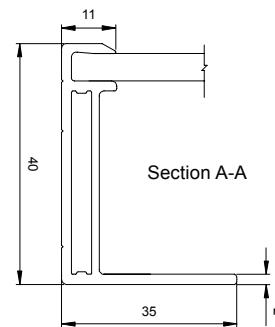
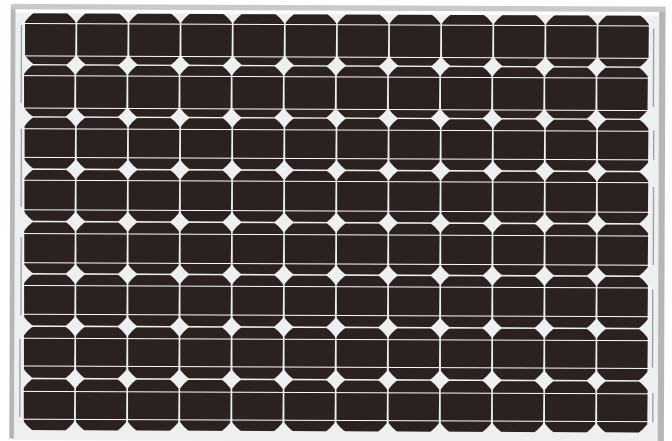
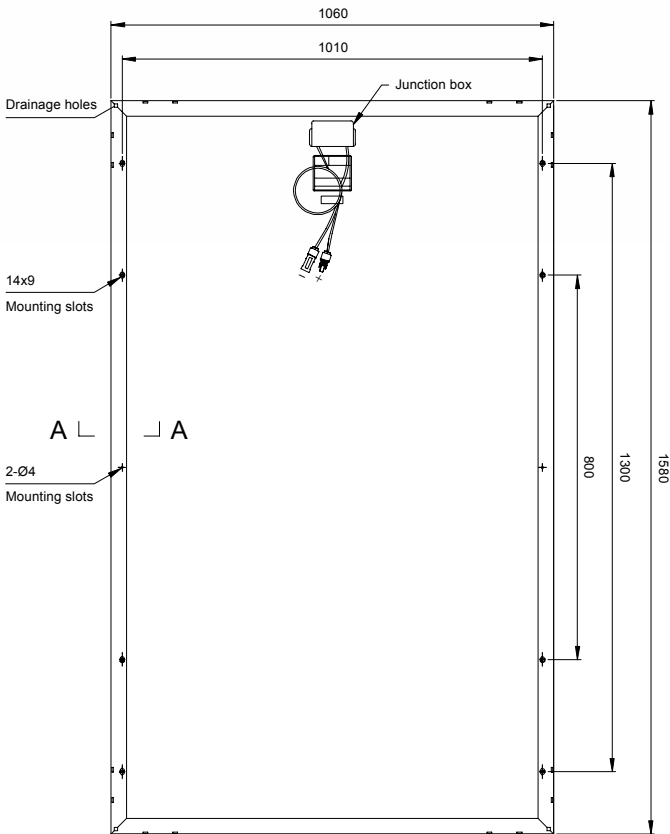


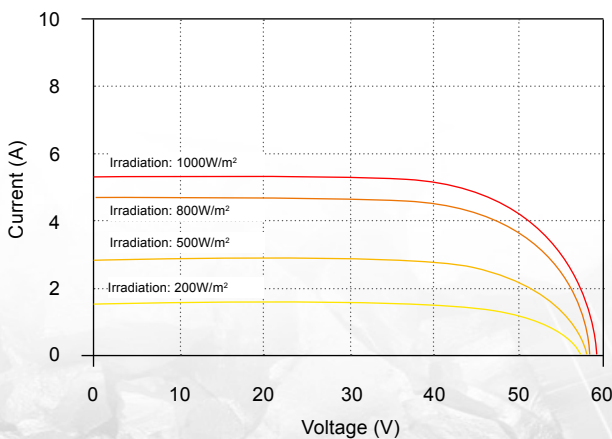
### TPV230-MO Photovoltaic panel family

It adopts high transparent low iron, tempered glass and self-supporting solar cells in order to improve conversion efficiency on our solar modules. The TPV230 series modules consist of 96 pcs 125×125mm mono-crystalline silicon solar cells which are in high efficiency, individually characterized and electronically matched before interconnection. Laminated with high quality toughened glass, EVA and TPT, the operating characteristics of solar cells can be ensured under any climatic conditions. After assembled by anodized aluminum alloy frame and with junction box, cable with connector, the solar modules are designed for long service life, easy to install, withstand the storm, high wind and hail impact.



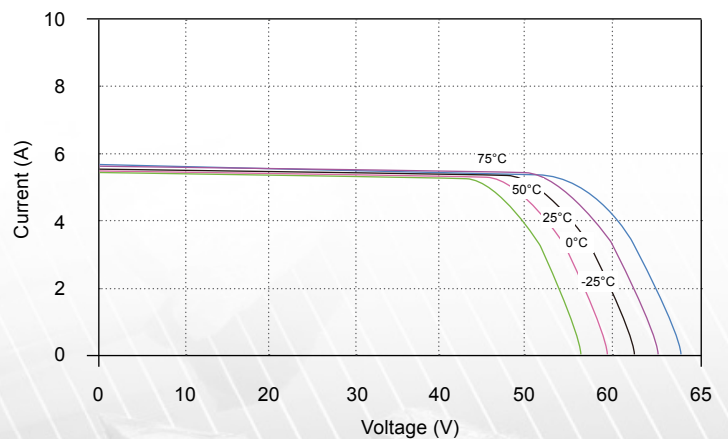
### IV-Curves

IV-Curve (STC)



Test condition: @STC 1000W/m<sup>2</sup>, AM1.5, 25°C, P<sub>mpp</sub>: ± 1.5% rel.  
Test Method according to: IEC6094-8 6094-3-ED/2008, 60904-1

IV-Curve (Temperature)



Test condition: @1000W/m<sup>2</sup>, AM1.5, -25 / 0 / 50 / 75°C  
P<sub>mpp</sub>: ± 1.5% rel.

### TPV230-MO Photovoltaic panel family

Module family		TPV 230-MO / XXX Wp				
Module Type		TPV 230-MO 240W	TPV 230-MO 245W	TPV 230-MO 250W	TPV 230-MO 255W	TPV 230-MO 260W
<b>Ellectrical parameter 1000W/m<sup>2</sup> (STC)</b>						
Maximum Power (P Max)	[W]	<b>240</b>	<b>245</b>	<b>250</b>	<b>255</b>	<b>260</b>
Maximum system Voltage (V)	[V]			1000		
Maximum Power Voltage (Vmp)	[V]	48,1	48,4	48,7	49,0	49,3
Maximum Power Current (Imp)	[A]	4,99	5,06	5,14	5,21	5,27
Open Circuit Voltage (Voc)	[V]	59,4	59,5	59,6	59,8	60,0
Short Circuit Current (Isc)	[A]	5,34	5,43	5,49	5,55	5,64
Module Efficiency	%	14,08%	14,38%	14,64%	14,96%	15,26%
NOCT	°C			47±2		
Short-circuit Current temperature coefficient	% / °C			0,0241		
Open-circuit Voltage temperature coefficient	% / °C			-0,2904		
Peak power temperature coefficient	% / °C			-0,4183		
Electrical protection				Class II		
Diodes				4 by-pass		
Junction box				1000V / IP65 TÜV		
IP safety				IP65		
Cable				4 mm <sup>2</sup> / 1000mm / 1000V TÜV		
Connector				Solar-3 or Solar-4		
<b>Cells</b>						
Cell technology				Monocrystalline silicon cells		
Quantity of cells	db			96 (8x12)		
Dimension of cells	[mm]			125 x 125		
Cells connection				copper conductor		
Cell efficiency	%	16,8-17	17-17,2	17,2-17,4	17,4-17,6	17,8-18
<b>Dimensions of module</b>						
Lenght	[mm]			1580		
Width	[mm]			1060		
Thickness	[mm]			40 / 45 / 50		
Thickness of glass	[mm]			High Transmiss, Low Iron, tempered glass 3,2mm		
Weight	[kg]			<22		
<b>Common data</b>						
Power tolerance	%			0 ... +3		
Operating temperature	°C			-40 ...+85		
Hail protection				227g steel ball fall down from 1m height and 60m/s wind		
Wind load	m/sec			60 (5400 Pascal)		
Performance warranty	% / year			Pm is not less than 90% in 10years and 80% in 25years		
Warranty	year			5		