

Specification of THxxxPM5-78SA Monocrystalline PERC solar module

KEY features



Technology

Innovative structure; Low temperature adhesive; High density setting



Beautiful appearance

Module's layout is homogeneous and consistent; With more aesthetic feeling of science and technology



Safety and reliability

No micro-crack caused by welding; Lower operating temperature; High pressure resistance



Lower system cost

High screen-to-body ratio which reduce system cost



Low hot spot effect

Prolong module lifetime; Reduce electricity loss during generating



Lower occlusion loss

Parallel layout brings high effective generation hours



Green and environmental friendly

Insist environmental friendly faith; Fluorine-free and low Pb in module



material process warranty



linear power output warranty

Complete system and product certifications

IEC 61215/61730, IEC62804(PID), IEC61701(Salt), IEC62716(Ammonia)

ISO 9001:2015 / Quality management System

ISO 14001:2015 / Environmental management System

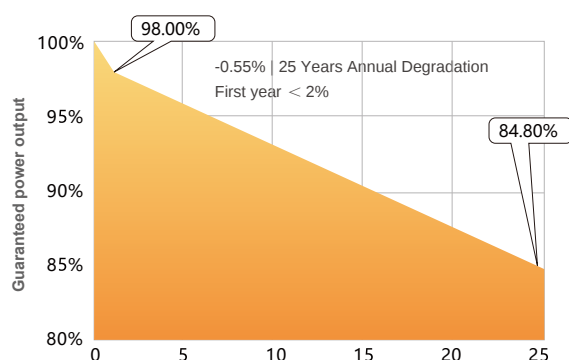
ISO 45001:2018 / Occupational health and safety Management System

ISO 50001:2011 / Energy management Systems

IEC TS 62941-2016 / Photovoltaic industry Quality management System



Warranty



Electrical Characteristics at Standard Test Conditions(STC)

Module Type:TH *** PM5-78SA	475	470	465	460	455	450
Maximum Power-Pm [W]	475	470	465	460	455	450
Open Circuit Voltage-Voc [V]	49.5	49.4	49.4	49.2	49.0	48.8
Short Circuit Current-Isc [A]	12.12	12.07	12.03	11.99	11.95	11.90
Maximum Power Voltage-Vm [V]	41	40.9	40.9	40.7	40.5	40.3
Maximum Power Current-Im [A]	11.59	11.49	11.37	11.30	11.23	11.17
Module Efficiency-η [%]	21.2	20.9	20.7	20.5	20.3	20.0

Electrical Characteristics at NMOT

Maximum Power-Pm [W]	358	354	350	346	343	339
Open Circuit Voltage-Voc [V]	47.2	47.1	47.1	46.9	46.7	46.5
Short Circuit Current-Isc [A]	9.76	9.72	9.69	9.66	9.63	9.59
Maximum Power Voltage-Vm [V]	39.1	39.0	39.0	38.8	38.6	38.4
Maximum Power Current-Im [A]	9.15	9.08	8.98	8.93	8.87	8.82

Note: 1. Standard Test Conditions [STC]: irradiance 1000 W/m²; AM 1.5; ambient temperature 25 °C according to EN 60904-3;
 2. Nominal Module Operating Temperature (NMOT): Irradiance 800W/ m²; wind speed 1m/s; ambient temperature 20 °C.
 3. Tolerance of Pm: 0~+5W, Measuring uncertainty of power: ±3%. Performance deviation of Voc [V], Isc [A], Vm [V] and Im [A]: ±3%.

Temperature Characteristics

NMOT	42.3 °C (±2 °C)
Temperature Coefficient of Voc	-0.27%/°C
Temperature Coefficient of Isc	0.04%/°C
Temperature Coefficient of Pm	-0.34%/°C

Maximum Ratings

Maximum System Voltage [V]	DC 1500/1000(IEC)
Series Fuse Rating [A]	20
Maximum Surface Load Capacity [Pa]	5,400
Temperature Range [°C]	-40~+85

Withstanding Hail Maximum diameter of 25 mm
with impact speed of 23 m • s⁻¹

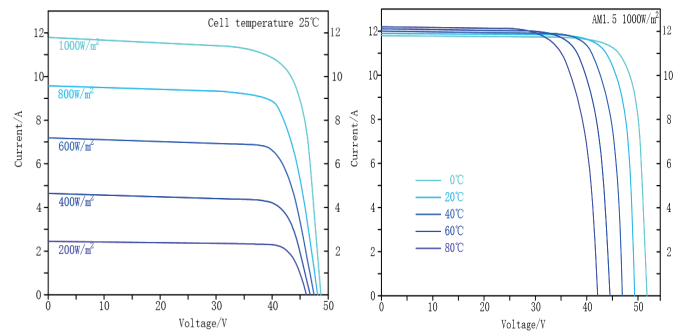
Package

container	40' GP
Number of pallets per container	31
Number of modules per container	682

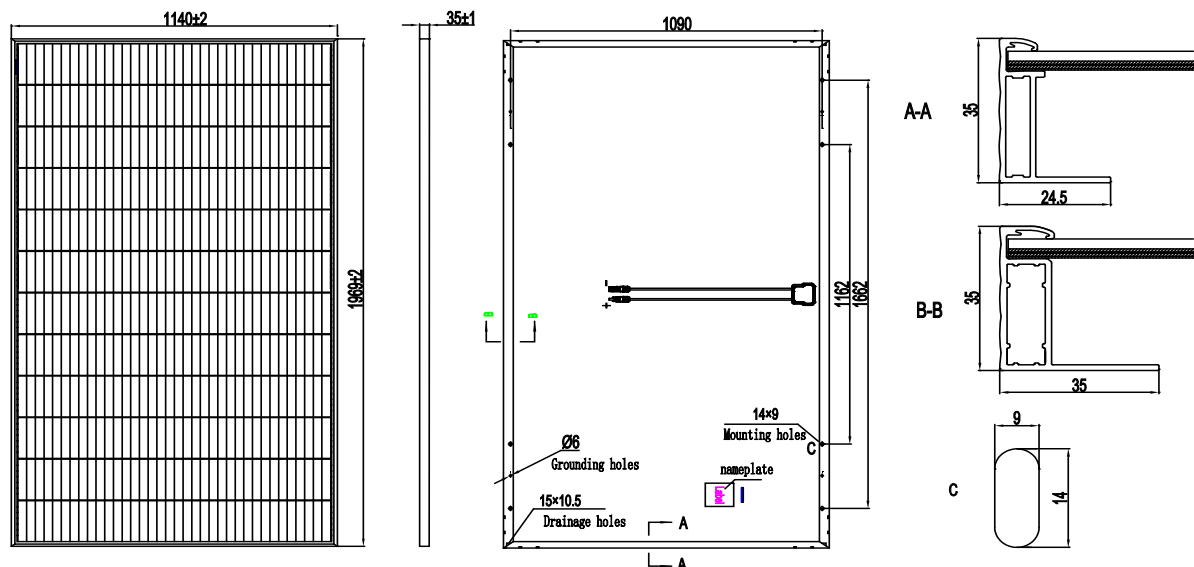
Mechanical Characteristics

Dimensions	1969×1140×35mm
Weight	24.5kg
Front Glass	AR coating tempered glass, 3.2mm
Frame	Anodized aluminum profile
Cells	Mono-crystalline solar cell
Cell Orientation	432 (36*12)
Junction Box	IP68, two diodes
Cable	4mm ² , 800mm (Be customized by customers)

I-V curve



Drawing



Declaration:

With the technical progress and product updates, there exists a deviation between the technical parameter of the TW Solar's future products and the technical parameter in this specification. The TW Solar reserves the right to adjust the technical parameter at any time without notifying the customers. TW Solar reserves the final right of interpretation.