TWxxx(35)D-1
Monocrystalline Silicon PV Module

Product Specification
(72 pcs Multi 125×125 mm Cells,With Tongling J-box1000 V System Voltage)

Typical Electrical Characteristics

Typical Type	Unit	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
Max-Power	P_m (W)	155	160	165	170	175	180	185	190
Power Tolerance	%	0 ~ +5w					0 ~ +5w		
Max-Power Voltage	V_m (V)	34.5	35.0	35.0	35.5	35.5	36.0	36.7	37.3
Max-Power Current	I_m (A)	4.49	4.57	4.71	4.79	4.93	5.00	5.04	5.10
Open-Circuit Voltage	V_{oc} (V)	41.4	42.0	42.0	42.6	42.6	43.2	43.8	44.4
Short-Circuit Current	I_{sc} (A)	5.03	5.12	5.28	5.36	5.52	5.60	5.62	5.62
Encapsulated Cell Efficiency	η_c (%)	14.00%	14.50%	15.00%	15.50%	15.75%	16.25%	16.75%	17.25%
Module Efficiency	η_m (%)	12.14%	12.53%	12.93%	13.32%	13.71%	14.10%	14.49%	14.88%
Test Condition		STC:AM=1.5, 1000W / m², Cells Temperature 25 ℃					STC:AM=1.5, 1000W / m², Cells Temperature 25 ℃		

CONSTRUCTION MATERIALS

Front cover (material/type/thickness)	Low iron tempered glass 3.2 mm
Cell (quantity/material/type/dimensions)	72 (6×12) / Monocrystalline / 125 mm×125 mm
Encapsulant (material)	EVA
Frame (material/color/anodization color)	Anodized aluminum alloy / sliver / clear
Junction box (protection degree)	Ip65 & IP67
Cable (length/cross-section area)	1100 mm / 4 mm²

MECHANICAL CHARACTERISTICS

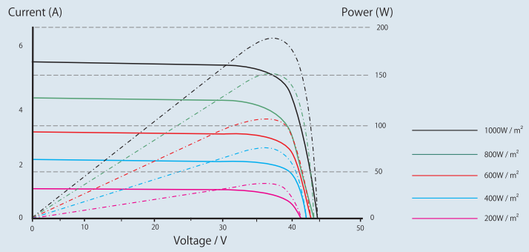
Dimension (L×W×H)	1580 mm×808 mm×40 mm
Standard Installation Hole Dimension	800 mm×758 mm
Weight	15.5 kg
Packing Configuration	23 pcs / carton
Quantity/Pallet	1 carton/pallet
Loading Capacity	644 pcs / 40 ft or 322 pcs / 20 ft

OPERATING CONDITIONS

Max. system voltage	Dc1000 V (TUV)
Max. series fuse rating	15 A
Limiting reverse current	Do not apply external voltages large than Voc of the module
Operating temperature range	-40 ℃~+85 ℃
Max. static load, front (snow & wind)	5400 Pa
Max. static load, back (wind)	2400 Pa
Max. hailstone impact (diameter/velocity)	25 mm / 23 m / s

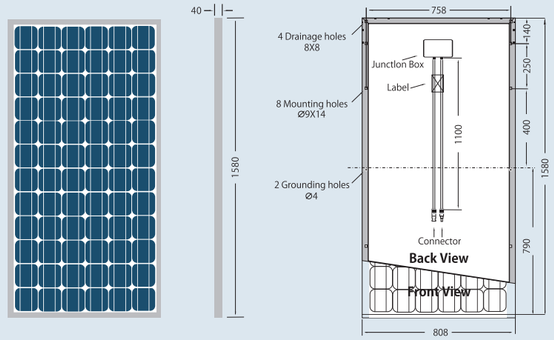
CERTIFICATIONS

TW190(35)D-1Module IV Curves



THERMAL CHARACTERISTICS

Nominal operating temperature	47±2 ℃
Temperature coefficient of Pmax	-0.43% / ℃
Temperature coefficient of Voc	-0.34% / ℃
Temperature coefficient of Isc	0.05% / ℃



WARRANTY

Manufacturing: 10 years

Power Output:

- 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%

50+25
History + Quality assurance