



# solarion

MOVING PHOTOVOLTAICS

## Solar Module Series SOL100GG

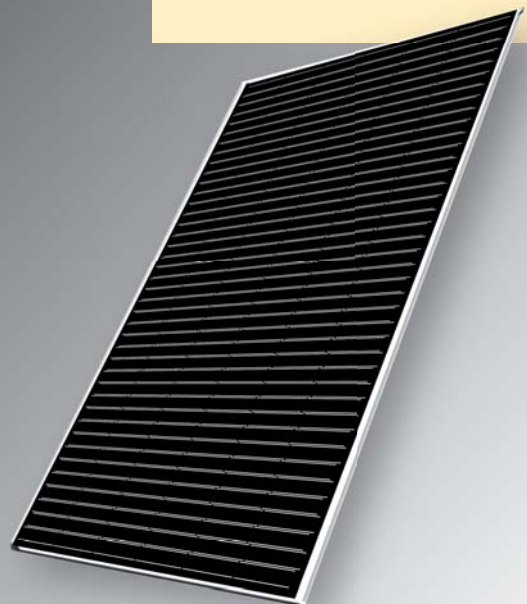
The solar module series SOL100 represents a new generation of solar energy conversion devices. It bases on Solarion's unique and proprietary ion beam assisted deposition technology for the cost effective production of flexible copper-indium-gallium-diselenide (CIGS) thin film solar cells manufactured in a roll-to-roll process.

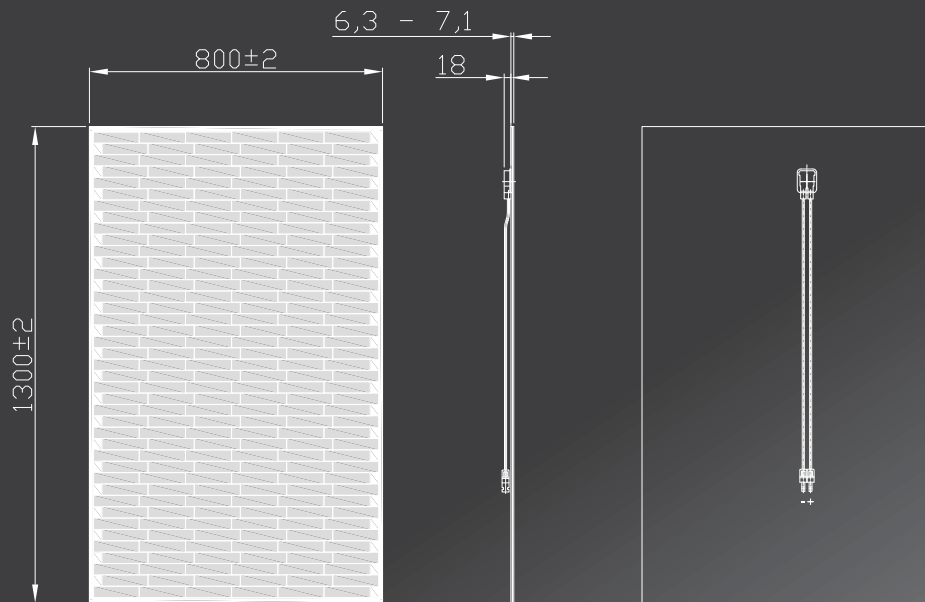
The frameless glass-glass encapsulation system used for these products provides a maximum of mechanical stability, durability and safety. The aesthetic black appearance makes the SOL100 an outstanding product for standard applications as well as for architectural integration. With its rectangular shape, a size of about one square meter and a weight of approximately 15 kg it is easy to handle and to install. The tempered front glass offers resistivity against hail impacts and mechanical loads.

## Summary of Qualities

- ✦ General purpose solar module
- ✦ Innovative Solarion-CIGS on Polyimide solar cells from roll-to-roll process
- ✦ High energy output, performs with excellent Performance Ratios (PR)
- ✦ Stable performance with no initial degradation
- ✦ Safe, robust and durable glass-glass encapsulation system
- ✦ Aesthetically pleasing black appearance
- ✦ Easy to handle and to install, frameless design does not require module grounding
- ✦ Up to 3500 Pa wind and snow load
- ✦ IEC61646 and IEC61730 qualification in preparation

20 years output warranty (80 %)  
10 years output warranty (90 %)  
2 years product warranty





## Technical Data Solar Module SOL100GG

Performance*						
Performance at Standard Test Conditions (STC: 1000 W/m <sup>2</sup> , 25 °C, Spectrum AM 1,5 G)						
Nominal Power P <sub>max</sub>	[W]	70	75	80	85	90
Voltage at Maximum Power V <sub>mp</sub>	[V]	15,9	16,0	16,1	16,1	16,2
Current at Maximum Power I <sub>mp</sub>	[A]	4,40	4,69	4,97	5,28	5,56
Open Circuit Voltage V <sub>oc</sub>	[V]	22,9	23,0	23,2	23,2	23,3
Short Circuit Current I <sub>sc</sub>	[A]	5,45	5,81	6,16	6,55	6,89
Performance at Nominal Operating Cell Temperature (NOCT: 800 W/m <sup>2</sup> , 45 ± 2 °C, Spectrum AM 1,5 G)						
Nominal Power P <sub>max</sub>	[W]	Tbd	Tbd	Tbd	Tbd	Tbd
Nominal Voltage V <sub>mp</sub>	[V]	Tbd	Tbd	Tbd	Tbd	Tbd
Current at Maximum Power I <sub>mp</sub>	[A]	Tbd	Tbd	Tbd	Tbd	Tbd
Open Circuit Voltage V <sub>oc</sub>	[V]	Tbd	Tbd	Tbd	Tbd	Tbd
Short Circuit Current I <sub>sc</sub>	[A]	Tbd	Tbd	Tbd	Tbd	Tbd
<b>Module efficiency reduction at 200 W/m<sup>2</sup> **</b>		<b>Tbd</b>				
Temperature Effects						
typ. Temperature Coefficient of P <sub>max</sub>		-0.45 %/K				
typ. Temperature Coefficient of V <sub>oc</sub>		-0.42 %/K				
typ. Temperature Coefficient of I <sub>sc</sub>		+0.01 %/K				
Operating Limits						
Maximum System Voltage		1000 V				
Ambient Temperature		-40 ... +45 °C				
Wind Resistance		130 km/h corresponds to 3500 Pa				
Hail Resistance		25 mm at 83 km/h				
Reverse current rating		10 A				
Structure						
Module Technology		Glass – Encapsulation Material – Glass, Frameless				
Number and Type of Solar Cells		246 pieces CIGS [Cu(In,Ga)Se <sub>2</sub> ] on Polyimide				
Dimensions (L x W x D)		1300 mm x 800 mm x 7 mm (25 mm including Junction Box)				
Weight		15,5 kg				
Junction Box		Protection Class IP 65, 1 Bypass Diode				
Output Terminals		MC-4, 200 mm cables; 2,5 mm <sup>2</sup>				

\* Measuring tolerances: Nominal Power P<sub>max</sub> ± 5 %, other Electrical Parameters ± 10 %

\*\* Reduction in the module efficiency with reduction in irradiation strength of 1000 W/m<sup>2</sup>, to 200 W/m<sup>2</sup>, temperature 25 °C, in accordance with EN 60904-1

The status of this data sheet is preliminary. It has the purpose to inform about typical technical parameters of the product, but it is not a specification!