

# Tiger Premium

# AS-7M120-HC

# 445W~460W

# MONOCRYSTALLINE MODULE

## ADVANCED PERFORMANCE & PROVEN ADVANTAGES

- High module conversion efficiency up to 21.26% 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

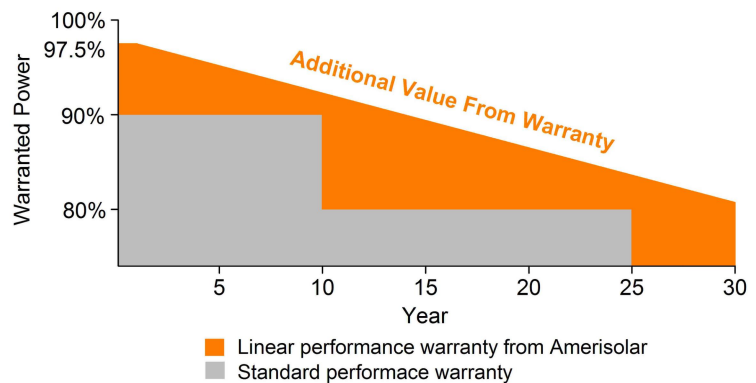
- IEC 61215, IEC 61730, CE
- ISO 9001:2015: Quality management system
- ISO 14001:2015: Environmental management system
- ISO 45001:2018: Occupational health and safety management system



## 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 ( $P_{max}$ )	445W	450W	455W	460W
Open Circuit Voltage ( $V_{OC}$ )	41.2V	41.4V	41.6V	41.8V
Short Circuit Current ( $I_{SC}$ )	13.75A	13.80A	13.85A	13.90A
Voltage at Maximum Power ( $V_{mp}$ )	34.4V	34.6V	34.8V	35.0V
Current at Maximum Power ( $I_{mp}$ )	12.94A	13.01A	13.08A	13.15A
Module Efficiency (%)	20.57	20.80	21.03	21.26
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 Pmax: ±3%; Measurement Tolerance: ±3%

## ELECTRICAL CHARACTERISTICS AT NOCT

Maximum Power ( $P_{max}$ )	332W	336W	340W	344W
Open Circuit Voltage ( $V_{OC}$ )	38.0V	38.2V	38.4V	38.6V
Short Circuit Current ( $I_{SC}$ )	11.14A	11.18A	11.22A	11.26A
Voltage at Maximum Power ( $V_{mp}$ )	31.3V	31.5V	31.7V	31.9V
Current at Maximum Power ( $I_{mp}$ )	10.61A	10.67A	10.73A	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	120 (6x20)
Module dimensions	1908x1134x30mm (75.12x44.65x1.18inches)
Weight	23.5kg (51.8lbs)
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)
Connector	MC4 or MC4 compatible

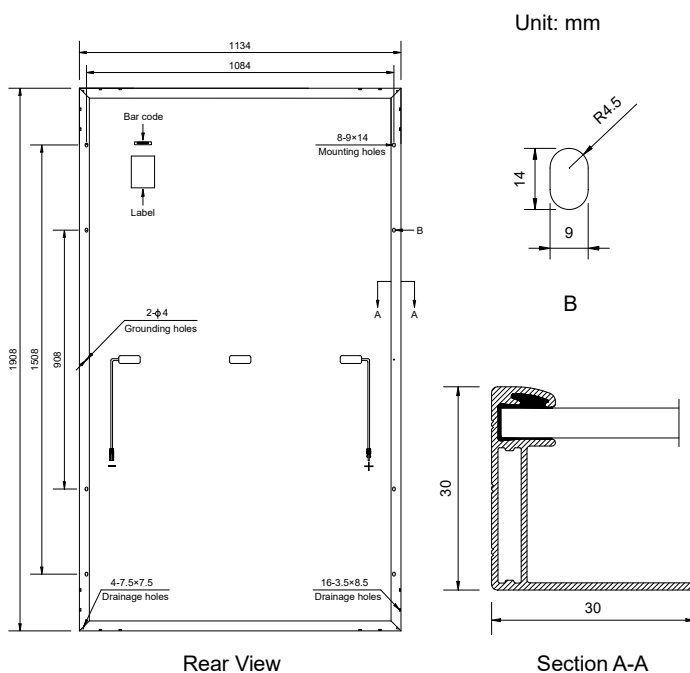
## TEMPERATURE CHARACTERISTICS

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

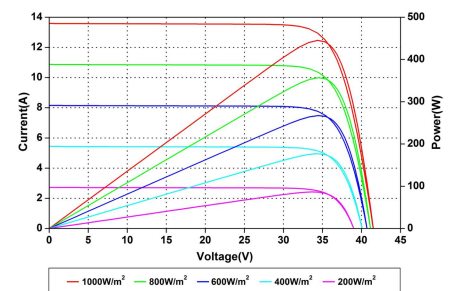
## PACKAGING

Standard packaging	36pcs/pallet
Module quantity per 20' container	216pcs
Module quantity per 40' container	873pcs (HQ)

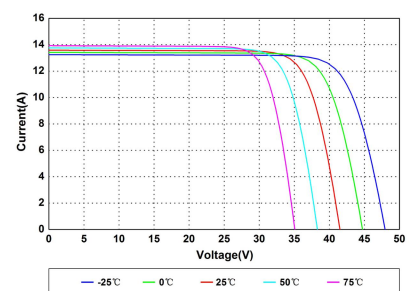
## ENGINEERING DRAWINGS



## 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.