

MONO SOLAR PV MODULES (120 HALF-CUT CELLS)

NEOSUN™ Ultra 120

NEOSUN™ Ultra is the top performance reference solar module series. Based on the advanced mono wafer and PERC Half-cut technology, Ultra offers as much power as 420W with outstanding cell efficiency up to 23.2% and 20.8% module efficiency.

Thanks to the Half-Cut technology, the cell internal resistance is reduced, which provides an additional module power even while shading, cloudy weather, and in low light conditions.



23.2%

EXCELLENT CELLS EFFICIENCY

Advanced 9BB solar cells with PERC technology provide efficiency up to 23.2% (up to 20.8% module efficiency)



Weak Sunlight

EXCELLENT WEAK LIGHT PERFORMANCE

Solar modules from NEOSUN Energy have excellent weak light performance (morning, evening and cloudy days)

+3%

POSITIVE POWER TOLERANCE

Guarantee from 0 to +3% as power tolerance, you can obtain more power than conventional output



SAND AND SALT PROTECTION

Reliable quality leads to a better sustainability even in harsh environment like desert or coastline

25

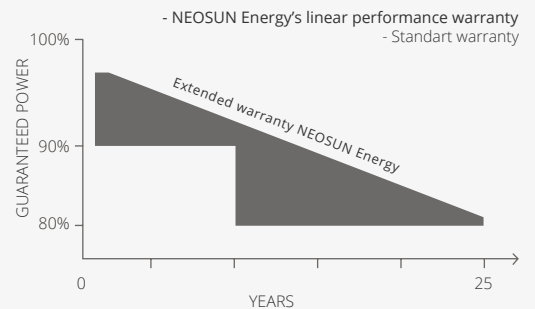
YEARS POWER WARRANTY

Even after 25 years our solar panel keeps at least 80% of its initial power output – because it's NEOSUN



HIGH WIND AND SNOW RESISTANCE

NEOSUN Energy modules withstand snow load of up to 550 kg/m² and wind speed of up to 162km/h



For a period of twenty-five (25) years commencing on the Warranty Start Date, loss of power output of the nominal power output measured at Standard Test Conditions (STC) for the Product(s) shall not exceed:

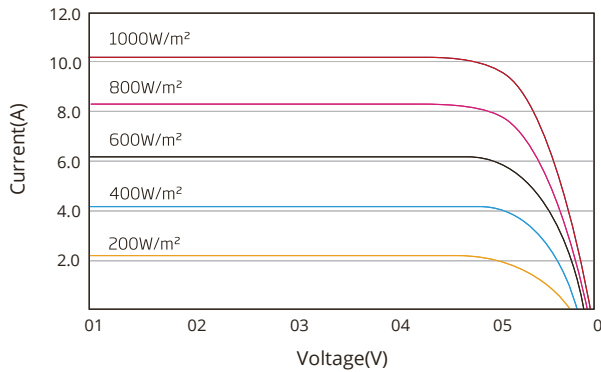
1. For Polycrystalline Products: 2% in the first year, thereafter 0.67% per year ending with 82% in the 25th year after the Warranty Start Date.

2. For Monocrystalline Products: 3% in the first year, thereafter 0.67% per year, ending with 81% in the 25th year after the Warranty Start Date.

The Warranty Start Date shall be defined as the date of the Bill of Lading date

I-V curves

I-V Curves of PV module NEOSUN Duo 350W at different light power

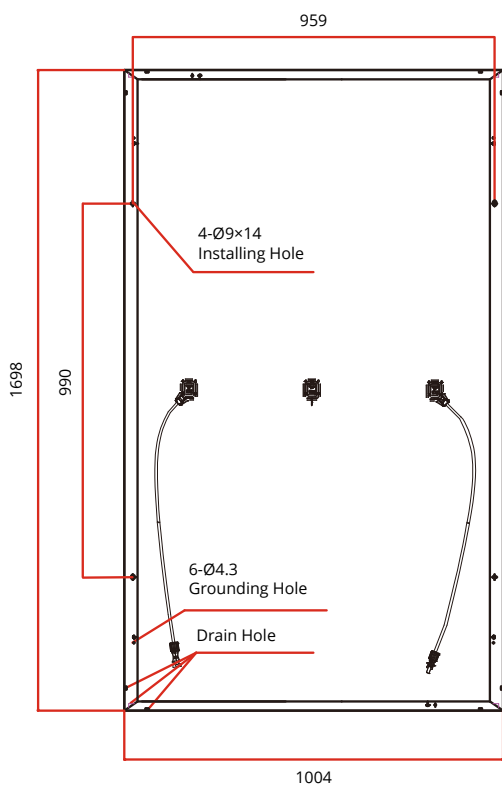


Electrical characteristics

| | | | |
|---------------------------------|--------------------------------------|--------|--------|
| Solar cells: | Mono PERC 120 cells 9BB, 6x20 pcs | | |
| Max Power | 340W | 350W | 355W |
| Power Tolerance | +5W | | |
| Voltage at Pmax (Vmp) | 34.2V | 34.6V | 34.8V |
| Current at Pmax (Imp) | 9.94A | 10.12A | 10.20A |
| Open-Circuit Voltage (Voc) | 42.0V | 42.5V | 42.7V |
| Short-Circuit Current (Isc) | 10.48A | 10.66A | 10.74A |
| Module Efficiency | 19.94% | 20.53% | 20.82% |
| Max-System Voltage (VDC) | 1500V(IEC), 1500V(UL) | | |
| No. of Bypass Diodes (pcs.) | 3 | | |
| Max Series Fuse (A) | 20A | | |
| Temperature Coefficient of Pmax | -0.36% / °C | | |
| Temperature Coefficient of Voc | -0.29% / °C | | |
| Temperature Coefficient of Isc | 0.05% / °C | | |
| Nominal Operating Cell t°C | 45 ± 2°C | | |

*STC Conditions (1000W/m²; 1.5 AM and 25°C Cell temperature)

Dimensions



Mechanical Characteristics

| | |
|----------------------------------|---------------------------------|
| Cable type, Diameter and Length | Ø =4mm ² , L=300±5mm |
| Type of Connector | Compatible type MC4 |
| Dimension AxBxC | 1698x1004x30mm |
| Weight | 19 kg |
| Front Glass | Tempered with AR coating |
| Junction Box (protection degree) | IP68 Rated |
| Frame | Clear anodized aluminum alloy |

Qualification Test Parameters

| | |
|-------------------------------|----------------|
| Dielectric Insulation Voltage | 6000VDC max |
| Operating Temperature | -40°C to +85°C |
| Max load | 5400Pa |
| Hailstone impact | 25mm at 23m/s |
| Fire safety class | Class C |

Packaging Configuration

| | | |
|-----------------------|-------|-------|
| Container | 20'GP | 40'HQ |
| Pieces per pallet | 35 | 35 |
| Pallets per container | 12 | 26 |
| Pieces per container | 420 | 910 |

Caution: read safety and installation instructions before using this product