

AS-6M144-HC

430W~450W

MONOCRYSTALLINE MODULE

ADVANCED PERFORMANCE & PROVEN ADVANTAGES

- High module conversion efficiency up to 20.37% 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

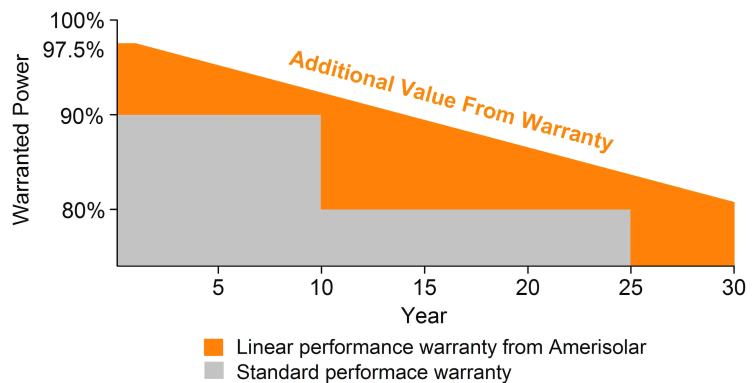
- IEC 61215, IEC 61730, UL 1703, IEC 62716, IEC 61701, IEC TS 62804, CE, CQC
- ISO 9001:2015: Quality management system
- ISO 14001:2015: Environmental management system
- ISO 45001:2018: Occupational health and safety management system



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}) | 430W | 435W | 440W | 445W | 450W |
| Open Circuit Voltage (V_{OC}) | 49.4V | 49.6V | 49.8V | 50.0V | 50.2V |
| Short Circuit Current (I_{SC}) | 11.04A | 11.10A | 11.16A | 11.22A | 11.28A |
| Voltage at Maximum Power (V_{mp}) | 41.0V | 41.2V | 41.4V | 41.6V | 41.8V |
| Current at Maximum Power (I_{mp}) | 10.49A | 10.56A | 10.63A | 10.70A | 10.77A |
| Module Efficiency (%) | 19.46 | 19.69 | 19.92 | 20.14 | 20.37 |
| 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 | 20A | | | | |

STC: Irradiance 1000W/m², Cell temperature 25°C, AM1.5; Tolerance of P_{max}: ±3%; Measurement Tolerance: ±3%

ELECTRICAL CHARACTERISTICS AT NOCT

| | | | | | |
|---------------------------------------|-------|-------|-------|-------|-------|
| Maximum Power (P_{max}) | 319W | 323W | 327W | 331W | 335W |
| Open Circuit Voltage (V_{OC}) | 45.4V | 45.6V | 45.8V | 46.0V | 46.2V |
| Short Circuit Current (I_{SC}) | 8.94A | 8.99A | 9.04A | 9.09A | 9.14A |
| Voltage at Maximum Power (V_{mp}) | 37.2V | 37.4V | 37.6V | 37.8V | 38.0V |
| Current at Maximum Power (I_{mp}) | 8.58A | 8.64A | 8.70A | 8.76A | 8.82A |

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

MECHANICAL CHARACTERISTICS

| | |
|-------------------|--|
| Cell type | Monocrystalline PERC 166*83mm |
| Number of cells | 144 (6x24) |
| Module dimensions | 2108x1048x40mm (82.99x41.26x1.57inches) |
| 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), Length: Portrait: 300mm (11.81inches); Landscape: 1400mm (55.12inches) |
| Connector | MC4 or MC4 compatible |

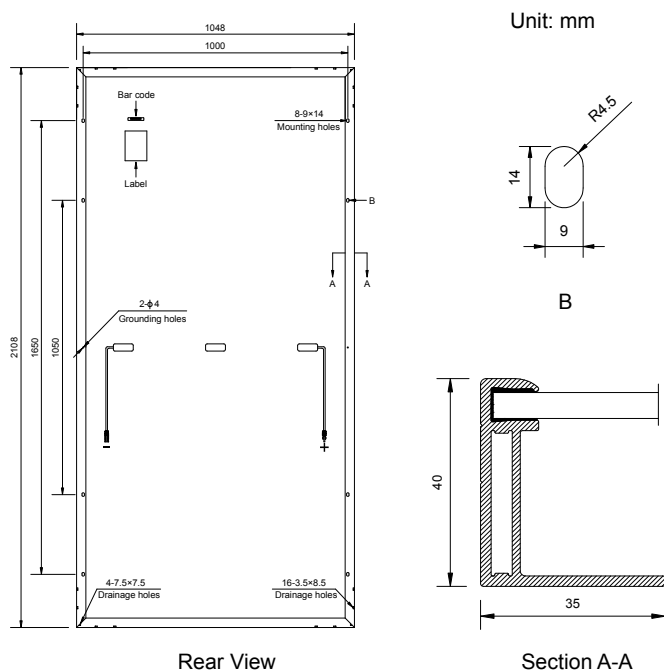
TEMPERATURE CHARACTERISTICS

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

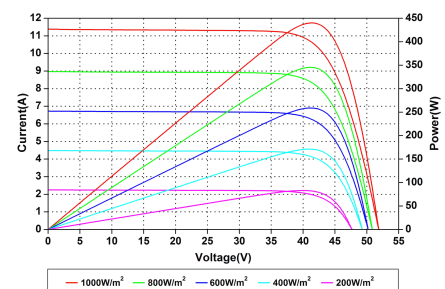
PACKAGING

| | |
|-----------------------------------|--------------|
| Standard packaging | 27pcs/pallet |
| Module quantity per 20' container | 135pcs |
| Module quantity per 40' container | 594pcs |

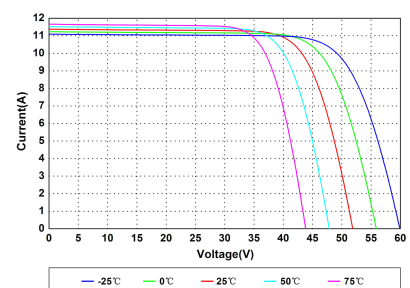
ENGINEERING DRAWINGS



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.