

# AS-6M144-HC BLACK 430W~450W MONOCRYSTALLINE MODULE

## ADVANCED PERFORMANCE & PROVEN ADVANTAGES

- High module conversion efficiency up to 20.37% 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.
- Positive power tolerance of 0 ~ +3 %.
- Aesthetically appealing design with black backsheet and frame.

## CERTIFICATIONS

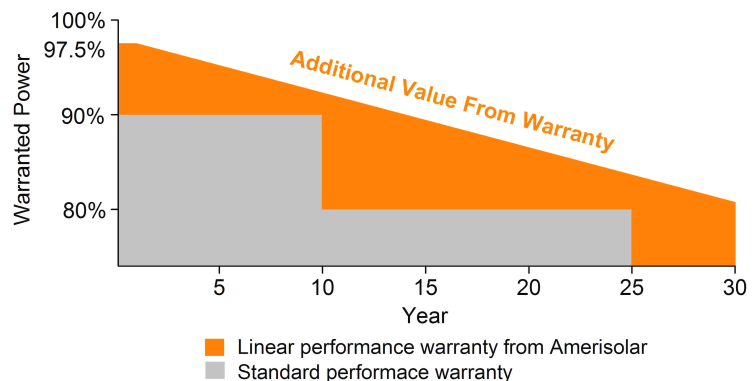


- IEC 61215, IEC 61730, UL 1703, IEC 62716, IEC 61701, IEC TS 62804, CE, CQC
- ISO 9001:2015: Quality management system
- ISO 14001:2015: Environmental management system
- ISO 45001:2018: Occupational health and safety management system

## 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 ( $P_{max}$ )	430W	435W	440W	445W	450W
Open Circuit Voltage ( $V_{OC}$ )	48.4V	49.6V	49.8V	50.0V	50.2V
Short Circuit Current ( $I_{SC}$ )	11.04A	11.10A	11.16A	11.22A	11.28A
Voltage at Maximum Power ( $V_{mp}$ )	41.0V	41.2V	41.4V	41.6V	41.8V
Current at Maximum Power ( $I_{mp}$ )	10.49A	10.56A	10.63A	10.70A	10.77A
Module Efficiency (%)	19.46	19.69	19.92	20.14	20.37
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	20A				

STC: Irradiance 1000W/m<sup>2</sup>, Cell temperature 25°C, AM1.5

## ELECTRICAL CHARACTERISTICS AT NOCT

Maximum Power ( $P_{max}$ )	319W	323W	327W	331W	335W
Open Circuit Voltage ( $V_{OC}$ )	45.4V	45.6V	45.8V	46.0V	46.2V
Short Circuit Current ( $I_{SC}$ )	8.94A	8.99A	9.04A	9.09A	9.14A
Voltage at Maximum Power ( $V_{mp}$ )	37.2V	37.4V	37.6V	37.8V	38.0V
Current at Maximum Power ( $I_{mp}$ )	8.58A	8.64A	8.70A	8.76A	8.82A

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

## MECHANICAL CHARACTERISTICS

Cell type	Monocrystalline PERC 166*83mm
Number of cells	144 (6x24)
Module dimensions	2108x1048x40mm (82.99x41.26x1.57inches)
Weight	24kg (52.9lbs)
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: 1400mm (55.12inches)
Connector	MC4 or MC4 compatible

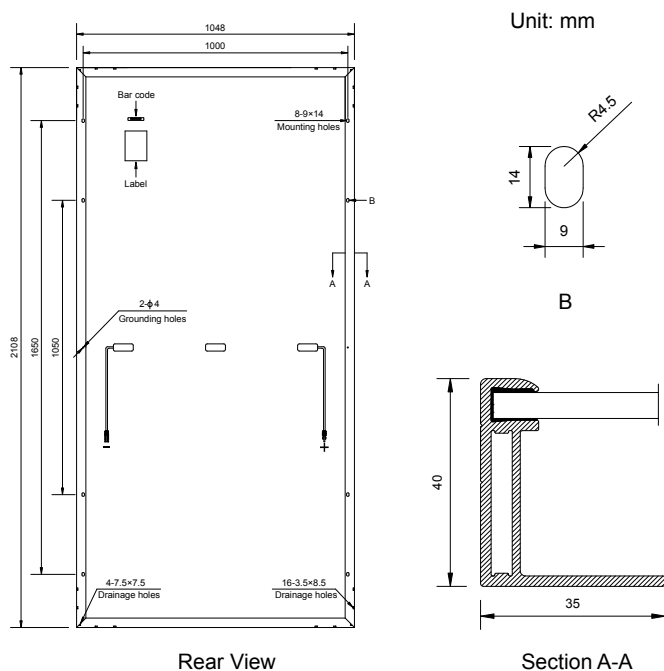
## TEMPERATURE CHARACTERISTICS

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

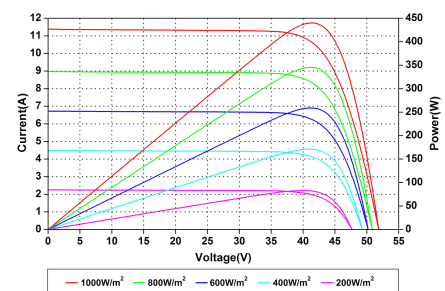
## PACKAGING

Standard packaging	27pcs/pallet
Module quantity per 20' container	135pcs
Module quantity per 40' container	594pcs

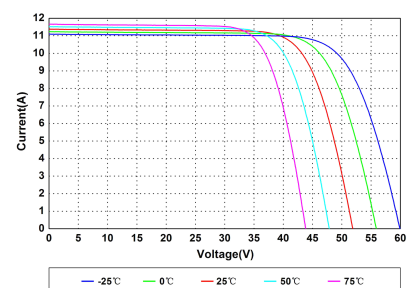
## ENGINEERING DRAWINGS



## 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.