

LA50-12S

High-efficiency PV Module

Technology

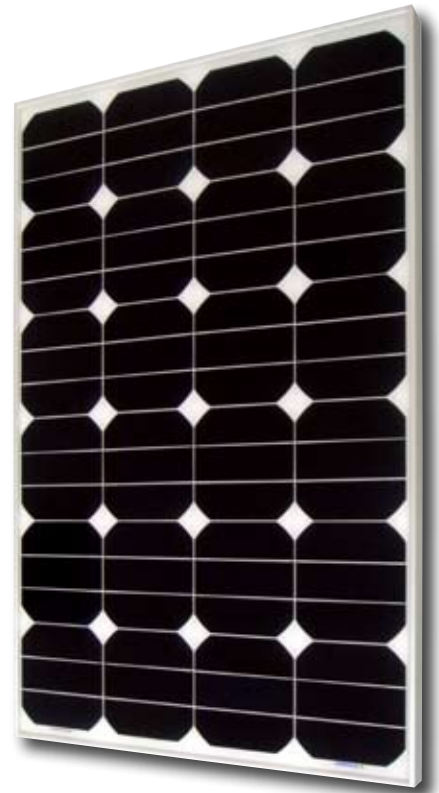
The LORENTZ LA-Series of PV modules offer a conversion efficiency due to the unique back-contact technology. As a result, our monocrystalline silicon solar cells yield a high voltage per cell, and LORENTZ modules are lighter and smaller.

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 backsheets for long-term package durability
- 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

LA50-12S meets the requirements for IEC and CE.



Specifications

Electrical Data

Peak power	P _{max}	[Wp]	50
Tolerance		[%]	+15 / -5
Max. power current	I _{mp}	[A]	2.9
Max. power voltage	V _{mp}	[V]	17.4
Short circuit current	I _{sc}	[A]	3.4
Open circuit voltage	V _{oc}	[V]	23.3
Efficiency of cells		[%]	15.1
Temperature co-efficient for P _{max}		[%/°C]	-0.38
Temperature co-efficient for V _{oc}		[mV/°C]	-60.8
Temperature co-efficient for I _{sc}		[mA/°C]	2.0
Max. system voltage		[V]	600

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

Cells

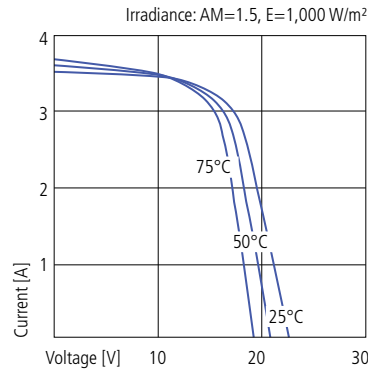
Number of cells in series	36
Number of cells in parallel	2
Cell technology	monocrystalline
Cell shape	rectangular

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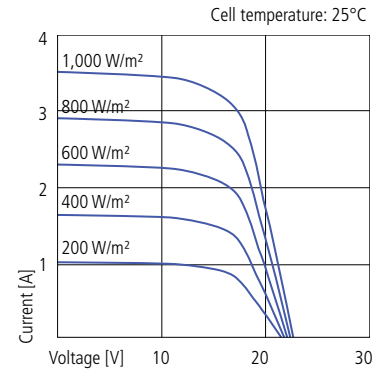
High-efficiency PV Module



Electrical Performance



Current-voltage characteristics of PV module LORENTZ LA50-12S at various cell temperatures.



Current-voltage characteristics of PV module LORENTZ LA50-12S at various irradiation levels.

Physical Specifications mm [in]

