

AS-7M144N-BHC Black 560W~600W

MONOCRYSTALLINE MODULE

ADVANCED PERFORMANCE & PROVEN ADVANTAGES

- High module conversion efficiency up to 23.22% 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

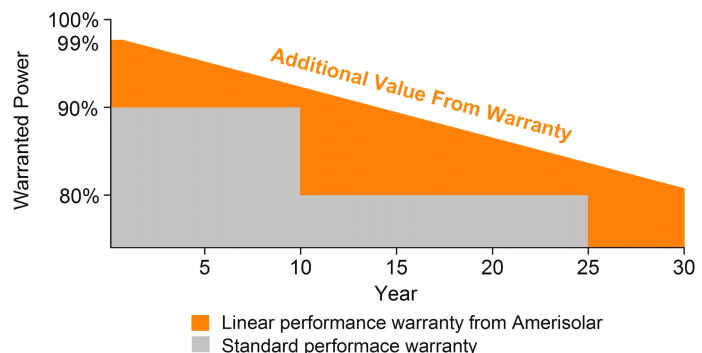


- IEC 61215, IEC 61730, CE
- ISO 9001:2015: Quality management system
- ISO 14001:2015: Environmental management system
- ISO 45001:2018: Occupational health and safety management system

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 | 595W | 600W |
| Open Circuit Voltage (V_{oc}) | 50.4V | 50.6V | 50.8V | 51.0V | 51.2V | 51.4V | 51.6V | 51.8V | 52.0V |
| Short Circuit Current (I_{sc}) | 14.04A | 14.09A | 14.14A | 14.19A | 14.24A | 14.29A | 14.34A | 14.39A | 14.44A |
| Voltage at Maximum Power (V_{mp}) | 42.2V | 42.4V | 42.6V | 42.8V | 43.0V | 43.2V | 43.4V | 43.6V | 43.8V |
| Current at Maximum Power (I_{mp}) | 13.28A | 13.33A | 13.39A | 13.44A | 13.49A | 13.54A | 13.59A | 13.65A | 13.70A |
| Module Efficiency (%) | 21.68 | 21.87 | 22.07 | 22.26 | 22.45 | 22.65 | 22.84 | 23.02 | 23.22 |
| Operating Temperature | -40°C to +85°C | | | | | | | | |
| Maximum System Voltage | 1500V DC | | | | | | | | |
| Fire Resistance Rating | Class C | | | | | | | | |
| Maximum Series Fuse Rating | 30A | | | | | | | | |

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 | 449W | 454W |
| Open Circuit Voltage (V_{oc}) | 47.9V | 48.1V | 48.3V | 48.5V | 48.7V | 48.9V | 49.1V | 49.3V | 49.5V |
| Short Circuit Current (I_{sc}) | 11.37A | 11.41A | 11.45A | 11.49A | 11.53A | 11.57A | 11.61A | 11.65A | 11.69A |
| Voltage at Maximum Power (V_{mp}) | 39.7V | 39.9V | 40.1V | 40.3V | 40.5V | 40.7V | 40.9V | 41.1V | 41.3V |
| Current at Maximum Power (I_{mp}) | 10.61A | 10.66A | 10.70A | 10.75A | 10.80A | 10.85A | 10.90A | 10.95A | 11.00A |

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

ELECTRICAL CHARACTERISTICS WITH DIFFERENT REAR SIDE POWER GAIN (EXAMPLE: AS-7M144N-BHC-570W)

| Power Gain | P_{max} | V_{oc} | I_{sc} | V_{mp} | I_{mp} |
|------------|-----------|----------|----------|----------|----------|
| 10% | 627W | 50.8V | 15.54A | 42.6V | 14.72A |
| 15% | 656W | 50.8V | 16.25A | 42.6V | 15.40A |
| 20% | 684W | 50.8V | 16.96A | 42.6V | 16.06A |
| 25% | 713W | 50.8V | 17.67A | 42.6V | 16.74A |
| 30% | 741W | 50.8V | 18.36A | 42.6V | 17.40A |

MECHANICAL CHARACTERISTICS

| | |
|-------------------|---|
| Cell type | Monocrystalline N-type 182*91mm |
| Number of cells | 144 (6x24) |
| Module dimensions | 2279x1134x30mm |
| Weight | 32kg |
| Front/Back Glass | 2mm AR coated tempered glass/2mm tempered glass |
| Frame | Anodized aluminum alloy |
| Junction box | IP68, 3 diodes |
| Cable | 4mm ² , 300mm; Customized Length |
| Connector | MC4 or MC4 compatible |

TEMPERATURE CHARACTERISTICS

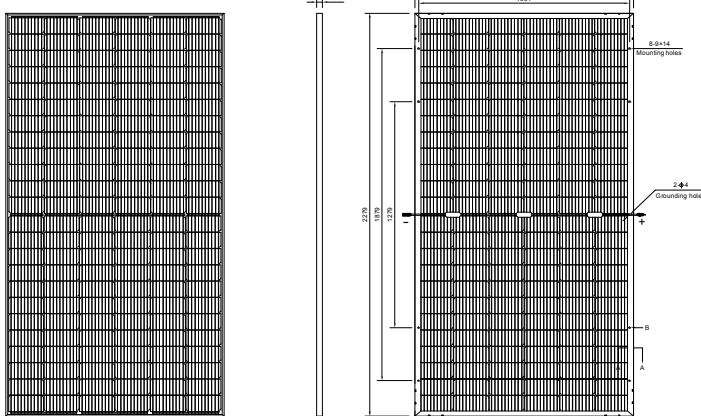
| | |
|---|-----------|
| Nominal Operating Cell Temperature (NOCT) | 43°C±2°C |
| Temperature Coefficients of P_{max} | -0.30%/°C |
| Temperature Coefficients of V_{oc} | -0.25%/°C |
| Temperature Coefficients of I_{sc} | 0.045%/°C |

PACKAGING

| | |
|-----------------------------------|--------------------|
| Standard packaging | 36pcs/pallet |
| Module quantity per 20' container | 180pcs |
| Module quantity per 40' container | 720pcs /740pcs(HQ) |

ENGINEERING DRAWINGS

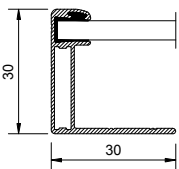
Unit: mm



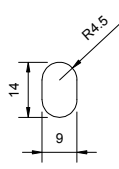
Front

Side

Back

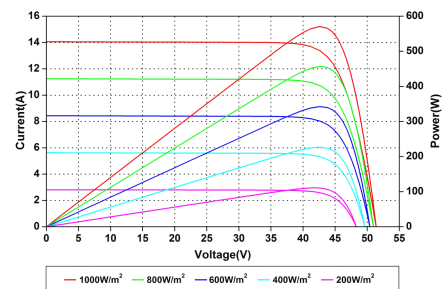


Section A-A

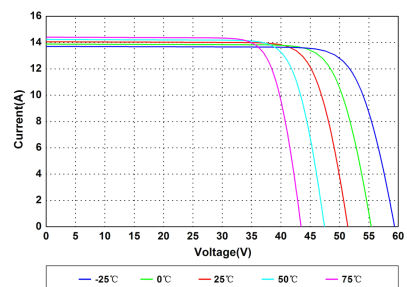


B

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.