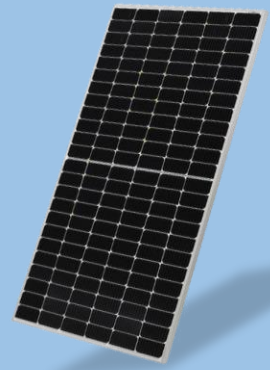




AF-7M144-HC

535~550 Watt



MONO PERC HALF-CELL & HALF-CUT MODULE

sustainability the smart way

KEY FEATURES



Multi-Busbar Solar Cell

Multi-Busbar (MBB) solar cell adopts new technology to improve the efficiency of modules, offers a better aesthetic appearance, making it perfect for rooftop installation.



High Efficiency

High module conversion efficiency up to 21.28% by using innovative half-cell design and MBB cell technology.



PID Resistance

Potential induced degradation (PID) resistance.



Low-Light Performance

Low temperature coefficient and excellent performance under high temperature and low light conditions.



Severe Weather Resilience

Robust aluminum frame ensures the modules to withstand wind loads up to 2400Pa and snow loads up to 5400Pa.



Durability Against Extreme Environmental Conditions

High reliability against extreme environmental conditions (passing salt mist, ammonia and hail tests).

CERTIFICATIONS

- IEC 61215, IEC 61730, CE
- ISO 9001:2015: Quality management system
- ISO 14001:2015: Environmental management system
- ISO 45001:2018: Occupational health and safety management system



LINEAR PERFORMANCE WARRANTY

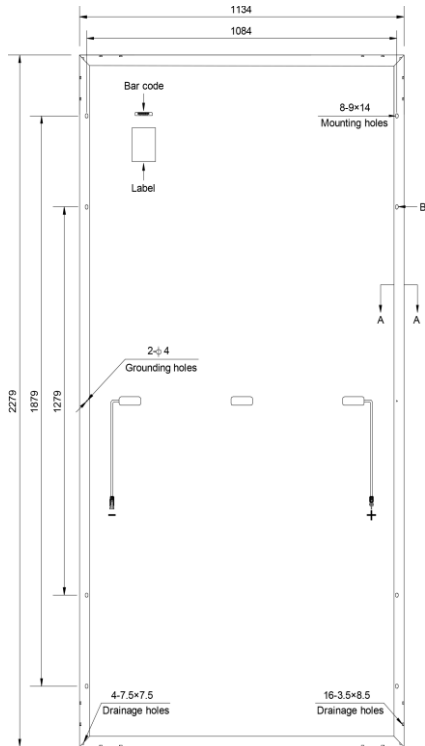
- 20 Year Product Warranty
- 30 Year Linear Power Warranty



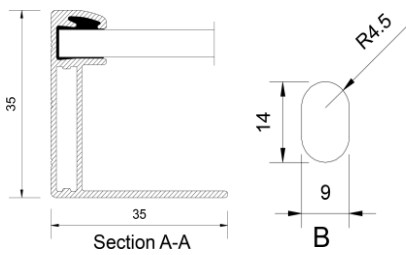
TECHNICAL DATA

AF-7M144-HC 535~550W

DIMENSIONS OF PV MODULE (mm)



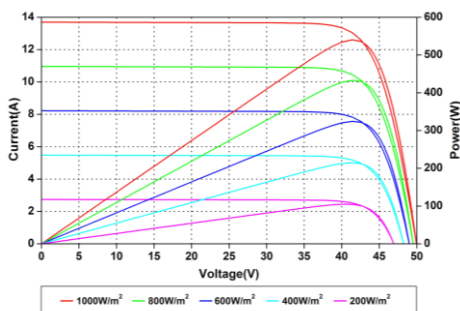
Rear View



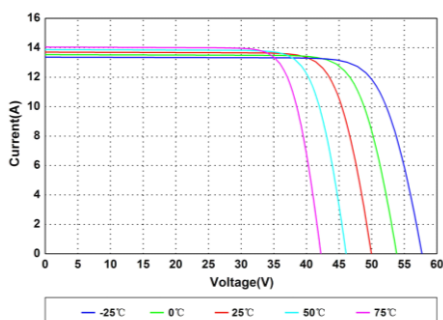
Section A-A

B

I-V CURVES OF PV MODULE



P-V CURVES OF PV MODULE



ELECTRICAL DATA (STC)

Peak Power Watts- P_{MAX} (Wp)*	535W	540W	545W	550W
Maximum Power Voltage- V_{MPP} (V)	41.2V	41.4V	41.6V	41.8V
Maximum Power Current- I_{MPP} (A)	12.99A	13.05A	13.11A	13.16A
Open Circuit Voltage- V_{OC} (V)	49.4V	49.6V	49.8V	50.0V
Short Circuit Current- I_{SC} (A)	13.82A	13.86A	13.90A	13.94A
Module Efficiency (%)	20.70	20.89	21.09	21.28

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5;

*Measuring tolerance: ±3%.

ELECTRICAL DATA (NMOT)

Maximum Power- P_{MAX} (Wp)	399W	403W	407W	411W
Maximum Power Voltage- V_{MPP} (V)	37.5V	37.7V	37.9V	38.1V
Maximum Power Current- I_{MPP} (A)	10.64A	10.69A	10.74A	10.79A
Open Circuit Voltage- V_{OC} (V)	45.5V	45.7V	45.9V	46.1V
Short Circuit Current- I_{SC} (A)	11.19A	11.22A	11.25A	11.28A

NMOT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1 m/s.

MECHANICAL DATA

Solar Cells	Monocrystalline PERC 182×91 mm
Number of Cells	144 (6×24)
Module Dimensions	2279×1134×35 mm (89.72×44.65×1.38 inches)
Weight	29 kg (63.9 lbs)
Glass	3.2 mm (0.13 inches) tempered glass with AR coating
Frame	Anodized Aluminum Alloy
Junction box	IP 68 rated, 3 diodes
Cables	4 mm ² (0.006 inches ²), Portrait: 300 mm (11.81 inches); Landscape: 1300 mm (51.18 inches)
Connector	MC4 or MC4 compatible

TEMPERATURE RATINGS

NMOT (Nominal Module Operating Temperature)	43°C±2°C
Temperature Coefficient of P_{MAX}	-0.36%/°C
Temperature Coefficient of V_{OC}	-0.28%/°C
Temperature Coefficient of I_{SC}	0.05%/°C

MAXIMUM RATINGS

Operational Temperature	-40°C to +85°C
Maximum System Voltage	1000V DC/1500V DC
Max Series Fuse Rating	25A
Fire Resistance Rating	Type 1 (in accordance with UL1703)/Class C (IEC61730)

PACKAGING CONFIGURATION

Standard packaging	31 pcs/pallet
Module quantity per 20 container	155 pcs
Module quantity per 40 container	620 pcs (HQ)

WARRANTY

First year degradation of less than 2.5%
Gradual annual power decline of 0.89% to 0.58% from year 2 to 30
No less than 80.6% actual power output

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.