

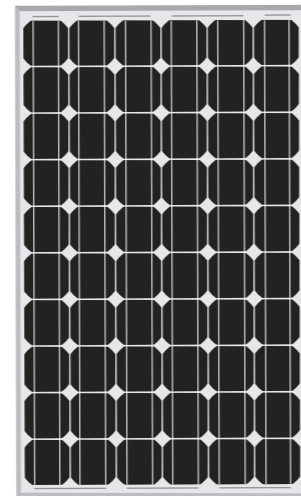
Photovoltaic Modules

Photovoltaic modules
60pcs 156×156mm mono-crystalline silicon cell

GPM230-B-60

The GPM230 series module consists of 60pcs156×156mm 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, characteristic operation of solar cells can be ensured under any climatic conditions.

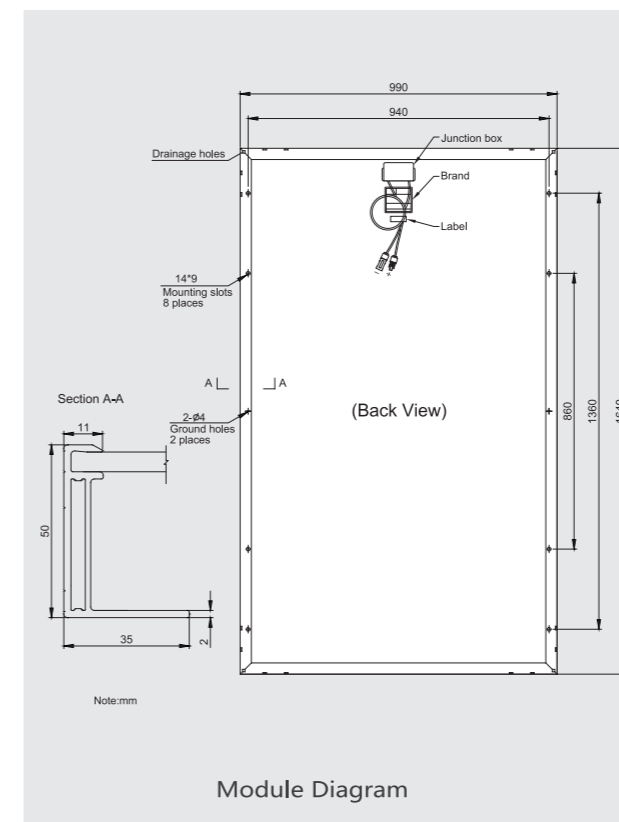
After assembled by anodized aluminum alloy frame and junction box with MC connectors, the GPPV solar modules are designed for long service life, easy to install, withstand the storm, high wind and hail impact etc.



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Specifications

Cell	Mono-crystalline silicon solar cells 156mm×156mm
No. of cells and connections	60(6×10)
Dimension of module	1640mm×990mm×50mm

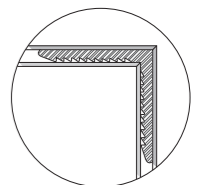
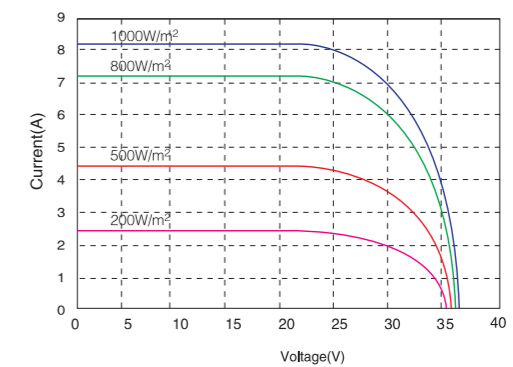
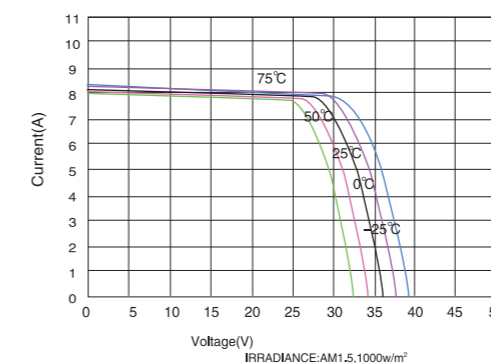
Temperature Coefficients

Nominal Operating Cell Temperature	45°C±2°C
Short-circuit current temperature coefficient	$\alpha(I_{sc})$ 0.09%/°C
Open-circuit voltage temperature coefficient	$\beta(V_{oc})$ -0.34%/°C
Peak power temperature coefficient	$\gamma(P_{max})$ -0.37%/°C

above data is only for reference

Output

Cable	4.0mm ² (TUV)
Lengths	1100mm
Connector	MC Type



Module		GPM230-B-60									
Encapsulation		Glass/EVA/Cells/ EVA/TPT									
Size and Number of cells		156mm×156mm 60/6×10pcs									
Maximum Power (Pmax)	W	210	215	220	225	230	235	240	245	250	
Power Tolerance		±3%									
Open Circuit Voltage (Voc)	V	36.0	36.5	36.5	36.5	37.0	37.0	37.0	37.2	37.2	
Short Circuit Current (Isc)	A	7.76	7.85	8.02	8.06	8.10	8.25	8.31	8.35	8.38	
Maximum Power Voltage (Vmp)	V	29.6	29.7	29.9	30.0	30.1	30.2	30.3	30.8	31.4	
Maximum Power Current (Imp)	A	7.10	7.24	7.35	7.50	7.65	7.78	7.92	7.95	7.96	
Max.syst. Oper. voltage	V	1000V									
Diodes		6 by-pass									
Dimension	mm	1640×990×50									
Weight	kg	21									
Operate Temp. scope	°C	-40/+85									
Relative humidity		0 to 100%									
Resistances		227g steel ball fall down from 1m height and 60m/s wind									
Warranty		Pm is not less than 90% in 10 years and 80% in 25 years									

Test condition: @STC 1000W/m², AM1.5, 25°C