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Solar Panel Guide Specification Data Sheet

Solbian Energie Alternative Srl Solbianflex SXX 70-240W SXX 120 G

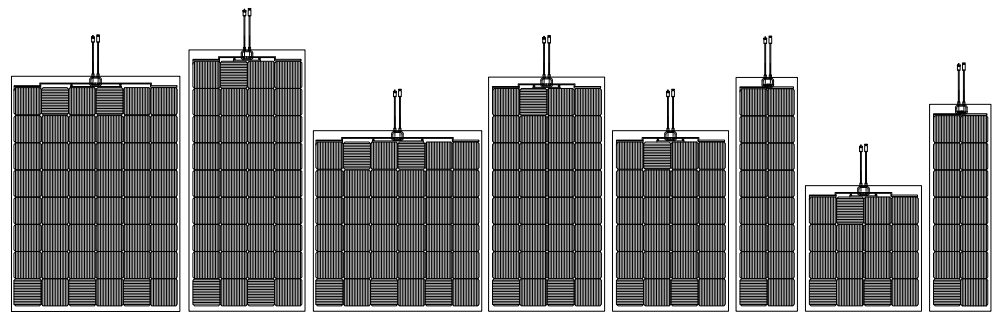
Also available on the web at
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More power with HJT cells.

SXX series

Based on Hevel
HJT technology
HEVEL
ENERGY GROUP

MADE IN ITALY

SXX 240

SXX 180 L

SXX 180 Q

SXX 160

SXX 120

SXX 80 L

SXX 80 Q

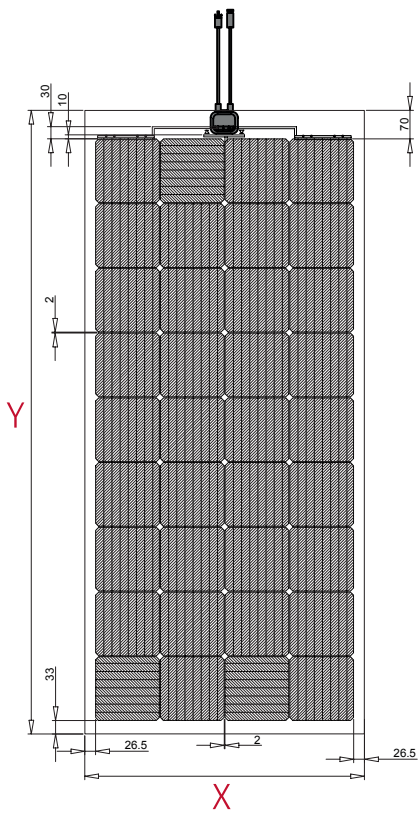
SXX 70

In the SXX series the heterojunction solar cells are electrically connected using ultra-thin copper wires that form a very fine mesh on the cell surface, resulting in thousands of contact points. This alternative to the standard bus-bar method allows a higher module power and increases the energy yield. A technology optimally suited to flexible modules, due to its intrinsic insensitivity to micro-cracks, that are the most common cause of energy loss in solar modules.

The SXX series comes at the same size of standard 6 inches cell panels but generates more power, thanks to its silicon-based heterojunction solar cells (HJT) that offer more than 23% of efficiency. When compared with panels of the same nominal power, the SXX prove to harvest more energy due to HJT cells being intrinsically bifacial, an important feature especially when panels are encapsulated in a transparent sandwich and installed with the back exposed to indirect light. To top it all, HJT cells perform better than others in hot climates, thanks to very low temperature coefficients.

Features

- ✓ High resistance to mechanical stresses thanks to the thin wires thick mesh on the cell surface
- ✓ Flexible and lightweight (2.2 kg/m²)
- ✓ Very high efficiency (> 23%)
- ✓ Low temperature coefficients (at high temperatures HJT cells show an efficiency drop 20% lower than standard silicon cells)
- ✓ Extra energy obtained thanks to the bifaciality, especially important for applications where the rear side of the module intercepts the reflection of light
- ✓ Completely waterproof and resistant to salt water
- ✓ Thin (less than 2 mm)
- ✓ 5 year warranty against manufacturing defects
- ✓ 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



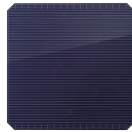
SOLBIANFLEX SXX

SXX series **HEVEL** inside

ENERGY GROUP

Hevel's laminated cell with patented SmartWire™ Technology, uniquely interconnects solar cells and collects the power they generate. A matrix of electrically efficient copper wires coated with a custom, low melting-point alloy, assures a reliable and fault tolerant electrical connection between cells. The combination of SmartWire™ technology and heterojunction solar cells provides the SXX panels with microcracks protection and bifaciality. While the front side of the cell can convert light into electricity with an efficiency larger than 23%, the back can match 90% of the power produced by the front side. If compared with single-face cells of the same nominal power, the joint action of both sides in bifacial cells can lead to a higher daily production of energy.

Hevel cell



On the front of the cell electrically-efficient copper wires form a mesh that creates a very high number of connection points.
High efficiency also in low light.



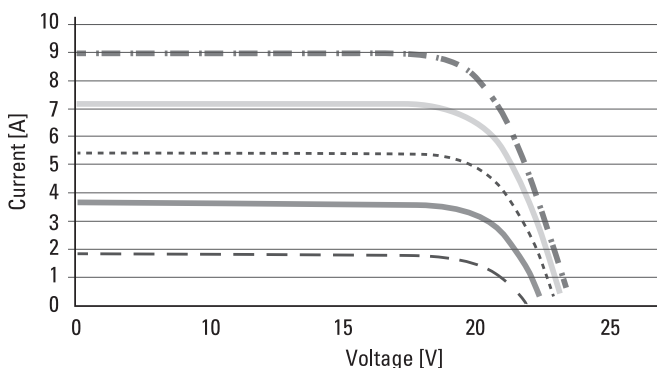
The intrinsically bifacial HJT technology offers an active cell backside.
More energy even when optimal panel orientation can't be achieved.

Datasheet

	SXX 240	SXX 180 L	SXX 180 Q	SXX 180 G	SXX 160	SXX 120	SXX 120 G	SXX 80 L	SXX 80 Q	SXX 70
Maximum power [W]	240	180	180	180	160	120	120	80	80	70
Length Y [mm]	1364	1523	1046	1046	1364	1046	726	1364	728	1205
Width X [mm]	996	683	996	996	683	683	996	365	683	365
Thickness [mm]	2	2	2	2	2	2	2	2	2	2
Weight [kg]	3.00	2.40	2.40	2.40	2.10	1.70	1.70	1.20	1.20	1.10
Max power Voltage Vmp [V]	27,9	20,9	20,9	20,9	18,6	14,0	14,0	9,3	9,3	8,1
Max power Current Imp [A]	8,6	8,6	8,6	8,6	8,6	8,6	8,6	8,6	8,6	8,6
Open circuit voltage Voc [V]	34,7	26,0	26,0	26,0	23,1	17,3	17,3	11,6	11,6	10,1
Short circuit current Isc [A]	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
NOCT [°C]	45 ± 2	45 ± 2	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	-40/+85	-40/+85
Temp. coeff. Pmax [%/°C]	-0,32	-0,32	-0,32	-0,32	-0,32	-0,32	-0,32	-0,32	-0,32	-0,32
Temp. coeff. Voc [%/°C]	-0,25	-0,25	-0,25	-0,25	-0,25	-0,25	-0,25	-0,25	-0,25	-0,25
Temp. coeff. Isc [%/°C]	0,04	0,04	0,04	0,04	0,04	0,04	0,04	0,04	0,04	0,04
Columns x Rows (cells n°)	6x8 (48)	4x9 (36)	6x6 (36)	6x6 (36)	4x8 (32)	4x6 (24)	6x4 (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	1000 V	1000 V
Maximum reverse current [A]	12 A	12 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	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



--- 100 W/m² - - - - - 600 W/m²
 - - - 200 W/m² ——— 800 W/m²
 ——— 400 W/m² - · - · - 1000 W/m²

Certifications

