LA90-12S

High-efficiency PV Module

Technology

The LORENTZ LA-Series of PV modules offer a conversion efficiency of 17-20% due to the unique back-contact technology.

Our monocrystalline silicon solar cells yield a higher voltage per cell. Therefore 32 cells are sufficient to provide the same voltage as traditional 36-cell modules. As a result, LORENTZ modules are lighter and smaller.

In combination with an extremely low voltage-temperature coefficient, this 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

Features

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

Warranty

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

  Details according to warranty issued by LORENTZ

Standards

LA90-12S meets the requirements for IEC and CE.

Specifications

Electrical Data

Peak power	Pmax	[Wp]	90
Tolerance		[%]	+10 / -5
Max. power current	Imp	[A]	5.1
Max. power voltage	Vmp	[V]	17.6
Short circuit current	Isc	[A]	5.5
Open circuit voltage	Voc	[V]	21.4
Efficiency of cells		[%]	19.7
Temperature co-efficient for Pmax		[%/°C]	-0.38
Temperature co-efficient for Voc		[mV/°C]	-60.8
Temperature co-efficient for Isc		[mA/°C]	3.5
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 per module	32*
Cell technology	monocrystalline
Cell shape	rectangular

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

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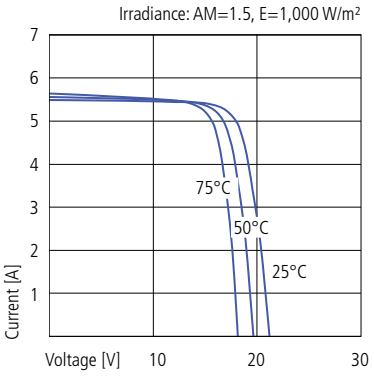
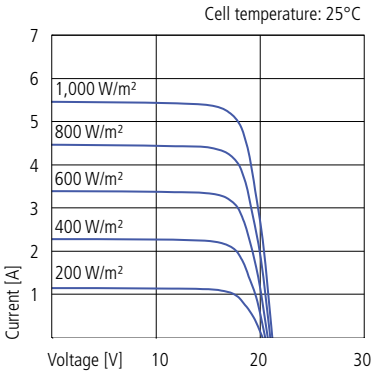
LORENTZ GERMANY

Electrical Performance

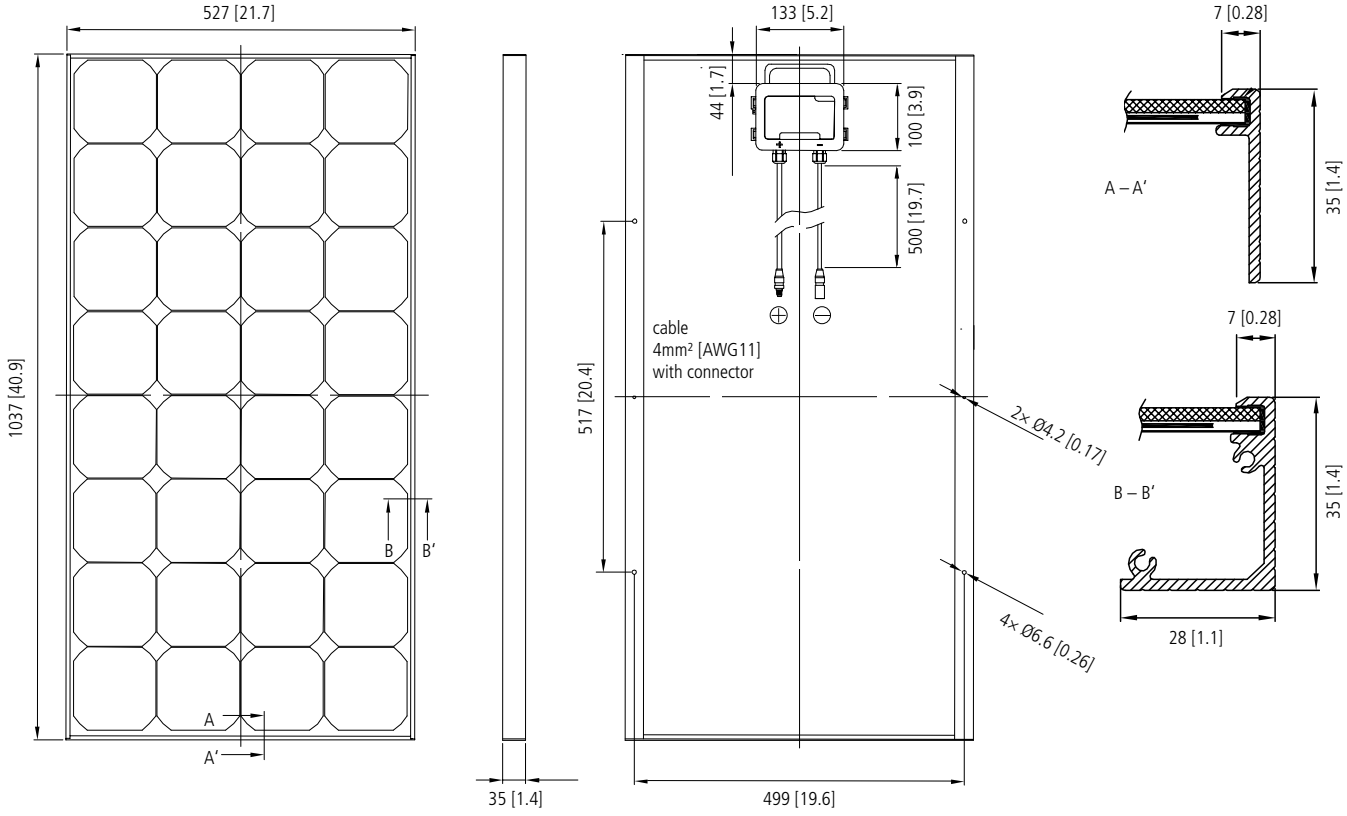


Current-voltage characteristics of PV module LORENTZ LA90-12S at various cell temperatures.



Current-voltage characteristics of PV module LORENTZ LA90-12S at various irradiation levels.

Physical Specifications mm [in]



Weight	[kg]	7.4
Dimension	[mm]	527 × 1037 × 35
Cable		approx. 1 m / 40 in, 4 mm² / AWG 12
Connectors		ZJRH Cixi Renhe 05-1

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