

# AS-7M144-HC 525W~550W

## MONOCRYSTALLINE MODULE

### ADVANCED PERFORMANCE & PROVEN ADVANTAGES

- High module conversion efficiency up to 21.28% by using innovative Half-cell design and Multi-busbar(MBB) cell technology.
- Low temperature coefficient and excellent performance under high temperature and low light conditions.
- Robust aluminum frame ensures the modules to withstand wind loads up to 2400Pa and snow loads up to 5400Pa.
- High reliability against extreme environmental conditions (passing salt mist, ammonia and hail tests).
- Potential induced degradation (PID) resistance.

### CERTIFICATIONS

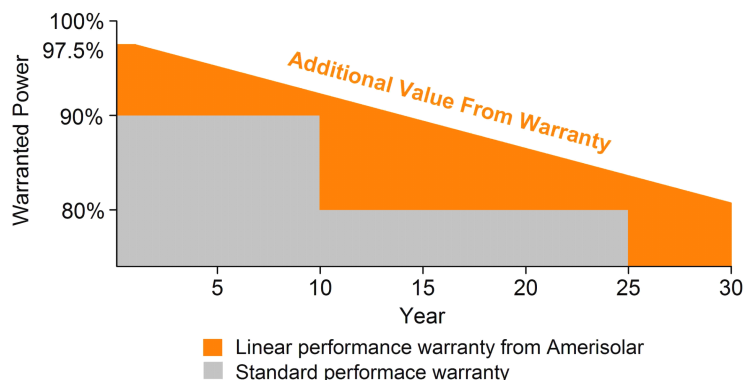
- IEC 61215, IEC 61730, CE
- ISO 9001:2015: Quality management system
- ISO 14001:2015: Environmental management system
- ISO 45001:2018: Occupational health and safety management system



### SPECIAL WARRANTY

- 20 years product warranty
- 30 years linear power output warranty

**Passionately  
committed to  
delivering innovative  
energy solution**



## ELECTRICAL CHARACTERISTICS AT STC

Maximum Power ( $P_{max}$ )	525W	530W	535W	540W	545W	550W
Open Circuit Voltage ( $V_{OC}$ )	49.0V	49.2V	49.4V	49.6V	49.8V	50.0V
Short Circuit Current ( $I_{SC}$ )	13.74A	13.78A	13.82A	13.86A	13.90A	13.94A
Voltage at Maximum Power ( $V_{mp}$ )	40.8V	41.0V	41.2V	41.4V	41.6V	41.8V
Current at Maximum Power ( $I_{mp}$ )	12.88A	12.93A	12.99A	13.05A	13.11A	13.16A
Module Efficiency (%)	20.31	20.51	20.70	20.89	21.09	21.28
Operating Temperature	-40°C to +85°C					
Maximum System Voltage	1000V DC/1500V DC					
Fire Resistance Rating	Type 1(in accordance with UL1703)/Class C(IEC61730)					
Maximum Series Fuse Rating	25A					

STC: Irradiance 1000W/m<sup>2</sup>, Cell temperature 25°C, AM1.5; Tolerance of P<sub>max</sub>: ±3%; Measurement Tolerance: ±3%

## ELECTRICAL CHARACTERISTICS AT NOCT

Maximum Power ( $P_{max}$ )	391W	395W	399W	403W	407W	411W
Open Circuit Voltage ( $V_{OC}$ )	45.1V	45.3V	45.5V	45.7V	45.9V	46.1V
Short Circuit Current ( $I_{SC}$ )	11.13A	11.16A	11.19A	11.22A	11.25A	11.28A
Voltage at Maximum Power ( $V_{mp}$ )	37.1V	37.3V	37.5V	37.7V	37.9V	38.1V
Current at Maximum Power ( $I_{mp}$ )	10.54A	10.59A	10.64A	10.69A	10.74A	10.79A

NOCT: Irradiance 800W/m<sup>2</sup>, Ambient temperature 20°C, Wind Speed 1 m/s

## MECHANICAL CHARACTERISTICS

Cell type	Monocrystalline PERC 182*91mm
Number of cells	144 (6x24)
Module dimensions	2279x1134x35mm (89.72x44.65x1.38inches)
Weight	29kg (63.9lbs)
Front cover	3.2mm (0.13inches) tempered glass with AR coating
Frame	Anodized aluminum alloy
Junction box	IP68, 3 diodes
Cable	4mm <sup>2</sup> (0.006inches <sup>2</sup> ), Portrait: 300mm (11.81inches); Landscape: 1300mm (51.18inches)
Connector	MC4 or MC4 compatible

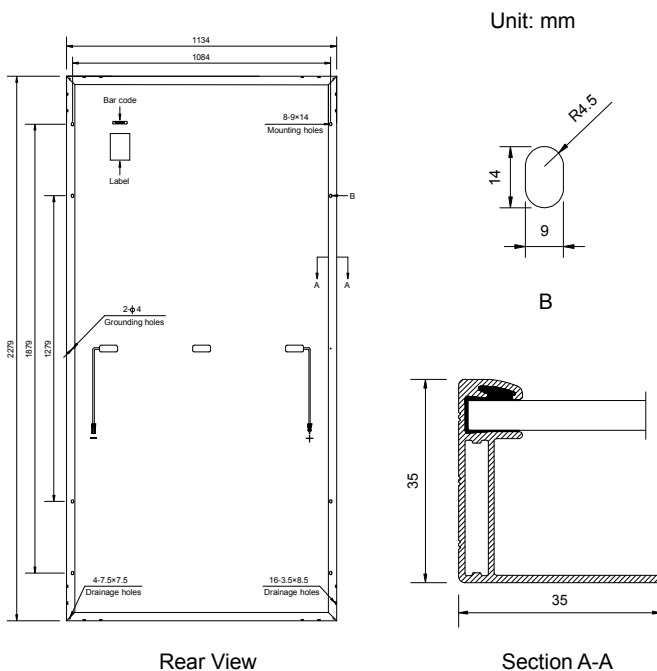
## TEMPERATURE CHARACTERISTICS

Nominal Operating Cell Temperature (NOCT)	43°C±2°C
Temperature Coefficients of $P_{max}$	-0.36%/°C
Temperature Coefficients of $V_{OC}$	-0.28%/°C
Temperature Coefficients of $I_{SC}$	0.05%/°C

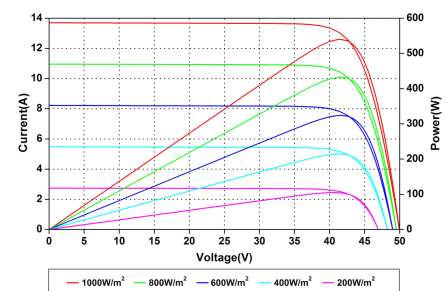
## PACKAGING

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

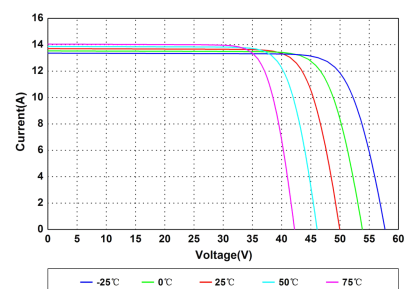
## ENGINEERING DRAWINGS



## IV CURVES



Current-Voltage and Power-Voltage Curves at Different Irradiances



Current-Voltage Curves at Different Temperatures

Specifications in this datasheet are subject to change without prior notice.