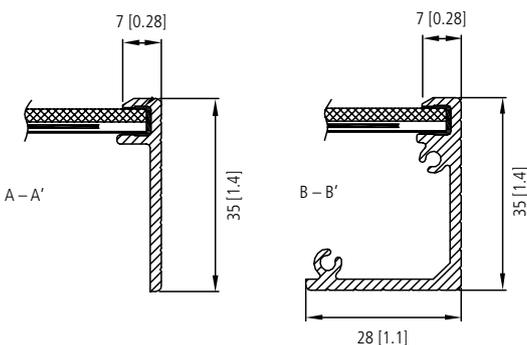
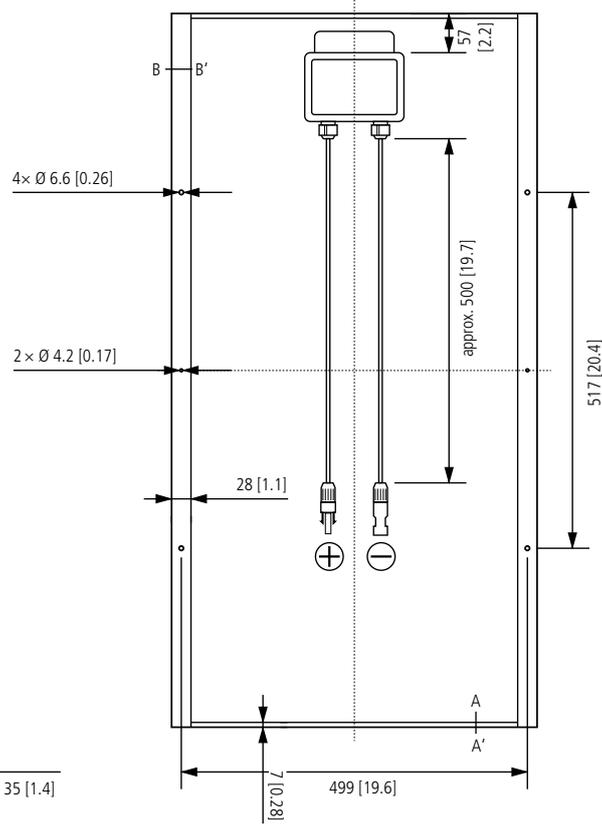
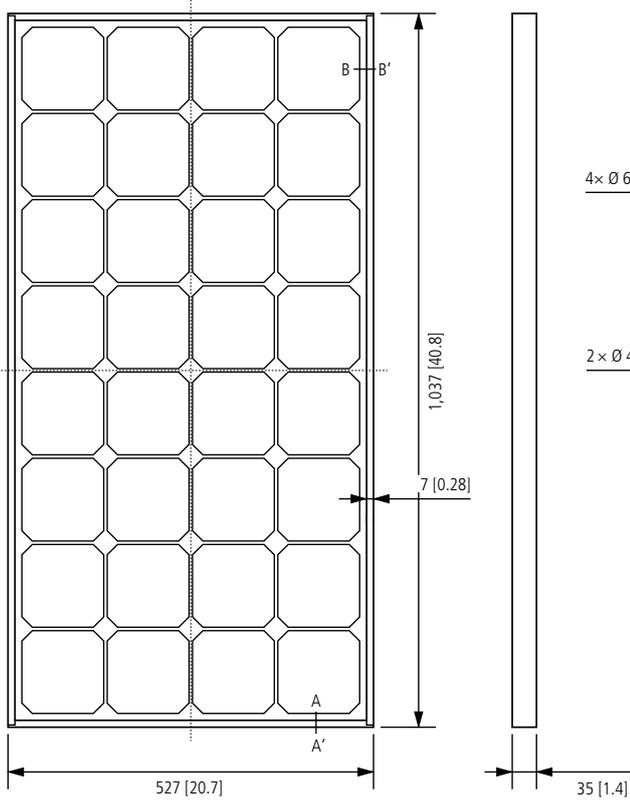


Irradiation Dependence

of I_{sc}, V_{oc} and P_{max} at 25 °C



Physical Specifications mm [in]



Weight	[kg]	7.4
Dimension	[mm]	527 × 1,037 × 35
Strength	[N/m ²]	2,400
Cable		approx. 500 mm / 19.7 in, 4 mm ² / AWG12
Connectors		NBZH PV-ZH202