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# Poly-crystalline Solar Panel 50W

## Technical parameter

Maximum Power(W)	50W
Optimum Power Voltage(Vmp)	18.43V
Optimum Operating Current(Imp)	2.71A
Open Circuit Voltage(Voc)	22.48V
Short Circuit Current(Isc)	2.98A

## Mechanical Characteristics

Cell Type Poly-crystalline	156 x 52mm
No of Cell	36 (4x9pcs)
Dimensions	678x542x25mm
Weight	4.2Kg
Front Glass	3.5mm,High Transmission, Low Iron, Tempered Glass
Junction box	IP65 Rated
Output Cable	TUV 1x4.0mm <sup>2</sup> /UL12AWG,Length:900mm

## Temperature and Coefficients

Operating Temperature(°C):	-40°C ~ + 85°C
Maximum System Voltage:	600V(UL)/1000V(IEC) DC
Maximum Rated Current Series:	15A
Temperature Coefficients of Pmax:	-0.47%

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Temperature Coefficients of Voc: -0.389%

Temperature Coefficients of Isc: 0.057%

Nominal Operating Cell Temperature (NOCT): 47+/-2°C

### **Materials of solar panel**

- 1).Solar Cell-----Poly-crystalline solar cell 156\*52mm
- 2).Front Glass-----3.2mm, high transmission, low iron, tempered glass
- 3).EVA-----excellent anti-aging EVA
- 4).TPT-----TPT hot seal made of flame resistance
- 5).Frame-----anodized aluminum profile
- 6).Junction Box-----IP65 rated, high quality, with diode protection

Superiority: high quality anodized aluminum frame, high efficiency long life, easy installation, strong wind resistance, strong hail resistance.

### **Features**

1. High cell efficiency with quality silicon materials for long term output stability
2. Strictly quality control ensure the stability and reliability, totally 23 QC procedures
3. High transmittance low iron tempered glass with enhanced stiffness and impact resistance
4. Both Poly-crystalline and Mono-crystalline
5. Excellent performance in harsh weather
6. Outstanding electrical performance under high temperature and low irradiance

### **Quality assurance testing**

Thermal cycling test

Thermal shock test

Thermal/Freezing and high humidity cycling test

Electrical isolation test

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Hail impact test

Mechanical, wind and twist loading test

Salt mist test

Light and water-exposure test

Moist carbon dioxide/sulphur dioxide

