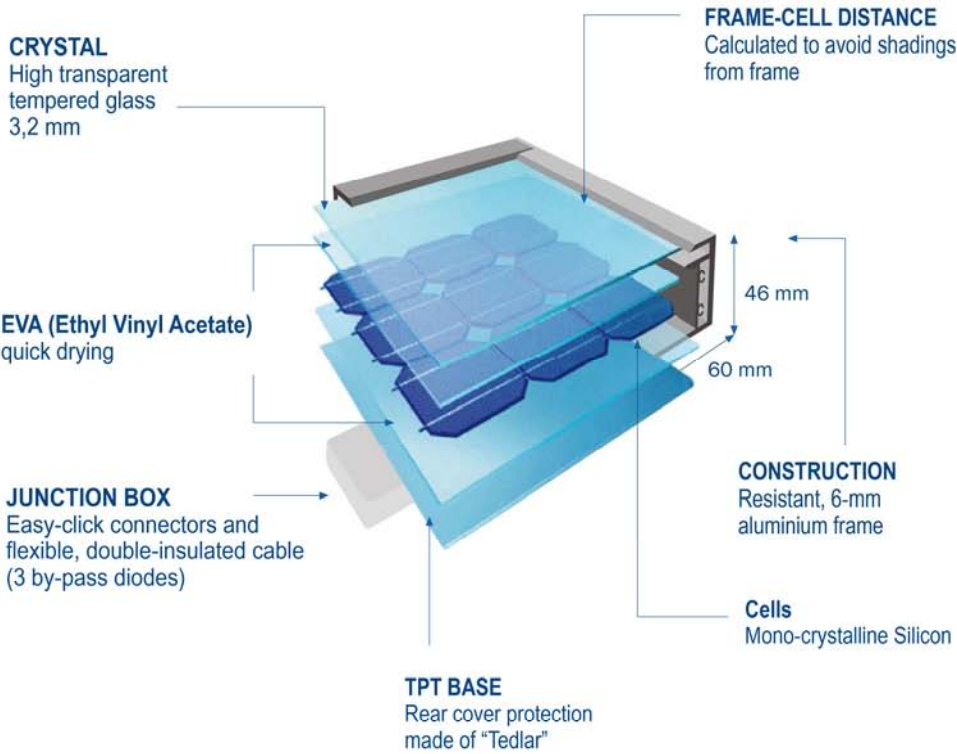




**Photovoltaic Solar Module SGM 72 / 160-180 W**



**MECHANICAL CHARACTERISTICS**

**Dimension**  
1580 x 808 x 46 mm

**Area within frame**  
1180 x 746 mm

**Weight**  
16 kg

**Frame material**  
Aluminium

**Crystal**  
3,2 mm tempered glass

**Casing**  
0,5 mm EVA

**Back**  
TPT base, "Tedlar"

**Junction Box**  
TYPV - BM 101

**Connector**  
Tany Solar  
TYPV- CN101/CN101/M -/F

**Wiring**  
2 wires - 90 cm, Ø 4 mm

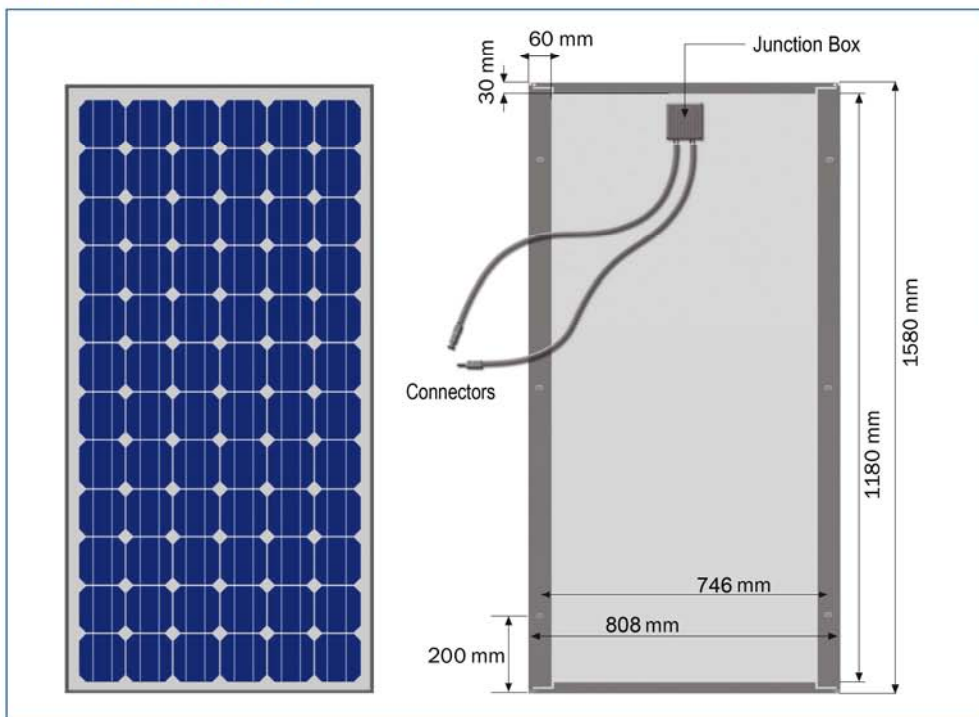
**Cell**  
Mono-crystalline Silicon

**72 cells**

**Dimension of Cell**  
125 x 125 mm

**Limited Power Warranty**  
90% the first 10 years  
80% the first 25 years

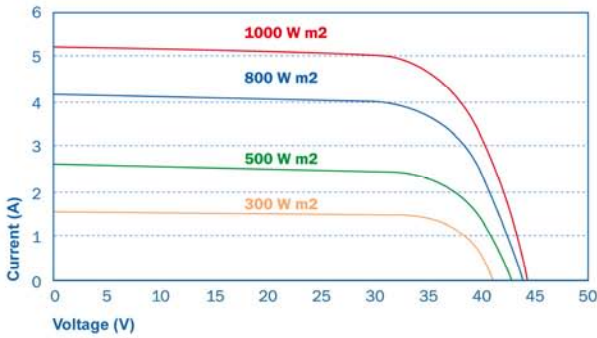
**CONSTRUCTION DETAILS**



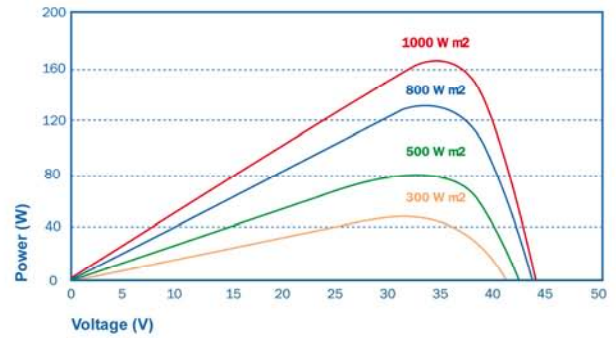


**Photovoltaic Solar Module SGM 72 / 160-180 W**

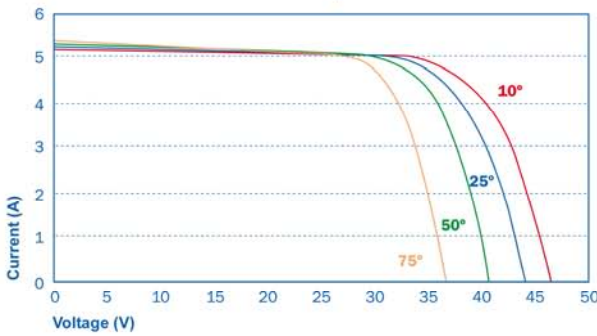
**I-V curve at different irradiance levels G(W/m<sup>2</sup>)**



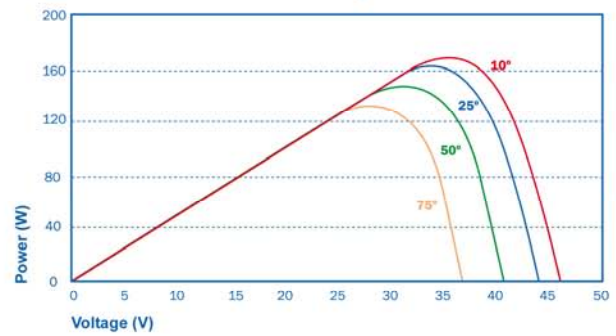
**P-V curve at different irradiance levels G(W/m<sup>2</sup>)**



**I-V curve at different temperatures**



**P-V curve at different temperatures**



\* Graphs for SGM-72 / 165 W

**ELECTRICAL CHARACTERISTICS**

Model	SGM 72/160 W	SGM 72/165 W	SGM 72/170 W	SGM 72/175 W	SGM 72/180 W
Peak Power P <sub>max</sub> (STC)*	160 W	165 W	170 W	175 W	180 W
Power tolerance	±3 %	±3 %	±3 %	±3 %	±3 %
Peak Power Voltage (V <sub>m</sub> )	35,0 V	35,0 V	35,5 V	35,5 V	36,0 V
Peak Power Current (I <sub>m</sub> )	4,57 A	4,71 A	4,79 A	4,93 A	5,00 A
Open-circuit Voltage (V <sub>oc</sub> )	42,0 V	42,0 V	42,6 V	42,6 V	43,2 V
Short-circuit Current (I <sub>sc</sub> )	5,12 A	5,28 A	5,37 A	5,52 A	5,60 A
Maximum System Voltage	1000 V <sub>DC</sub>	1000 V <sub>DC</sub>	1000 V <sub>DC</sub>	1000 V <sub>DC</sub>	1000 V <sub>DC</sub>
Temperature coefficient (V <sub>oc</sub> )	-0,34 %/°C	-0,34 %/°C	-0,34 %/°C	-0,34 %/°C	-0,34 %/°C
Temperature coefficient (I <sub>sc</sub> )	0,09 %/°C	0,09 %/°C	0,09 %/°C	0,09 %/°C	0,09 %/°C
Temperature coefficient (P <sub>max</sub> )	-0,37 %/°C	-0,37 %/°C	-0,37 %/°C	-0,37 %/°C	-0,37 %/°C
NOCT **	48 °C	48 °C	48 °C	48 °C	48 °C
Cell efficiency	15,0 %	15,5 %	16,0 %	16,3 %	17,0 %
Module efficiency	12,6 %	13,0 %	13,4 %	13,8 %	14,2 %

\* Test results at Standard Conditions (1000 W/m<sup>2</sup>; AM 1,5; 25 °C)

\*\* Nominal Operation Cell Temperature (800 W/m<sup>2</sup>; 20 °C room temperature) and wind velocity 1 m/s