

LC50-12M

High-efficiency PV Module

Features

- high energy yields ensured by high conversion efficiency
- sturdy, clear-anodized aluminum frame with pre-drilled holes for quick installation
- advanced EVA encapsulation with triple-layer backsheet, meets the most stringent safety requirements for high-voltage operation
- reliable bypass diodes to prevent overheating (hot spot effect) and to minimise power loss by shading
- manufactured in ISO 9001:2000-certified factory

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
- etc.

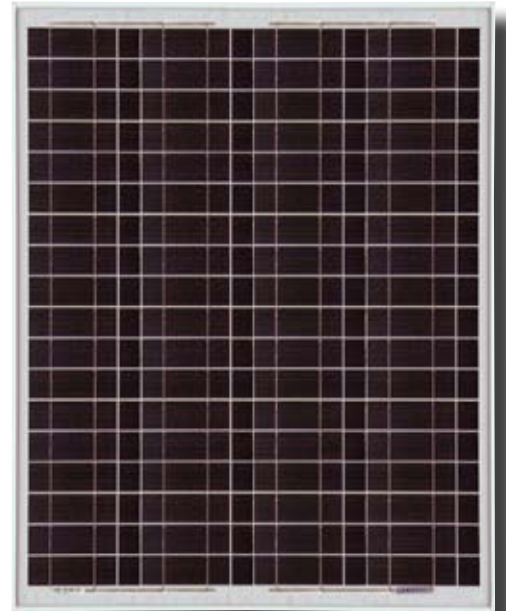


photo may differ from actual product

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

LC50-12M is certified according to IEC 61215 and 61730 by TÜV Rheinland and meets the requirements for CE.



- Qualified, IEC 61215
- Safety tested, IEC 61730
- Periodic Inspection



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]	17.2
Short circuit current	I _{sc}	[A]	3.2
Open circuit voltage	V _{oc}	[V]	22.5
Temperature co-efficient for P _{max}		[%/°C]	-0.50
Temperature co-efficient for V _{oc}		[%/°C]	-0.35
Temperature co-efficient for I _{sc}		[%/°C]	0.09
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

To find out more visit www.lorentz.de

BERNT LORENTZ GmbH & Co. KG

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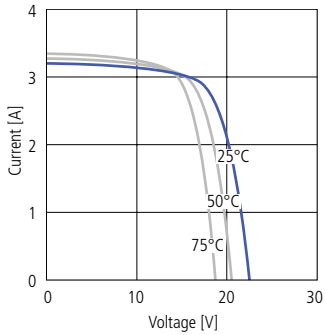
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Sun. Water. Life.

Electrical Performance

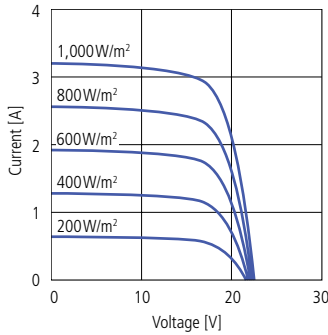
Electrical Performance

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



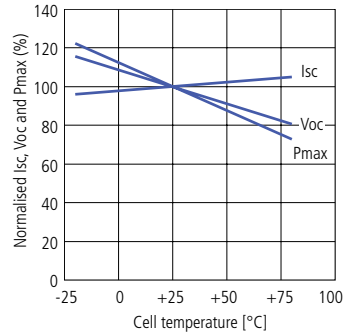
Electrical Performance

for different irradiation, at 25 °C



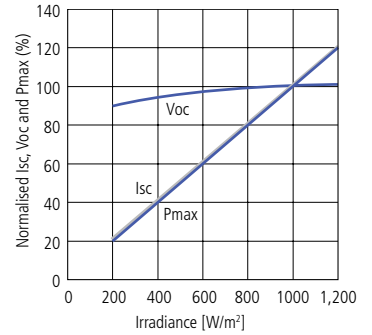
Temperature Dependence

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

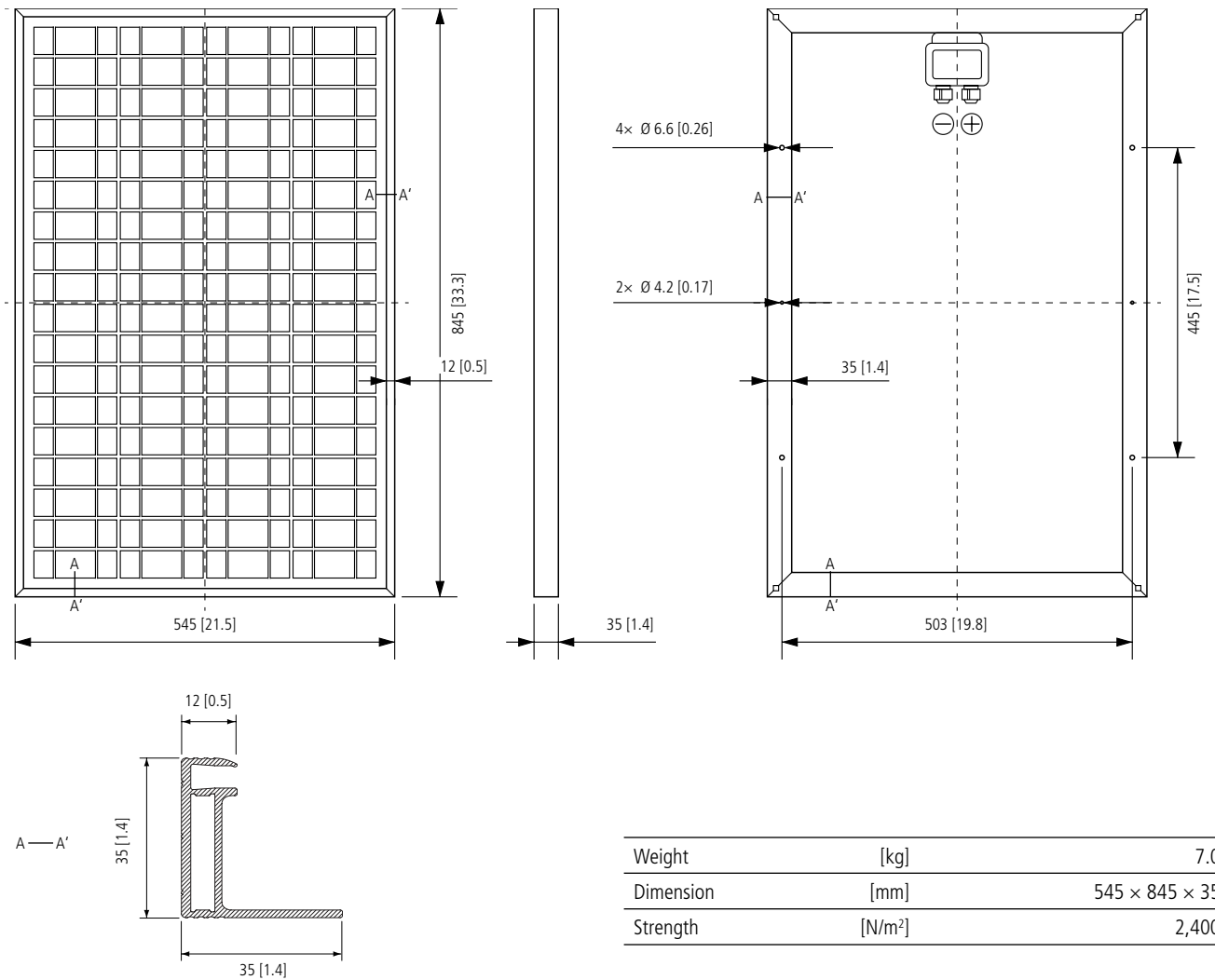


Irradiation Dependence

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



Physical Specifications mm [in]



Weight	[kg]	7.0
Dimension	[mm]	545 × 845 × 35
Strength	[N/m ²]	2,400

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