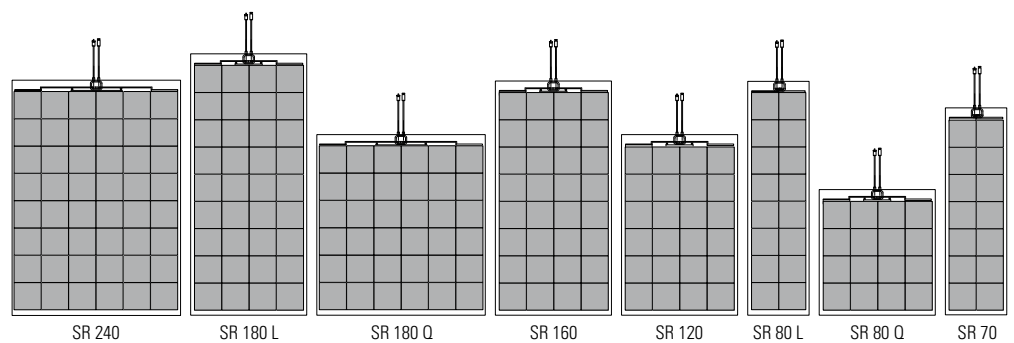


# Super Rugged Series.

## SR series

MADE IN ITALY



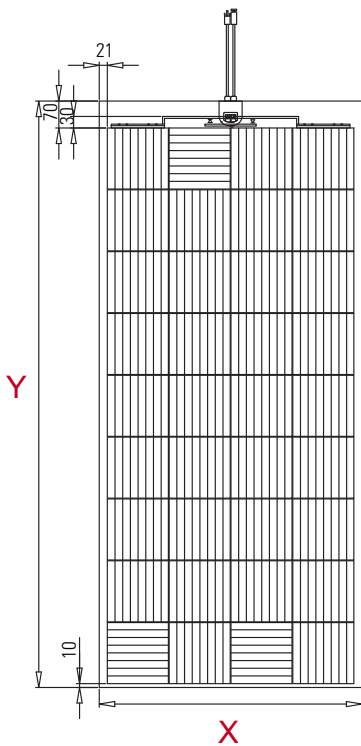
The monocrystalline high efficiency SR cells are sandwiched by two patented metallic grids. The grid on the front is carefully tailored to optimize the current harvesting, while the one behind the cell offers strong mechanical support.

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
- ✓ Flexible and lightweight (2.4 kg/m<sup>2</sup>)
- ✓ 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
- ✓ Up to nine bypass diodes in the Guardian models, to fight the effects of shadows even better
- ✓ 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



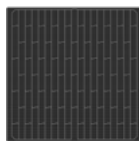
SOLBIANFLEX SR

## SR Series MERLIN SOLAR inside

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

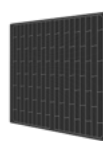
The same copper and solder as any other bus bar cell are used, but 20 redundant lines and more than 180 interconnections enable the extraction of more power and significantly improve the reliability, performance and ruggedness of the solar panel.

### 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 over-bending.

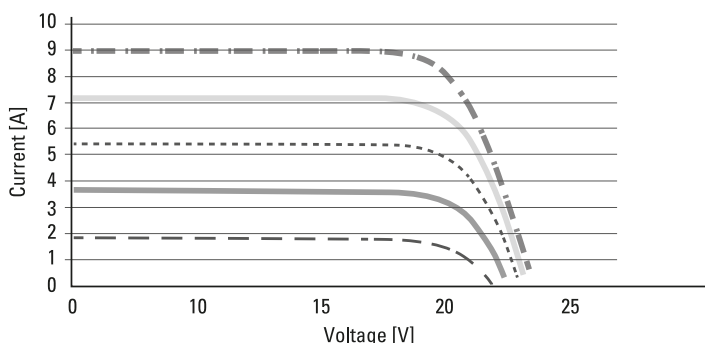
**All the ruggedness and flexibility you need.**

## Datasheet

	SR 240	SR 180 L	SR 180 Q	SR 160	SR 120	SR 80 L	SR 80 Q	SR 70
Maximum power [W]	240	180	180	160	120	80	80	70
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]	3,25	2,50	2,50	2,24	1,71	1,19	1,19	1,06
Max power Voltage Vmp [V]	26,4	19,8	19,8	17,6	13,2	8,8	8,8	7,7
Max power Current Imp [A]	9,1	9,1	9,1	9,1	9,1	9,1	9,1	9,1
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]	9,6	9,6	9,6	9,6	9,6	9,6	9,6	9,6
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/m<sup>2</sup> with perpendicular incidence and (c) cell temperature of 25 °C. Measurements carried out according to the Standard IEC 61215 requirements.

## Electrical Characteristics



## Certifications

