

# AS-7M108-HC Black 420W~440W MONOCRYSTALLINE MODULE

## ADVANCED PERFORMANCE & PROVEN ADVANTAGES

- High module conversion efficiency up to 22.53% by using innovative N-type TOPCon cell technology.
- Extremely low LID (light induced degradation) and low annual power degradation ensure higher energy yield during the module's lifetime.
- 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.
- Aesthetically appealing design with black backsheet and frame.

## CERTIFICATIONS

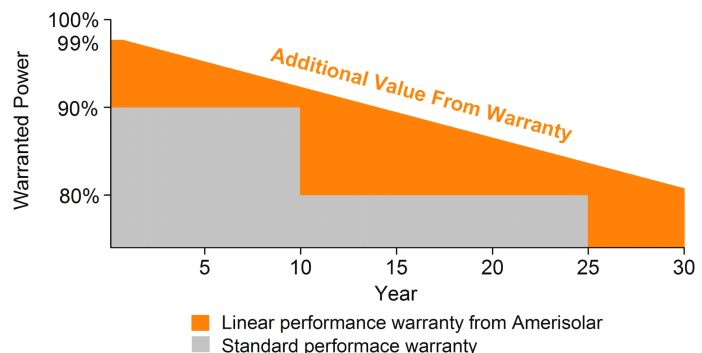


- IEC 61215, IEC 61730, CE
- ISO 9001:2015: Quality management system
- ISO 14001:2015: Environmental management system
- ISO 45001:2018: Occupational health and safety management system

## 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 ( $P_{max}$ )	420W	425W	430W	435W	440W
Open Circuit Voltage ( $V_{OC}$ )	38.0V	38.2V	38.4V	38.6V	38.8V
Short Circuit Current ( $I_{SC}$ )	13.94A	14.00A	14.06A	14.12A	14.18A
Voltage at Maximum Power ( $V_{mp}$ )	31.8V	32.0V	32.2V	32.4V	32.6V
Current at Maximum Power ( $I_{mp}$ )	13.21A	13.29A	13.36A	13.43A	13.50A
Module Efficiency (%)	21.51	21.76	22.02	22.28	22.53
Operating Temperature	-40°C to +85°C				
Maximum System Voltage	1000V DC/1500V DC				
Fire Resistance Rating	Class C				
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 ( $P_{max}$ )	316W	320W	324W	328W	331W
Open Circuit Voltage ( $V_{OC}$ )	36.1V	36.3V	36.5V	36.7V	36.9V
Short Circuit Current ( $I_{SC}$ )	11.29A	11.34A	11.39A	11.44A	11.49A
Voltage at Maximum Power ( $V_{mp}$ )	29.9V	30.1V	30.3V	30.5V	30.7V
Current at Maximum Power ( $I_{mp}$ )	10.57A	10.64A	10.70A	10.75A	10.81A

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

## MECHANICAL CHARACTERISTICS

Cell type	Monocrystalline N-type 182*91mm
Number of cells	108 (6x18)
Module dimensions	1722x1134x30mm (67.80x44.65x1.18inches)
Weight	20.5kg (45.2lbs)
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: 1200mm (47.24inches)
Connector	MC4 or MC4 compatible

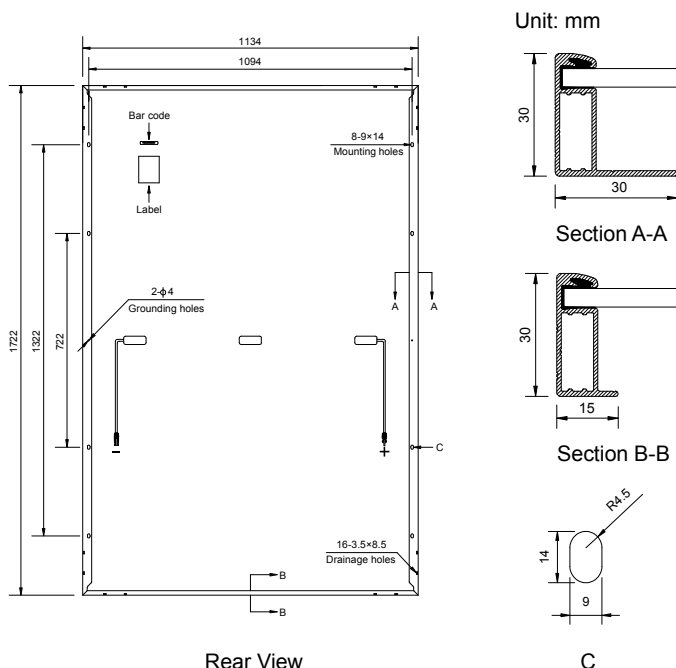
## TEMPERATURE CHARACTERISTICS

Nominal Operating Cell Temperature (NOCT)	43°C±2°C
Temperature Coefficients of $P_{max}$	-0.30%/°C
Temperature Coefficients of $V_{OC}$	-0.25%/°C
Temperature Coefficients of $I_{SC}$	0.045%/°C

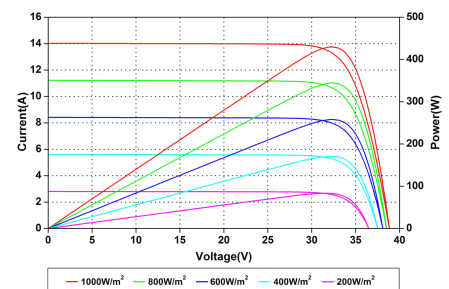
## PACKAGING

Standard packaging	36pcs/pallet
Module quantity per 20' container	216pcs
Module quantity per 40' container	936pcs (HQ)

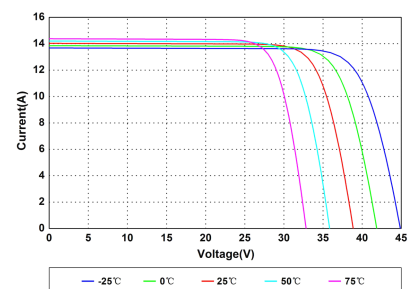
## ENGINEERING DRAWINGS



## 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.