

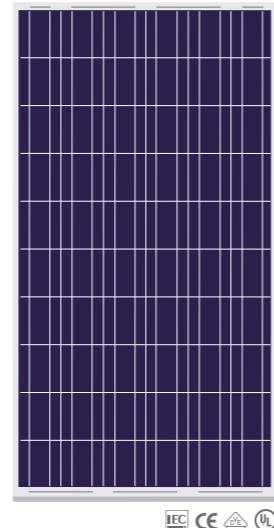
## Photovoltaic Modules

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

**GPM220P-B-60**

The GPM220P series module consists of 60pcs156×156mm poly-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.



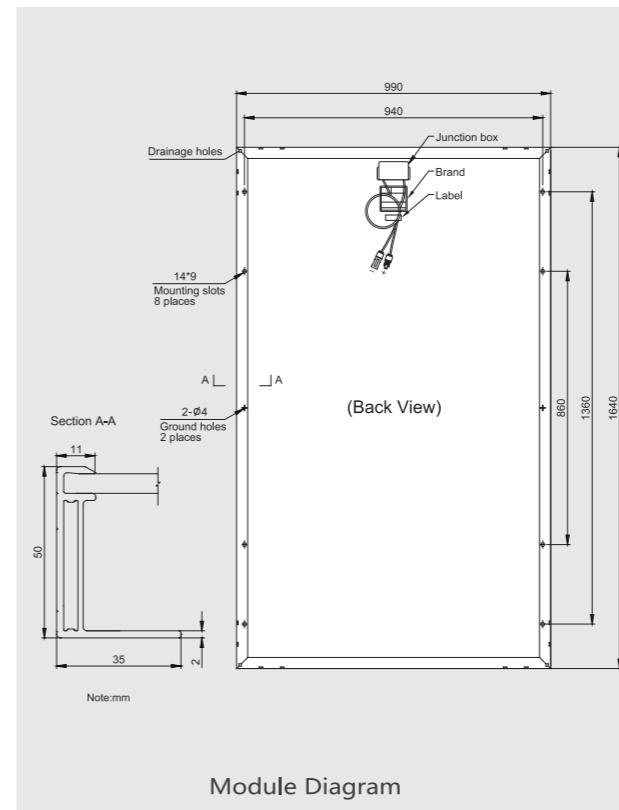
Module										GPM220P-B-60										
Encapsulation										Glass/EVA/Cells/ EVA/TPT										
Size and Number of cells										156mm×156mm 60/6×10pcs										
Maximum Power (Pmax)	W	200	205	210	215	220	225	230	235	240	± 3%									
Power Tolerance	V	36.5	36.5	36.5	36.5	37.0	37.0	37.0	37.0	37.2										
Open Circuit Voltage (Voc)	A	7.65	7.71	7.88	8.03	8.10	8.17	8.22	8.29	8.33										
Short Circuit Current (Isc)	V	28.6	28.8	29.0	29.3	29.5	29.6	29.8	30.0	30.2										
Maximum Power Voltage (Vm)	A	6.98	7.12	7.24	7.34	7.45	7.60	7.73	7.83	7.95										
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/m<sup>2</sup>, AM1.5, 25°C

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Module Diagram

### Specifications

Cell	Poly-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	46°C±2°C
Short-circuit current temperature coefficient	$\alpha(I_{sc})$ 0.08%/°C
Open-circuit voltage temperature coefficient	$\beta(V_{oc})$ -0.32%/°C
Peak power temperature coefficient	$\gamma(P_{max})$ -0.38%/°C

above data is only for reference

### Output

Cable	4.0mm <sup>2</sup> (TUV)
Lengths	1100mm
Connector	MC Type

