



50+25

History + Quality assurance

TIANWEI, a company with over 50 years' history, has well established a fully integrated PV industry chain (silicon-wafer-cell-module).

Utilizing first class equipments and high quality components with industry proven technology, plus our quality oriented philosophy, TIANWEI is committed to providing you:

- High performance modules with reliable quality
- Industry leading power output warranty:
 - ◆ Within the first one year, the output power shall not degrade more than 3%
 - ◆ Within the first two years, the output shall not degrade more than 4%
 - ◆ In the following 23 years, the average annual power degradation shall not exceed more than 0.6%

After 25 years, the product's output power shall not be less than 83.5% of the minimum output power as set forth in this specification.

Compared with the industry standard 10 years 90% and 25 years 80% power output guarantee, TIANWEI's semi-linear performance guarantee provides you with considerable added value.



TIANWEI

TWxxx(35)D-1 Series Monocrystalline Silicon PV Module

Electrical Characteristics

Type	TW155(35)D-1	TW160(35)D-1	TW165(35)D-1	TW170(35)D-1	TW175(35)D-1	TW180(35)D-1	TW185(35)D-1	TW190(35)D-1
Parameter	TW155(35)D	TW160(35)D	TW165(35)D	TW170(35)D	TW175(35)D	TW180(35)D	TW185(35)D	TW190(35)D
Maximum Power (Pmax)	155W	160W	165W	170W	175W	180W	185W	190W
Voltage at Pmax (Vmp)	34.5V	35.0V	35.0V	35.5V	35.5V	36.0V	36.7V	37.3V
Current at Pmax (Imp)	4.49A	4.57A	4.71A	4.79A	4.93A	5.00A	5.04A	5.10A
Short circuit current (Isc)	5.03A	5.12A	5.28A	5.36A	5.52A	5.60A	5.62A	5.62A
Open circuit voltage (Voc)	41.4V	42.0V	42.0V	42.6V	42.6V	43.2V	43.8V	44.4V
Module Efficiency	12.14%	12.53%	12.92%	13.31%	13.71%	14.10%	14.49%	14.88%
Maximum System Voltage (Usys)	DC1000V(TUV) DC600V(UL)							
Power Tolerance	±3%							
Series Fuse Rating (Ir)	15A							

All technical data at standard test condition: Am=1.5 E=1000w/m² Tc=25°C

Mechanical Characteristics

Dimensions	Length:1580mm Width:808mm Depth:40mm
Weight	15.5kg
Solar Cells	72 solar cells (125mm × 125mm) in a 6 × 12 matrix connected string
Junction Box	IP 65 Junction Box
Output Cables	4mm ² (12AWG) solar cable with weatherproof connectors
Front Cover	3.2mm(1/8 inch) low iron, high transparent tempered glass
Frame	Material:6063T5;Electrophoretic coating aluminum alloy frame; Color:silver

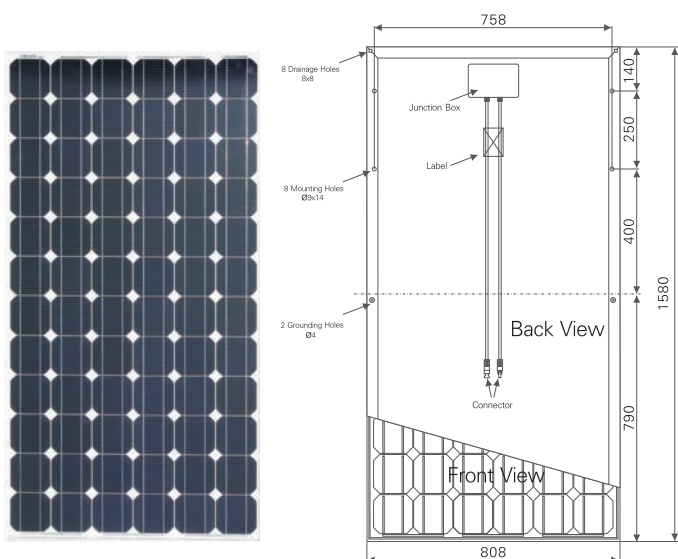
Temperature Coefficients

Nominal Operating Cell Temperature(NOCT)	47 ± 2°C
Temperature Coefficient of Pmax	-0.43%/°C
Temperature Coefficient of Voc	-0.34%/°C
Temperature Coefficient of Isc	0.05%/°C

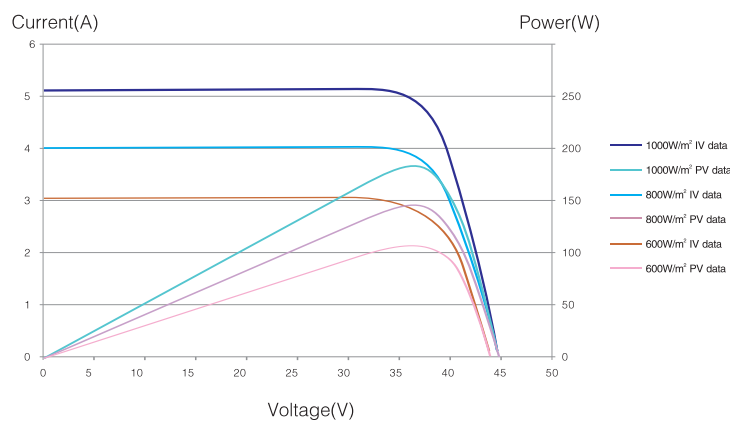
Qualification Test Parameters

Operating Temperature	-40°C to +85°C
Wind Load	≤2400 Pa
Snow Load	≤5400 Pa

Module Diagram



TW180(35)D Module IV Curves



• Typical IV Curve

Note: Technical data is subject to change without prior notice, please contact Tianwei New Energy representative for latest data.

TWxxx(35)D-2 Series Monocrystalline Silicon PV Module

Electrical Characteristics

Type	TW160(35)D-2	TW165(35)D-2	TW170(35)D-2	TW175(35)D-2	TW180(35)D-2	TW185(35)D-2	TW190(35)D-2	TW195(35)D-2	TW200(35)D-2
Maximum Power (Pmax)	160W	165W	170W	175W	180W	185W	190W	195W	200W
Voltage at Pmax (Vmp)	34.8V	34.9V	35.2V	35.5V	35.8V	36.2V	36.7V	37.1V	37.6V
Current at Pmax (Imp)	4.60A	4.73A	4.83A	4.93A	5.03A	5.12A	5.17A	5.26A	5.32A
Short circuit current (Isc)	4.92A	5.02A	5.12A	5.24A	5.32A	5.42A	5.54A	5.68A	5.78A
Open circuit voltage (Voc)	42.9V	43.3V	43.7V	43.9V	44.4V	44.8V	44.9V	45.0V	45.2V
Module Efficiency	12.53%	12.92%	13.32%	13.71%	14.10%	14.49%	14.88%	15.27%	15.67%
Maximum System Voltage (Usys)	DC1000V(TUV)								
Power Tolerance	±3%								
Series Fuse Rating (Ir)	15A								

All technical data at standard test condition: Am=1.5 E=1000w/m² Tc=25°C

Mechanical Characteristics

Dimensions	Length:1580mm Width:808mm Depth:40mm
Weight	15.5kg
Solar Cells	72 solar cells (125mm × 125mm) in a 6 × 12 matrix connected string
Junction Box	IP 65 Junction Box
Output Cables	4mm ² (12AWG) solar cable with weatherproof connectors
Front Cover	3.2mm(1/8 inch) low iron, high transparent tempered glass
Frame	Material:6063T5;Electrophoretic coating aluminum alloy frame; Color:silver

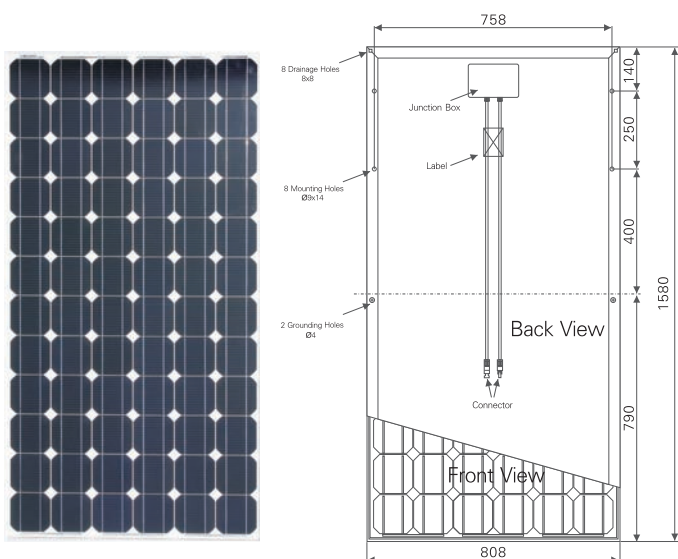
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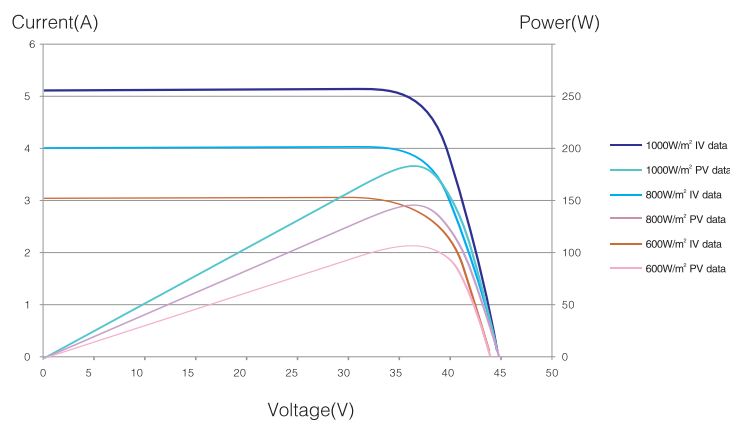
Qualification Test Parameters

Operating Temperature	-40°C to +85°C
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Snow Load	≤5400 Pa

Module Diagram



TW180(35)D Module IV Curves



• Typical IV Curve

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