

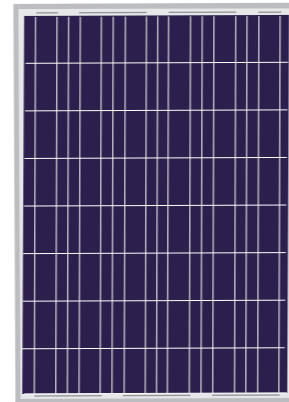
## Photovoltaic Modules

Photovoltaic modules  
48pcs 156×156mm poly-crystalline silicon cell

**GPM180P-B-48**

The GPM180P-B series module consists of 48pcs 156×156mm 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.

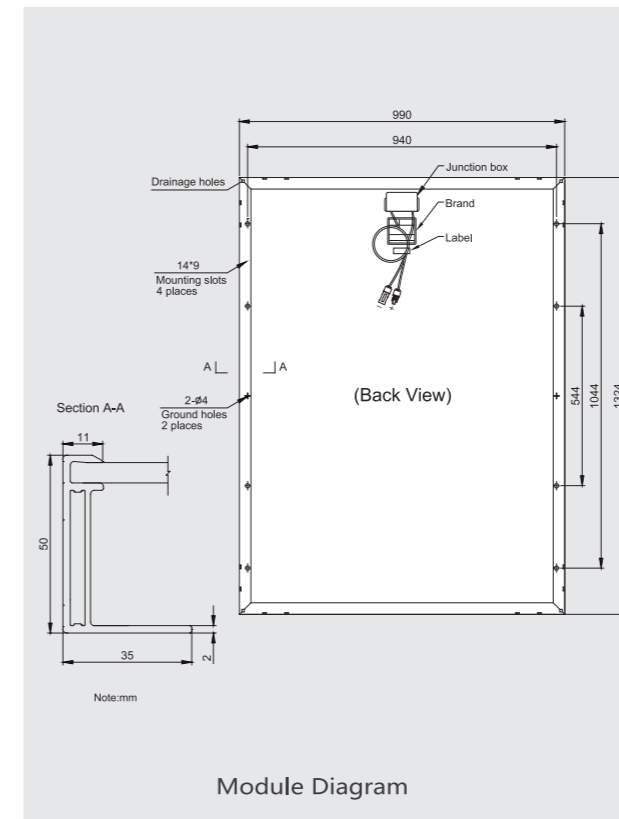
After assembled by anodized aluminum alloy frame and junction box with MC connectors, the GPPV solar modules are designed for long service life, easy to install, withstand the storm, high wind and hail impact etc.



## Photovoltaic Modules

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**GPM180P-B-48**



### Specifications

Cell	Poly-crystalline silicon solar cells 156mm×156mm
No. of cells and connections	48(6×8)
Dimension of module	1324mm×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

Module		GPM180P-B-48						
Encapsulation		Glass/EVA/Cells/ EVA/TPT						
Size and Number of cells		156mm×156mm 48/6×8pcs						
Maximum Power (Pmax)	W	<b>160</b>	<b>165</b>	<b>170</b>	<b>175</b>	<b>180</b>	<b>185</b>	<b>190</b>
Power Tolerance		± 3%						
Open Circuit Voltage (Voc)	V	29.3	29.3	29.6	29.6	29.6	29.7	29.7
Short Circuit Current (Isc)	A	7.85	7.95	8.11	8.21	8.33	8.33	8.34
Maximum Power Voltage (Vmp)	V	21.9	22.1	22.3	22.5	22.6	23.2	23.8
Maximum Power Current (Imp)	A	7.32	7.45	7.61	7.79	7.95	7.96	7.98
Max.syst. Oper. voltage	V	1000V						
Diodes		6 by-pass						
Dimension	mm	1324×990×50						
Weight	kg	16.5						
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

