

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

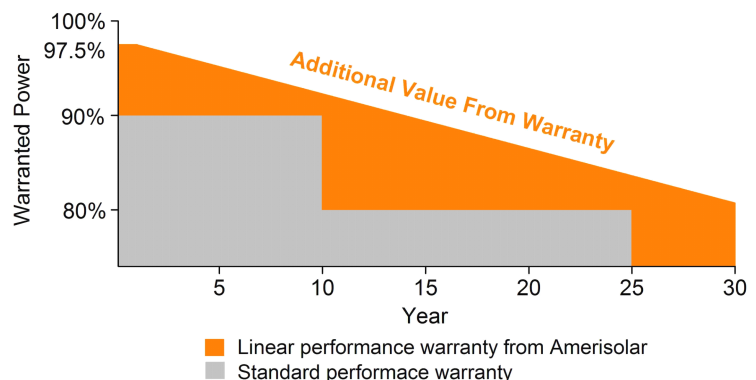
- IEC 61215, IEC 61730, CE
- ISO 9001:2015: Quality management system
- ISO 14001:2015: Environmental management system
- ISO 45001:2018: Occupational health and safety management system



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/m², 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/m², 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 | 24kg (52.9lbs) |
| 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: 1200mm (47.24inches) |
| Connector | MC4 or MC4 compatible |

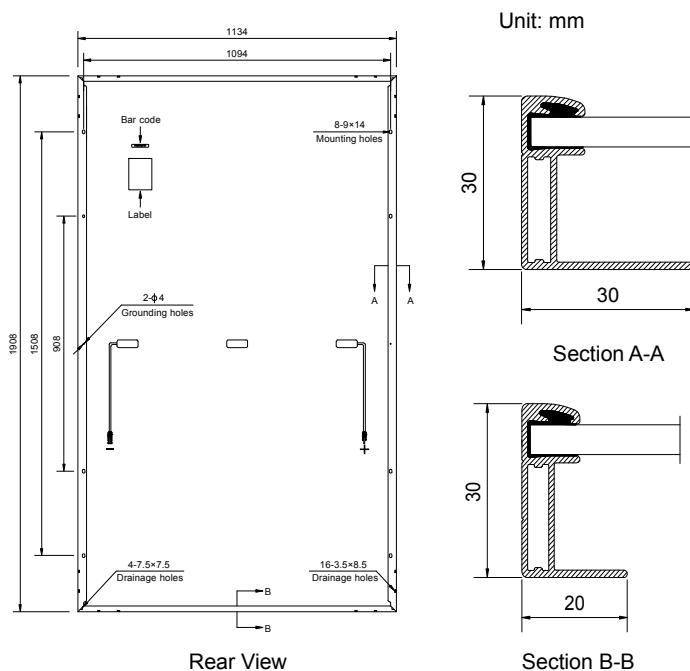
TEMPERATURE CHARACTERISTICS

| | |
|---|-----------|
| 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 |

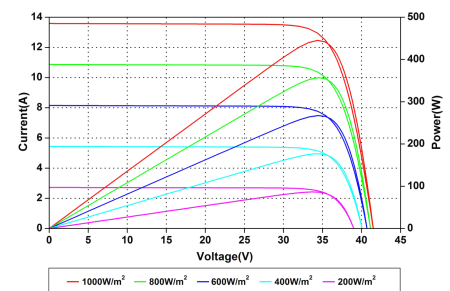
PACKAGING

| | |
|-----------------------------------|--------------|
| Standard packaging | 36pcs/pallet |
| Module quantity per 20' container | 216pcs |
| Module quantity per 40' container | 864pcs (HQ) |

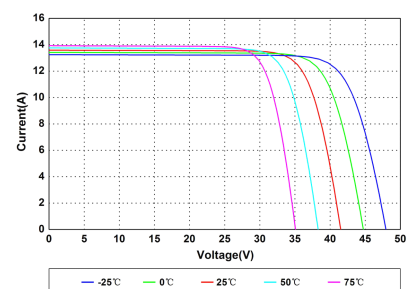
ENGINEERING DRAWINGS



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.