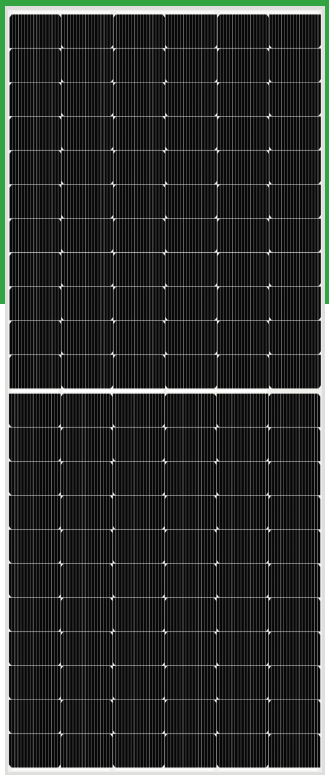
Amerisolar USA | New Energy New World®



# AS-7M132N-BHC G12R

# 600W~630W

## MONOCRYSTALLINE MODULE

## ADVANCED PERFORMANCE & PROVEN ADVANTAGES

- High module conversion efficiency up to 23.31% 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.

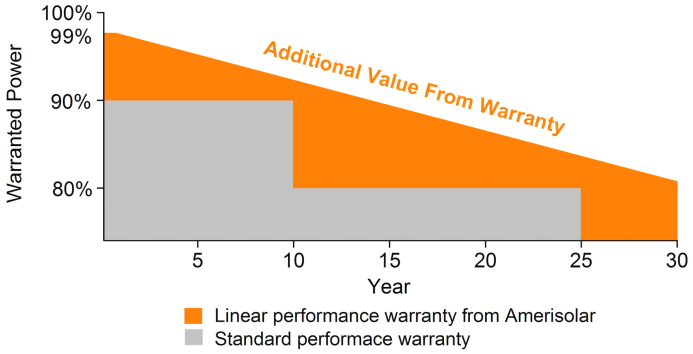
## CERTIFICATIONS

- 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 (Pmax) | 605W | 610W | 615W | 620W | 625W | 630W |
| Open Circuit Voltage (VOC) | 48.5V | 48.7V | 48.9V | 49.1V | 49.3V | 49.5V |
| Short Circuit Current (ISC) | 15.95A | 16.00A | 16.05A | 16.10A | 16.15A | 16.20A |
| Voltage at Maximum Power (Vmp) | 40.0V | 40.2V | 40.4V | 40.6V | 40.8V | 41.0V |
| Current at Maximum Power (Imp) | 15.13A | 15.18A | 15.23A | 15.28A | 15.32A | 15.37A |
| Module Efficiency (%) | 22.38 | 22.56 | 22.75 | 22.93 | 23.12 | 23.31 |
| Operating Temperature | -40°C to +85°C | | | | | |
| Maximum System Voltage | 1000V DC/1500V DC | | | | | |
| Fire Resistance Rating | Class C | | | | | |
| Maximum Series Fuse Rating | 30A | | | | | |

STC: Irradiance 1000W/m$^2$, Cell temperature 25°C, AM1.5; Tolerance of Pmax: ±3%; Measurement Tolerance: ±3%

## ELECTRICAL CHARACTERISTICS AT NOCT

| | | | | | | |
|---|---|---|---|---|---|---|
| Maximum Power (Pmax) | 457W | 461W | 465W | 469W | 473W | 477W |
| Open Circuit Voltage (VOC) | 46.1V | 46.3V | 46.5V | 46.7V | 46.9V | 47.1V |
| Short Circuit Current (ISC) | 12.87A | 12.91A | 12.96A | 13.00A | 13.04A | 13.08A |
| Voltage at Maximum Power (Vmp) | 37.4V | 37.6V | 37.8V | 38.0V | 38.2V | 38.4V |
| Current at Maximum Power (Imp) | 12.22A | 12.27A | 12.31A | 12.35A | 12.39A | 12.43A |

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

## ELECTRICAL CHARACTERISTICS WITH DIFFERENT REAR SIDE POWER GAIN (EXAMPLE: AS-7M144N-BHC-610W)

| Power Gain | $P_{max}$ | $V_{OC}$ | $I_{SC}$ | $V_{mp}$ | $I_{mp}$ |
|---|---|---|---|---|---|
| 10% | 671W | 48.7V | 17.63A | 40.2V | 16.70A |
| 15% | 702W | 48.7V | 18.45A | 40.2V | 17.47A |
| 20% | 732W | 48.7V | 19.23A | 40.2V | 18.21A |
| 25% | 763W | 48.7V | 20.05A | 40.2V | 18.99A |
| 30% | 793W | 48.7V | 20.84A | 40.2V | 19.73A |

## MECHANICAL CHARACTERISTICS

| | |
|---|---|
| Cell type | Monocrystalline N-type 182*105mm |
| Number of cells | 132 (6x22) |
| Module dimensions | 2382x1134x30mm |
| Weight | 28kg |
| 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

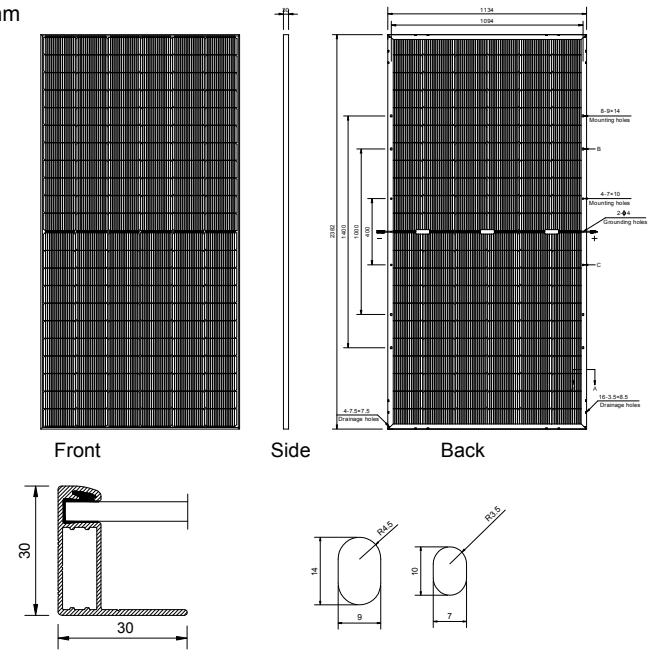
| | |
|---|---|
| Nominal Operating Cell Temperature (NOCT) | 43°C±2°C |
| Temperature Coefficients of $P_{max}$ | -0.30%/°C |
| Temperature Coefficients of $V_{OC}$ | -0.25%/°C |
| Temperature Coefficients of $I_{SC}$ | 0.045%/°C |

## PACKAGING

| | |
|---|---|
| Standard packaging | 36pcs/pallet |
| Module quantity per 20' container | 144pcs |
| Module quantity per 40' container | 720pcs(HQ) |

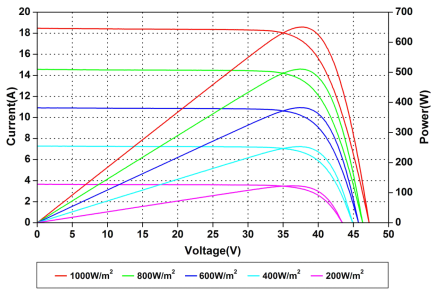
## ENGINEERING DRAWINGS

Unit: mm

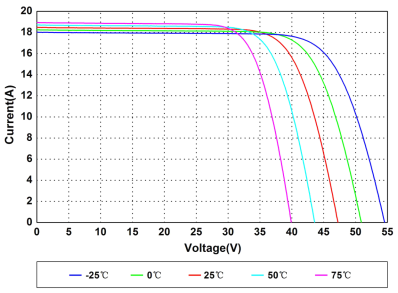



Specifications in this datasheet are subject to change without prior notice.

## IV CURVES




Current-Voltage and Power-Voltage Curves at Different Irradiances




Current-Voltage Curves at Different Temperatures