SOLBIAN

SR Series

Products

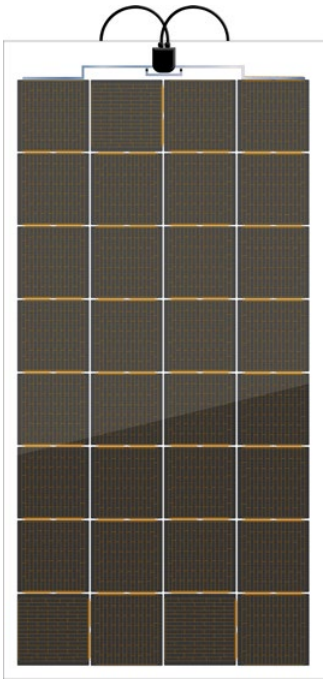
SR 48
SR 36 L
SR 36 Q
SR 32
SR 24
SR 16 L
SR 16 Q
SR 14

The series

The monocrystalline high efficiency SR cells are sandwiched by two patented metallic grids. The grid on the front is carefully tailored to optimize the current harvesting, while the one behind the cell offers strong mechanical support.
The grids essentially form a double shield that acts as a conducting reinforcement to the solar cell. Extreme crack and bend tolerance are built in, providing a guarantee of high efficiency and unmatched durability.

Features

- High resistance to mechanical stresses thanks to the thin wires thick mesh on the cell surface
- Ultra-thin design, less than 2 mm thick, with a weight of 2.4 kg/m²
- Completely waterproof and resistant to salt water
- Integrated bypass diodes to minimise output losses associated with partial shading
- Available with different front sheets, back sheets and many fixing and electrical wiring options
- Designed and manufactured in Italy
- IEC 61701 certified
- 5-year warranty against manufacturing defects



● Made in Italy

SR Series MERLIN SOLAR inside

At the core of Merlin Solar's patented technology is an innovative pair of metal grids that serve as intra-cell and inter-cell connections.
The same copper and solder as any other bus bar cell are used, but 20 redundant lines and more than 180 interconnections enable the extraction of more power and significantly improve the reliability, performance and ruggedness of the solar panel.

Merlin Solar cell

The metallic grid on the front of the cell is specifically designed to maximize the current harvesting.
More power and high reliability.

On the rear of the cell a second grid provides extreme resistance to cracks and overbending.
All the ruggedness and flexibility you need.

	SR 48	SR 36 L	SR 36 Q	SR 32	SR 24	SR 16 L	SR 16 Q	SR 14
Product	Lightweight semi-flexible solar panel							
Power at STC [W] ①	240	180	180	160	120	80	80	70
Power tolerance [%]	± 3							
Length [mm]	1379	1540	1058	1379	1058	1379	736	1219
Width [mm]	1013	691	1013	691	691	370	691	370
Thickness [mm]	2							
Weight [kg]	3.4	2.6	2.6	2.3	1.8	1.2	1.2	1.1
PV solar cells no.	48	36	36	32	24	16	16	14
PV solar cells	Merlin Solar grid technology							
PV Solar cell efficiency [%]	22.5+							
No. of bypass diodes②	3	2	3	2	2	1	2	1
Voltage at maximum power Vmp at STC [V]①	25.3	18.9	18.9	16.8	12.6	8.4	8.4	7.4
Current at maximum power Imp at STC [A]①	9.5							
Open-circuit voltage Voc at STC [V] ①	32	24	24	21.3	16	10.7	10.7	9.3
Short-circuit current Isc [A]	9.8							
Minimum design load [Pa] ③	1600							
NOCT [°C]	45 ± 2							
Operating temperature [°C]	-40 / +85							
Temp. coeff. Pmax [%/°C]	-0.40							
Temp. coeff. Voc [%/°C]	-0.32							
Temp. coeff. Isc [%/°C]	0.05							
Maximum system voltage [V]	1000							
Maximum reverse current [A]	12							
Safety class	A							
Warranty [year] ④	5							

① Values at STC = Standard Test Conditions: (a) light spectrum for an air mass of 1.5; (b) irradiance of 1000 W/m² with perpendicular incidence and (c) cell temperature of 25 °C. Measurements carried out according to the Standard IEC 61215 requirements.
② Diodes suitable for lamination and encapsulated within the panel.
③ Rated load for the solar panel when it is mounted on a rigid surface.
④ See the Solbian "Warranty conditions" for more information.

Certifications

SOLBIAN Viale Gandhi 21b, 10051 Avigliana (TO) ITALY +39 011.966.35.12 sales@solbian.eu

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