

AS-7M144-BHC 570W~590W

MONOCRYSTALLINE BIFACIAL N-TYPE TOPCON 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



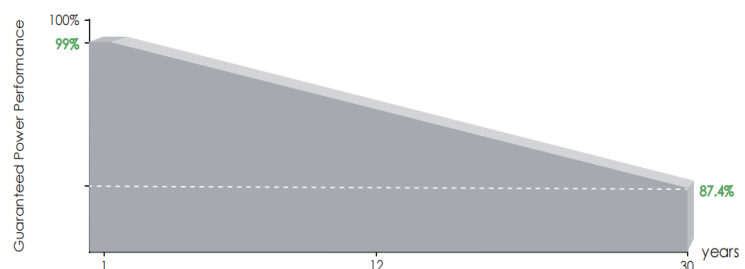
- IEC 61215, IEC 61730, CE
- ISO9001:2015: Quality management system
- ISO14001:2015: Environmental management system
- ISO 45001:2018: Occupational health and safety management system

SPECIAL WARRANTY

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

Passionately
committed to
delivering innovative
energy solution

LINEAR PERFORMANCE WARRANTY



ELECTRICAL CHARACTERISTICS AT STC*

Maximum Power (P_{max})	570W	575W	580W	585W	590W
Open Circuit Voltage (V_{oc})	50.8V	51.0V	51.2V	51.4V	51.6V
Short Circuit Current (I_{sc})	14.14A	14.19A	14.24A	14.29A	14.34A
Voltage at Maximum Power (V_{mp})	42.6V	42.8V	43.0V	43.2V	43.4V
Current at Maximum Power (I_{mp})	13.39A	13.44A	13.49A	13.55A	13.61A
Module Efficiency (%)	22.06	22.25	22.44	22.64	22.84
Operating Temperature	-40 °C to +85 °C				
Maximum System Voltage	1000/ 1500V (IEC)				
Fire Resistance Rating	Class C				
Maximum Series Fuse Rating	25A				

* STC: Irradiance 1000W/m², Cell temperature 25 °C, AM1.5; Tolerance of Pmax: ±3%; Measurement Tolerance: ±3%

ELECTRICAL CHARACTERISTICS AT NOCT**

Maximum Power (P_{max})	429W	533W	437W	441W	445W
Open Circuit Voltage (V_{oc})	48.3V	48.5V	48.7V	48.9V	45.10V
Short Circuit Current (I_{sc})	11.45A	11.49A	11.53A	11.57A	11.61A
Voltage at Maximum Power (V_{mp})	40.1V	40.3V	40.5V	40.7V	40.9V
Current at Maximum Power (I_{mp})	10.70A	10.75A	10.80A	10.85A	10.90A

** NOCT: Irradiance 800W/m², Ambient temperature 20 °C, Wind Speed 1 m/s

ELECTRICAL CHARACTERISTICS WITH DIFFERENT REAR SIDE POWER GAIN (EXAMPLE: AS-7M144-BHC-580W)

Power Gain	P_{max}	V_{oc}	I_{sc}	V_{mp}	I_{mp}
10%	638W	51.2V	15.66A	43.0V	14.84A
15%	667W	51.2V	16.38A	43.0V	15.51A
20%	696W	51.2V	17.09A	43.0V	16.19A
25%	725W	51.2V	17.80A	43.0V	16.96A
30%	754W	51.2V	18.51A	43.0V	17.54A

MECHANICAL CHARACTERISTICS

Cell type	Monocrystalline Bifacial TOPCON 182*91mm
Number of cells	144(6x24)
Module dimensions	2278x1134x30mm
Weight	31.0kg
Front/Back Glass	2.0mm tempered glass with AR coated
Frame	Anodized aluminum alloy
Junction box	IP68, 3 diodes
Cable	4mm ² , Length: 300mm
Connector	MC4 or MC4 compatible

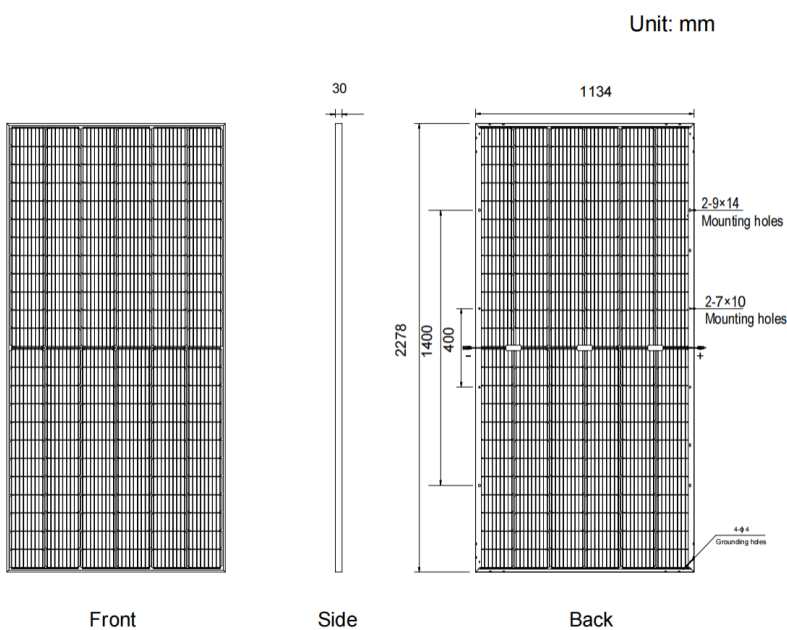
TEMPERATURE CHARACTERISTICS

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

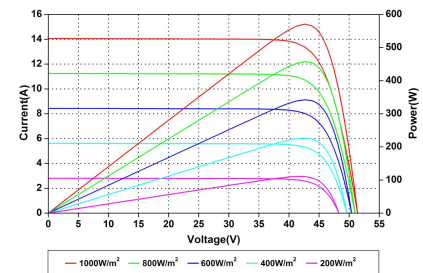
PACKAGING

Standard packaging	36pcs/ pallet
Module quantity per 20' container	180pcs
Module quantity per 40' container	720pcs(HQ)

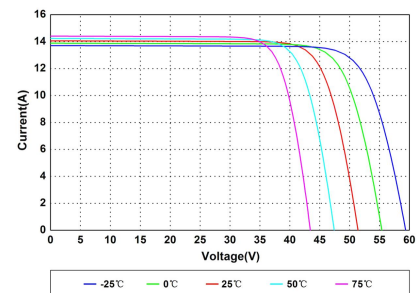
ENGINEERING DRAWINGS



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.