TW SOLAR



TWMND

N-type Half-cell Monofacial Module (60)

60HS470-490W

Residential Rooftop

12 YEAR Materials Warranty

30 YEAR Power Warranty

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Learn More

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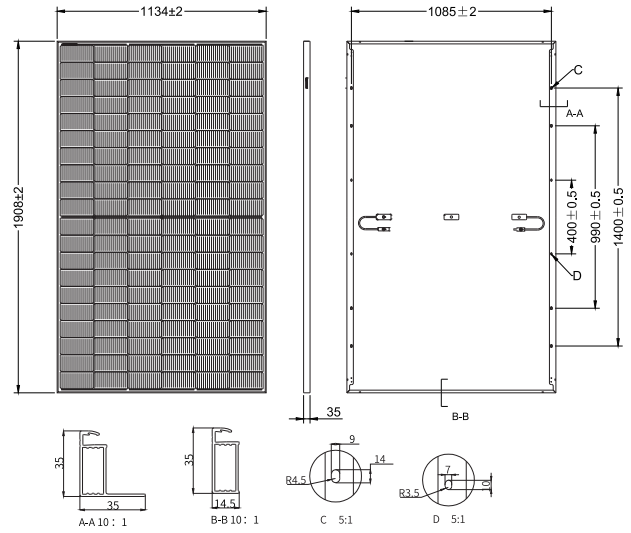
DRAWINGS (Unit: mm)



ELECTRICAL CHARACTERISTICS (STC)

Module Type: TWMND-60HSXXX					
Maximum Power: Pmax [W]	470	475	480	485	490
Open Circuit Voltage: Voc [V]	43.34	43.51	43.68	43.85	44.02
Short Circuit Current: Isc [A]	13.55	13.60	13.65	13.70	13.75
Voltage at Maximum Power: Vmp [V]	36.79	36.96	37.13	37.30	37.47
Current at Maximum Power: Imp [A]	12.78	12.85	12.93	13.00	13.07
Module Efficiency: η [%]	21.7	22.0	22.2	22.4	22.6

ELECTRICAL CHARACTERISTICS (NMOT)

Maximum Power: Pmax [W]	355.7	359.5	363.3	367.0	370.8
Open Circuit Voltage: Voc [V]	41.22	41.38	41.54	41.71	41.87
Short Circuit Current: Isc [A]	10.67	10.71	10.74	10.78	10.82
Voltage at Maximum Power: Vmp [V]	35.41	35.58	35.74	35.90	36.07
Current at Maximum Power: Imp [A]	10.03	10.09	10.15	10.20	10.26

* STC: Irradiance 1000W/m², Cell Temperature 25℃, Air Mass1.5, Measuring Tolerance: ±3%
* NMOT: Irradiance 800W/m², Ambient Temperature 20℃, Air Mass1.5, Wind Speed 1m/s

TEMPERATURE PARAMETERS

Temperature Coefficient (Pmax)	-0.30%/℃
Temperature Coefficient (Voc)	-0.25%/℃
Temperature Coefficient (Isc)	+0.046%/℃
NMOT	45±2℃

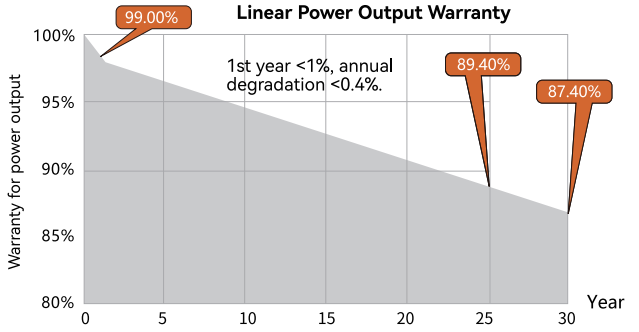
MAXIMUM RATINGS

Operational Temperature	-40℃~+85℃
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	25A
Power Output Tolerance	0~+5W

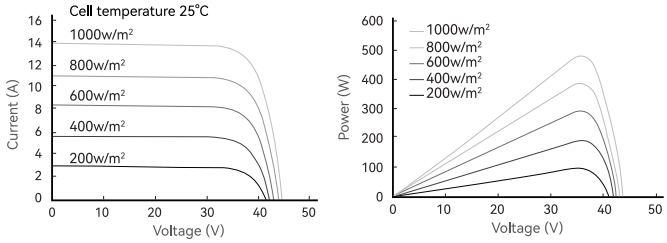
MECHANICAL PARAMETERS

Cells	TNC (N Type Monocrystalline Cell)
Cell Orientation	120[6X20]
Dimension	1908±2X1134±2X35mm
Weight	24.2kg
Front Glass	3.2mm high transmittance, AR coated tempered glass
Backsheet	White
Frame	Anodized aluminum alloy frame
Junction Box	IP68, 3 diodes
Output Cable	4.0mm²
Cable Length	±1200mm, length can be customized
Wind/Snow Load	2400Pa/5400Pa
Packaging	31pcs per pallet, 744pcs per 40'HC

WARRANTY



I-V CURVE



CERTIFICATIONS

Quality Management System and Product Certification

ISO 9001:2015 / quality management system
ISO 14001:2015 / environmental management system
ISO 45001:2018 / occupation health safety management system
ISO 50001:2011 / energy management system
IEC TS 62941—2016 / PV industry quality management system
IEC 61215/61730、IEC 62804(PID)、IEC 61701(Salt)、
IEC 62716 (Ammonia)、IEC 60068-2-68(Sand)

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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. (20231101)