



## Product Description

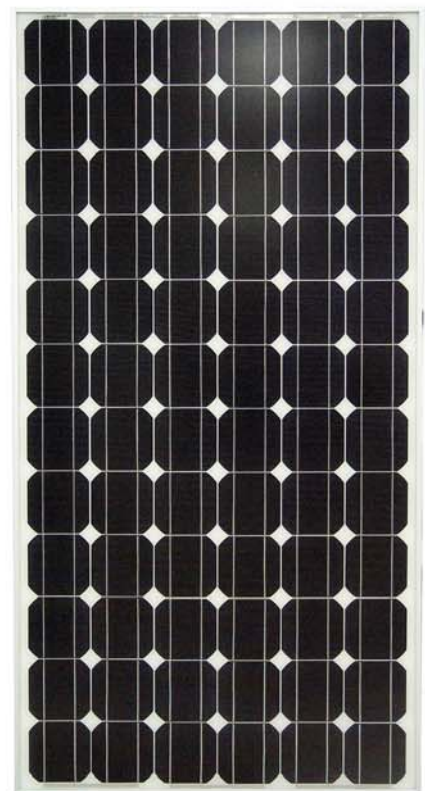
TSM-160M solar module is connected in series by 72 pieces of 125 mm × 125mm crystalline silicon cells. The product performance is produced according to IEC61215 Ed.2, IEC61730 international standard. TSM-160M solar modules include 165Wp, 170Wp, 175Wp, 180Wp etc specs. It can also be tailored to special requirements of customers.

## Features and Advantages

- High luminousness low iron hardened glass
- Anti-ageing EVA and excellent anti-climate back sheet
- Anodized excellent aluminum alloy frame
- High conversion efficiency, long life, convenient installation, wind protection, hail-stone protection
- Output power warranty for 25 years

## Applications

- Large on/off-grid solar power stations
- Commercial / industrial building roof-top systems
- Residential roof-top systems
- Rural electrification
- Other industrial and commercial applications

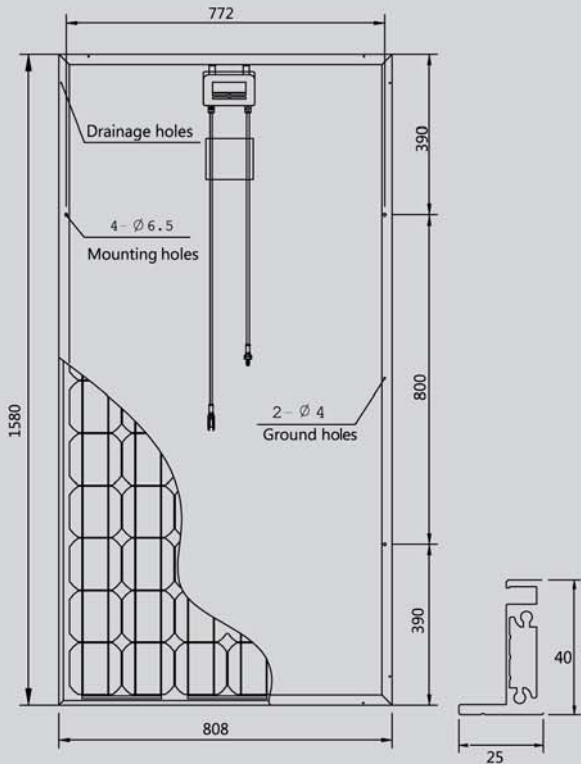


## Installation

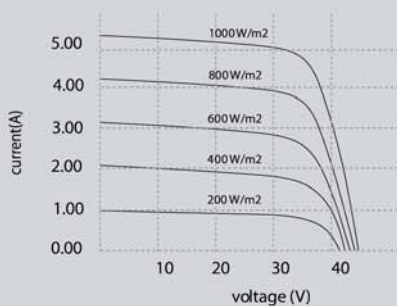
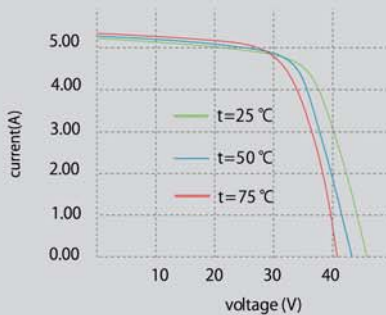
Install the PV modules facing South (in Northern Hemisphere), or North (in Southern Hemisphere).

PV modules connected in series should be installed at same orientation and angle. Different orientation or angle may cause loss of power output due to difference of amount of sunlight exposed to the modules.

## Dimensions



## I-V Curves



## Specification

Cell	Mono-crystalline 125mm × 125mm
No. of cells and connections	72 in series (6 × 12)
Weight	17KG
Dimensions	1580 × 808 × 40 (mm)
Carton	1645 × 878 × 105 (mm)/2pcs
Pallets	1670 × 930 × 2145 (mm)/38pcs
Produced in accordance with	IEC 61215 Ed.2 IEC 61730
ROHS	IECQ Certification

## Electrical Characteristics

Power	165Wp	170Wp	175Wp	180Wp
Open circuit voltage	43.7V	43.9V	44.0V	44.5V
Maximum power voltage	35.0V	35.5V	35.6V	36.0V
Short circuit current	5.14A	5.25A	5.40A	5.45A
Maximum power current	4.71A	4.79A	4.92A	5.00A
Encapsulated solar cell efficiency	15.5%	16.0%	16.5%	17.0%
Insulation	≥ 50MΩ			
Maximum system voltage	1000V			
voltage standoff	AC 2000 DC 3000V			
series fuse rating	10A			
Bypass diode	3 diodes (7.0A)			
Connector	MC4 // YS-188-9, YS-189-8			

STC: Irradiance 1000W/m<sup>2</sup>, module temperature 25 °C, AM = 1.5

## Physical Characteristics

Operating temperature	-40 °C to +90 °C
Storage temperature	-40 °C to +90 °C
Pressure Bearing	< 2400Pa
Wind Bearing	< 5400Pa
Hail Impact Test	25 mm diameter ice ball at 23.0 m/s-1, directed at 11 impact locations

## Temperature Coefficients

NOCT	45°C ± 2°C
Temperature coefficient of Isc	+0.05%/°C
Temperature coefficient of Voc	-0.34%/°C
Temperature coefficient of Pm	-0.5%/°C
Power output Tolerance	±3%

\* Specifications included in this datasheet are subject to change without prior notice  
\* Please visit "www.topsola.com" for newest information.