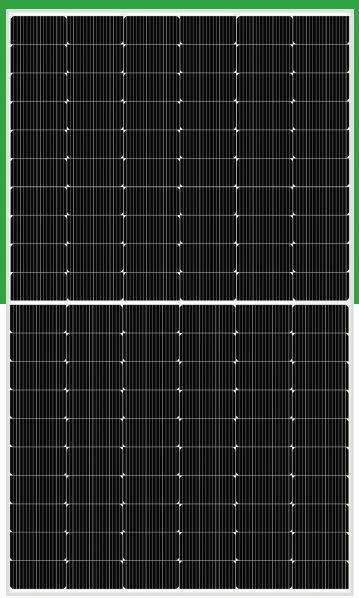
Amerisolar USA | New Energy New World®



# AS-7M120N-HC

# 500W~520W

## MONOCRYSTALLINE MODULE

## ADVANCED PERFORMANCE & PROVEN ADVANTAGES

- High module conversion efficiency up to 24.03% 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.

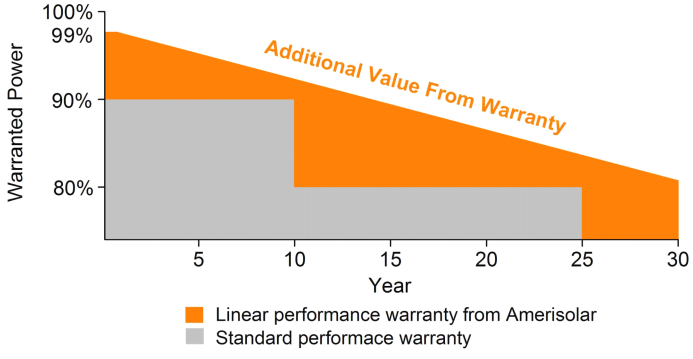
## CERTIFICATIONS

- 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 ($P_{max}$) | 500W | 505W | 510W | 515W | 520W |
| Open Circuit Voltage ($V_{OC}$) | 43.4V | 43.6V | 43.0V | 44.0V | 44.2V |
| Short Circuit Current ($I_{SC}$) | 14.38A | 14.6A | 14.66A | 14.72A | 14.78A |
| Voltage at Maximum Power ($V_{mp}$) | 36.6V | 36.8V | 37.0V | 37.2V | 37.4V |
| Current at Maximum Power ($I_{mp}$) | 13.67A | 13.72A | 13.78A | 13.84A | 13.90A |
| Module Efficiency (%) | 23.11 | 23.34 | 23.57 | 23.80 | 24.03 |
| 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/m$^2$, Cell temperature 25°C, AM1.5; Tolerance of Pmax: ±3%; Measurement Tolerance: ±3%

## ELECTRICAL CHARACTERISTICS AT NOCT

| | | | | | |
|---|---|---|---|---|---|
| Maximum Power ($P_{max}$) | 376W | 380W | 384W | 387W | 391W |
| Open Circuit Voltage ($V_{OC}$) | 41.3V | 41.5V | 41.7V | 41.9V | 42.1V |
| Short Circuit Current ($I_{SC}$) | 11.66A | 11.84A | 11.89A | 11.94A | 11.99A |
| Voltage at Maximum Power ($V_{mp}$) | 34.5V | 34.7V | 34.9V | 35.1V | 35.3V |
| Current at Maximum Power ($I_{mp}$) | 10.91A | 10.95A | 11.00A | 11.05A | 11.10A |

NOCT: Irradiance 800W/m$^2$, Ambient temperature 20°C, Wind Speed 1 m/s

## MECHANICAL CHARACTERISTICS

| | |
|---|---|
| Cell type | Monocrystalline N-type 182*91mm |
| Number of cells | 120 (6x20) |
| Module dimensions | 1908x1134x30mm (75.12x44.65x1.18inches) |
| Weight | 23kg (50.7lbs) |
| 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 |

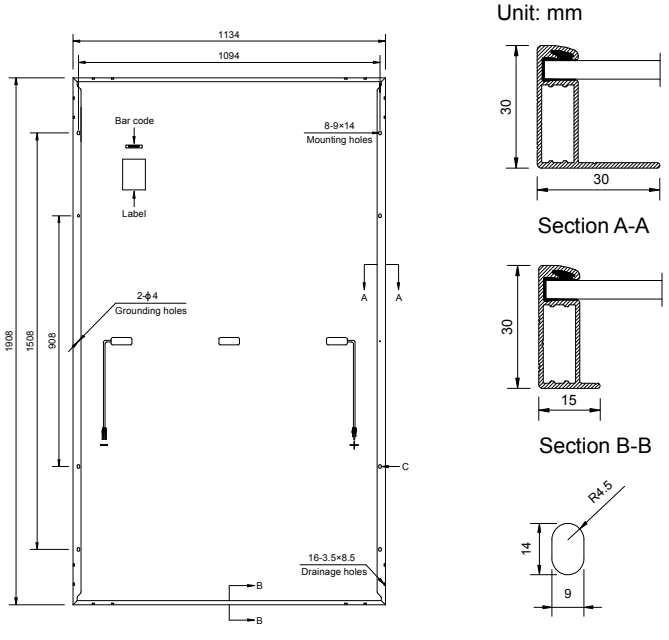
## TEMPERATURE CHARACTERISTICS

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

## PACKAGING

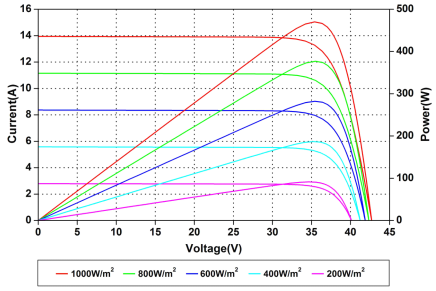
| | |
|---|---|
| Standard packaging | 36pcs/pallet |
| Module quantity per 20' container | 216pcs |
| Module quantity per 40' container | 864pcs (HQ) |

## ENGINEERING DRAWINGS

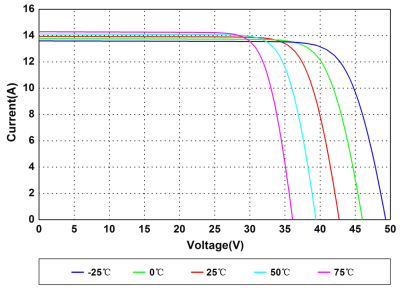



Rear View

## 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.

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