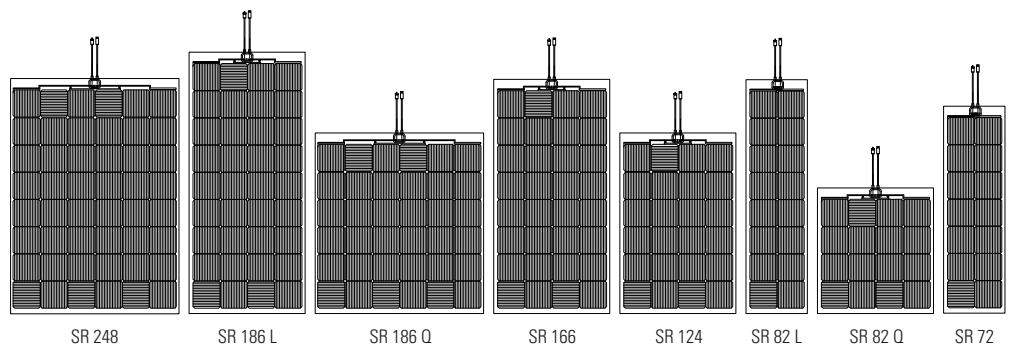


Super Rugged Series.

SR 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, enabling novel crystalline silicon architectures. A guaranty of high efficiency and unmatched durability in flexible solar panels.

Features

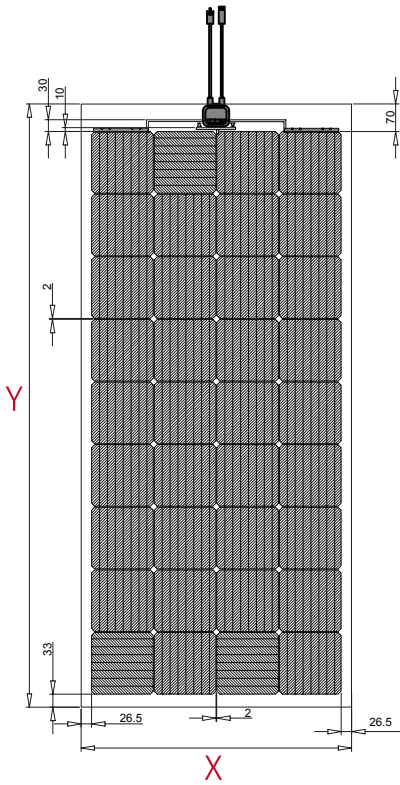


- ✓ High tolerance to cracks and bending thanks to the double shield protecting the cell
- ✓ Flexible and lightweight (2.2 kg/m²)
- ✓ Completely waterproof and resistant to salt water
- ✓ Thin (less than 2 mm)
- ✓ 5 year warranty against manufacturing defects
- ✓ Positive power tolerance (0%, +5%)
- ✓ Integrated bypass diodes to minimise output losses associated with partial shading
- ✓ Available with different front sheets, many fixing and electrical wiring options
- ✓ White, black or transparent back sheet
- ✓ Adaptable to any battery: from 5 to 48 volt, lead-acid or lithium
- ✓ Designed and manufactured in Italy

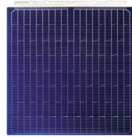
SR series MERLINSOLAR inside

At the core of Merlin Solar's patented technology is an innovative pair of metal grids that serve as intra-cell and inter-cell interconnects.

The same copper and solder as any other bus bar cell are used, but 20 redundant lines and 180+ interconnects, not only enable to extract more power but also dramatically improve the reliability, performance and ruggedness of the solar panels.

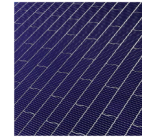


Merlin Solar™ cell



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 bendings.

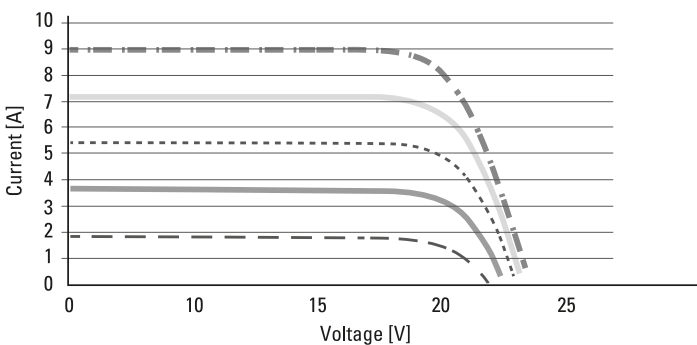
All the ruggedness and flexibility you need.

Datasheet

	SR 248	SR 186 L	SR 186 Q	SR 166	SR 124	SR 82 L	SR 82 Q	SR 72
Maximum power (0%, +5%) [W]	248	186	186	166	124	82	82	72
Length Y [mm]	1364	1523	1046	1364	1046	1364	728	1205
Width X [mm]	994	683	994	683	683	365	683	365
Thickness [mm]	2	2	2	2	2	2	2	2
Weight [kg]	3.00	2.40	2.40	2.10	1.70	1.20	1.20	1.10
Max power Voltage Vmp [V]	27.0	20.2	20.2	18.0	13.5	8.9	8.9	7.8
Max power Current Imp [A]	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
Open circuit voltage Voc [V]	32.0	24.0	24.0	21.3	16.0	10.7	10.7	9.3
Short circuit current Isc [A]	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
NOCT [°C]	45 ± 2	45 ± 2	45 ± 2	45 ± 2	45 ± 2	45 ± 2	45 ± 2	45 ± 2
Operating temperature [°C]	-40/+85	-40/+85	-40/+85	-40/+85	-40/+85	-40/+85	-40/+85	-40/+85
Temp. coeff. Pmax [%/°C]	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
Temp. coeff. Voc [%/°C]	-0.32	-0.32	-0.32	-0.32	-0.32	-0.32	-0.32	-0.32
Temp. coeff. Isc [%/°C]	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Columns x Rows (cells n°)	6x8 (48)	4x9 (36)	6x6 (36)	4x8 (32)	4x6 (24)	2x8 (16)	4x4 (16)	2x7 (14)
Maximum system voltage [V]	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V
Maximum reverse current [A]	12 A	12 A	12 A	12 A	12 A	12 A	12 A	12 A
Safety class	A	A	A	A	A	A	A	A

* 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.

Electrical Characteristics



Certifications

