

# AS-7M120-BHC 435W~455W

## MONOCRYSTALLINE MODULE

### ADVANCED PERFORMANCE & PROVEN ADVANTAGES

- More power gain up to 30% by utilizing the ambient light reflected from surrounding surfaces.
- Lower annual power degradation and higher energy yield during the module's lifetime.
- Superior performance under high temperature and low light conditions.
- High load-bearing capacity which can withstand wind loads up to 2400Pa and snow loads up to 5400Pa.
- Excellent reliability and durability against extreme environmental conditions (high resistance to salt mist, ammonia, sand, acid and alkali, etc.).
- Potential induced degradation (PID) free.

### CERTIFICATIONS

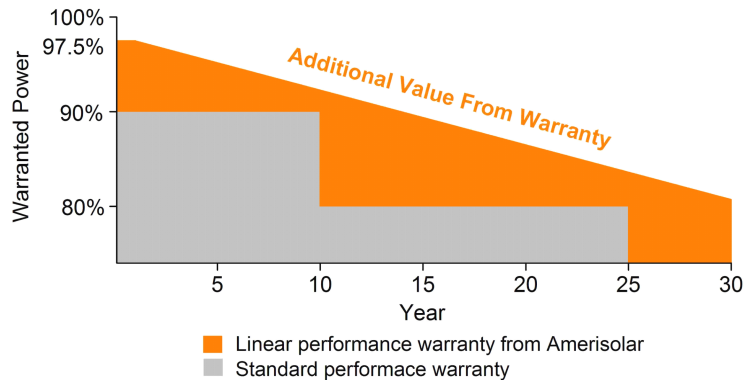


- IEC 61215, IEC 61730, CE
- ISO9001:2015: Quality management system
- ISO14001:2015: Environmental management system
- ISO 45001:2018: Occupational health and safety management system

### SPECIAL WARRANTY

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

**Passionately  
committed to  
delivering innovative  
energy solution**



## ELECTRICAL CHARACTERISTICS AT STC\*

Module Type	AS-7M120-BHC-435W	AS-7M120-BHC-440W	AS-7M120-BHC-445W	AS-7M120-BHC-450W	AS-7M120-BHC-455W
Maximum Power ( $P_{max}$ )	435W	440W	445W	450W	455W
Open Circuit Voltage ( $V_{oc}$ )	40.8V	41.0V	41.2V	41.4V	41.6V
Short Circuit Current ( $I_{sc}$ )	13.65A	13.70A	13.75A	13.80A	13.85A
Voltage at Maximum Power ( $V_{mp}$ )	34.0V	34.2V	34.4V	34.6V	34.8V
Current at Maximum Power ( $I_{mp}$ )	12.80A	12.87A	12.94A	13.01A	13.08A
Module Efficiency (%)	20.06	20.29	20.52	20.75	20.99
Operating Temperature	-40°C to +85°C				
Maximum System Voltage	1000V DC/1500V DC				
Fire Resistance Rating	Class C				
Maximum Series Fuse Rating	30A				

\*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\*\*

Module Type	AS-7M120-BHC-435W	AS-7M120-BHC-440W	AS-7M120-BHC-445W	AS-7M120-BHC-450W	AS-7M120-BHC-455W
Maximum Power ( $P_{max}$ )	324W	328W	332W	336W	340W
Open Circuit Voltage ( $V_{oc}$ )	37.6V	37.8V	38.0V	38.2V	38.4V
Short Circuit Current ( $I_{sc}$ )	11.06A	11.10A	11.14A	11.18A	11.22A
Voltage at Maximum Power ( $V_{mp}$ )	30.9V	31.1V	31.3V	31.5V	31.7V
Current at Maximum Power ( $I_{mp}$ )	10.49A	10.55A	10.61A	10.67A	10.73A

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

## ELECTRICAL CHARACTERISTICS WITH DIFFERENT REAR SIDE POWER GAIN (EXAMPLE: AS-7M120-BHC-445W)

Power Gain	$P_{max}$	$V_{oc}$	$I_{sc}$	$V_{mp}$	$I_{mp}$
10%	490W	41.2V	14.99A	34.4V	14.25A
15%	512W	41.2V	15.67A	34.4V	14.89A
20%	534W	41.2V	16.34A	34.4V	15.53A
25%	556W	41.2V	17.01A	34.4V	16.17A
30%	579W	41.2V	17.72A	34.4V	16.84A

## MECHANICAL CHARACTERISTICS

Cell type	Monocrystalline bifacial
Number of cells	120 (6x24)
Module dimensions	1912x1134x35mm
Weight	24kg
Front cover	3.2mm tempered glass with AR coating
Back cover	Transparent backsheet
Frame	Anodized aluminum alloy
Junction box	IP68, 3 diodes
Cable	4mm <sup>2</sup> , Length: Portrait: 300mm; Landscape: 1200mm
Connector	MC4 compatible

## TEMPERATURE CHARACTERISTICS

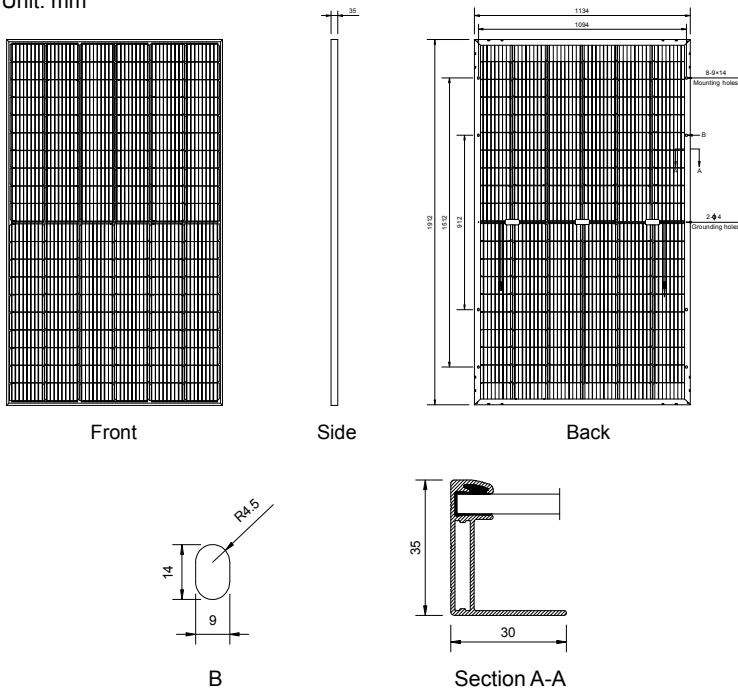
Nominal Operating Cell Temperature (NOCT)	42°C±2°C
Temperature Coefficients of $P_{max}$	-0.36%/°C
Temperature Coefficients of $V_{oc}$	-0.28%/°C
Temperature Coefficients of $I_{sc}$	0.05%/°C

## PACKAGING

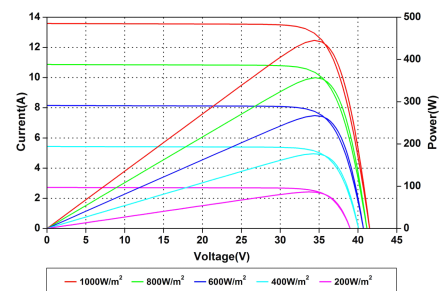
Standard packaging	31pcs/pallet
Module quantity per 20' container	186pcs
Module quantity per 40' container	744pcs(HQ)

## ENGINEERING DRAWINGS

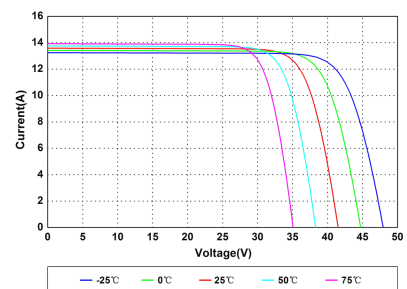
Unit: mm



## 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.