

# LA30-12S

## High-efficiency PV Module

### Technology

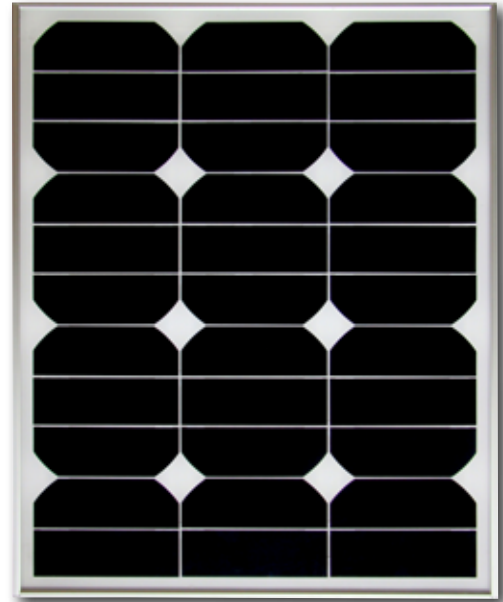
The LORENTZ LA-Series of PV modules with monocrystalline silicon solar cells offer a high conversion efficiency due to the unique back-contact technology.

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: up to 2 years
- Performance guarantee: up to 5 years (90% power output)

Details according to warranty issued by LORENTZ

### Standards

LA30-12S meets the requirements for IEC and CE.



### Specifications

#### Electrical Data

|   |                  |         |          |
|---|------------------|---------|----------|
| Peak power                                    | P <sub>max</sub> | [Wp]    | 30       |
| Tolerance                                     |                  | [%]     | + 15/- 5 |
| Max. power current                            | I <sub>mp</sub>  | [A]     | 1.7      |
| Max. power voltage                            | V <sub>mp</sub>  | [V]     | 17.5     |
| Short circuit current                         | I <sub>sc</sub>  | [A]     | 1.9      |
| Open circuit voltage                          | V <sub>oc</sub>  | [V]     | 21.0     |
| Temperature co-efficient for P <sub>max</sub> |                  | [%/°C]  | - 0.38   |
| Temperature co-efficient for V <sub>oc</sub>  |                  | [mV/°C] | - 60.5   |
| Temperature co-efficient for I <sub>sc</sub>  |                  | [mA/°C] | 1.8      |
| Max. system voltage                           |                  | [V]     | 48       |

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

#### Cells

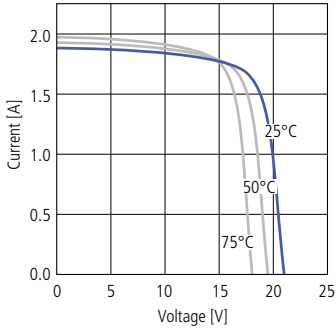
|                             |                 |
|-----------------------------|-----------------|
| Number of cells in series   | 33*             |
| Number of cells in parallel | 1               |
| Cell technology             | monocrystalline |
| Cell shape                  | rectangular     |

\* Due to the back-contact cell technology only 33 cells are required to yield the same V<sub>mp</sub> voltage as traditional SI products with 36 cells.

**Electrical Performance**

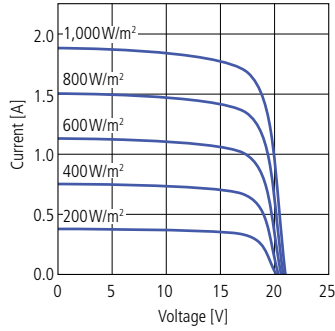
**Electrical Performance**

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



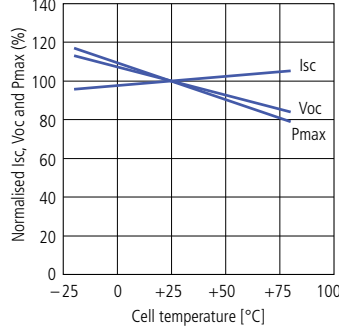
**Electrical Performance**

for different irradiation, at 25 °C



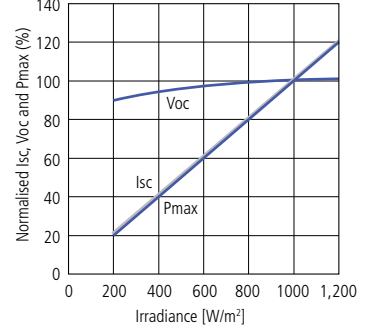
**Temperature Dependence**

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

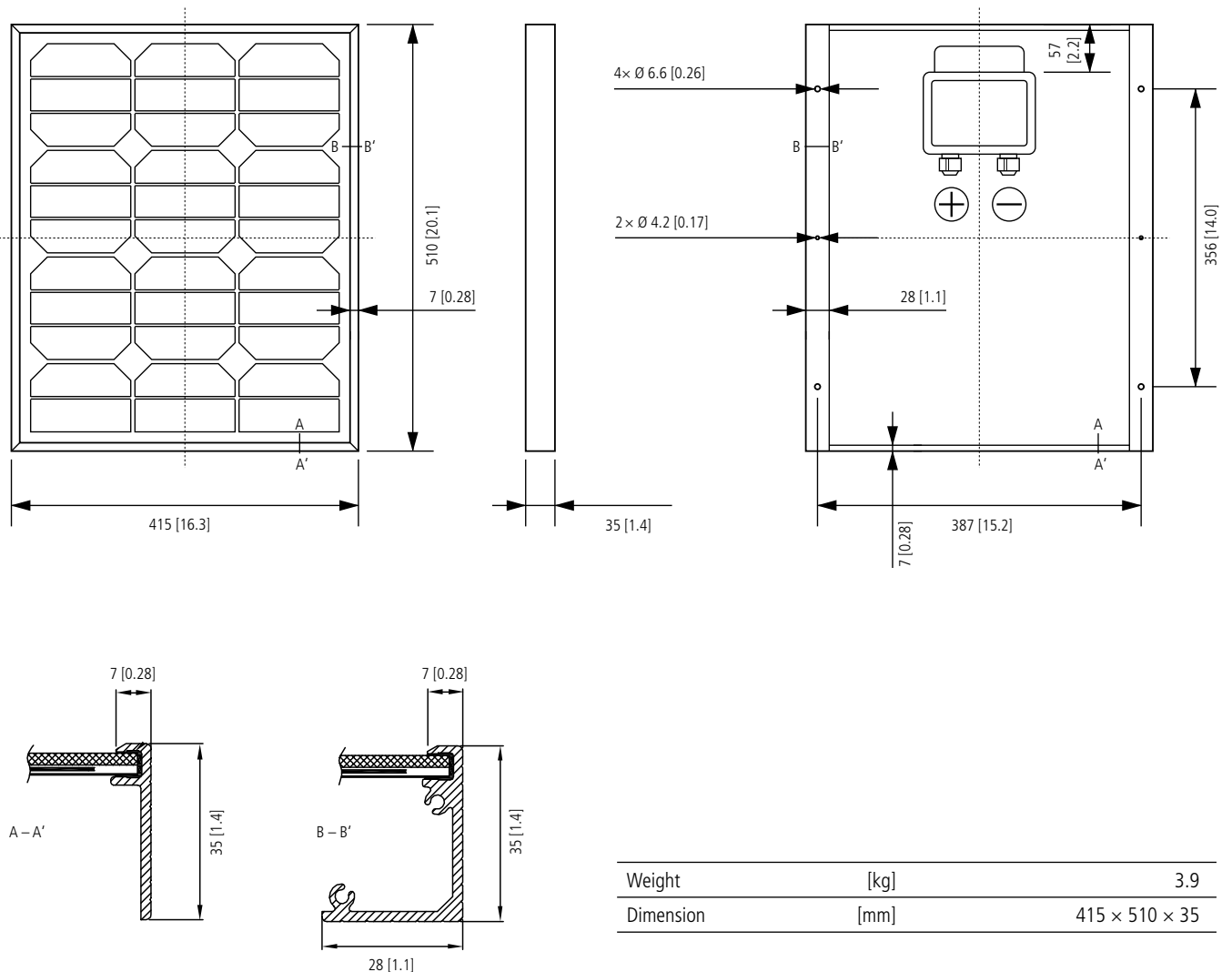


**Irradiation Dependence**

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



**Physical Specifications mm [in]**



|           |      |                |
|-----------|------|----------------|
| Weight    | [kg] | 3.9            |
| Dimension | [mm] | 415 × 510 × 35 |