

AS-7M144N-BHC 560W~590W

MONOCRYSTALLINE MODULE

ADVANCED PERFORMANCE & PROVEN ADVANTAGES

- High module conversion efficiency up to 22.84% 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.

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}) | 560W | 565W | 570W | 575W | 580W | 585W | 590W |
| Open Circuit Voltage (Voc) | 50.4V | 50.6V | 50.8V | 51.0V | 51.2V | 51.4V | 51.6V |
| Short Circuit Current (I _{SC}) | 14.04A | 14.09A | 14.14A | 14.19A | 14.24A | 14.29A | 14.34A |
| Voltage at Maximum Power (V _{mp}) | 42.2V | 42.4V | 42.6V | 42.8V | 43.0V | 43.2V | 43.4V |
| Current at Maximum Power (I _{mp}) | 13.28A | 13.33A | 13.39A | 13.44A | 13.49A | 13.54A | 13.59A |
| Module Efficiency (%) | 21.68 | 21.87 | 22.07 | 22.26 | 22.45 | 22.65 | 22.84 |
| 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/m², Cell temperature 25°C, AM1.5; Tolerance of Pmax: ±3%; Measurement Tolerance: ±3%

| ELECTRICAL CHARACTERISTICS AT NOCT | | | | | | | |
|---|--------|--------|--------|--------|--------|--------|--------|
| Maximum Power (P _{max}) | 421W | 425W | 429W | 433W | 437W | 441W | 445W |
| Open Circuit Voltage (Voc) | 47.9V | 48.1V | 48.3V | 48.5V | 48.7V | 48.9V | 49.1V |
| Short Circuit Current (I _{SC}) | 11.37A | 11.41A | 11.45A | 11.49A | 11.53A | 11.57A | 11.61A |
| Voltage at Maximum Power (V _{mp}) | 39.7V | 39.9V | 40.1V | 40.3V | 40.5V | 40.7V | 40.9A |
| Current at Maximum Power (I _{mp}) | 10.61A | 10.66A | 10.70A | 10.75A | 10.80A | 10.85A | 10.90A |

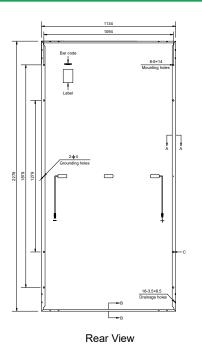
NOCT: Irradiance 800W/m², Ambient temperature 20°C, Wind Speed 1 m/s

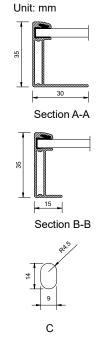
| MECHANICAL CHARACTERISTICS | | | | |
|----------------------------|--|--|--|--|
| Cell type | Monocrystalline N-type 182*91mm | | | |
| Number of cells | 144 (6x24) | | | |
| Module dimensions | 2278x1134x35mm (89.69x44.65x1.38inches) | | | |
| Weight | 27.5kg (60.6lbs) | | | |
| Front cover | 3.2mm (0.13inches) tempered glass with AR coating | | | |
| Frame | Anodized aluminum alloy | | | |
| Junction box | IP68, 3 diodes | | | |
| Cable | 4mm ² (0.006inches ²), Portrait: 300mm (11.81inches); | | | |
| | Landscape: 1300mm (51.18inches) | | | |
| 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 | 31pcs/pallet |
| Module quantity per 20' container | 155pcs |
| Module quantity per 40' container | 620pcs (HQ) |

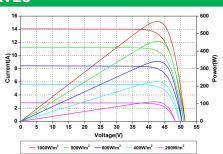
ENGINEERING DRAWINGS



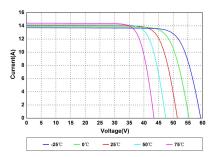


Specifications in this datasheet are subject to change without prior notice.

IV CURVES



Current-Voltage and Power-Voltage Curves at Different Irradiances



Current-Voltage Curves at Different Temperatures