

NEOSUN™ Duo M6 144

Get up to 25% additional power gain from the backside of the bifacial NEOSUN Duo module. Based on the advanced mono wafer and PERC Half-cut technology, Duo brings your projects to a 500W+ solar era.

Bifacial Half-cell module will have a higher energy yield compared with conventional module and will help to achieve the lowest LCOE possible.

23.2%

EXCELLENT CELLS EFFICIENCY

Advanced 9BB solar cells with Half-Cut PERC technology provide efficiency up to 23.2% (up to 20.6% module efficiency)



Weak Sunlight

BETTER POWER UNDER SHADOWS

Special half-cell design reduces the energy loss caused by shadows, better anti-shading performance

+25%

+25% OUTPUT POWER

Combines high efficiency PERC bifacial cells with a dual glass construction, which can convert light that hits the back of the module into electricity, generating up to 25% more energy



SAND AND SALT PROTECTION

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

30

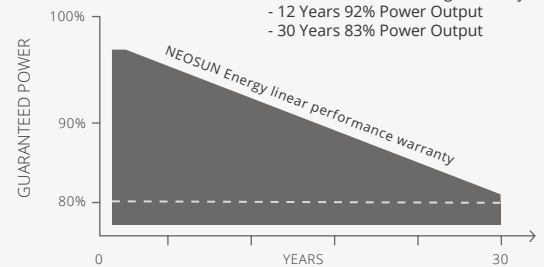
YEARS POWER WARRANTY

Even after 30 years NEOSUN Duo solar module keeps at least 83% of its initial power output



HIGH WIND AND SNOW RESISTANCE

NEOSUN Energy modules withstand front load of up to 5400Pa and wind speed of up to 162km/h



For a period of thirty (30) years commencing on the Warranty Start Date, loss of power output of the nominal power output measured at Standard Test Conditions (STC) for the NEOSUN bifacial solar modules shall not exceed: 2% in the first year, thereafter 0.5% per year ending with 83% in the 30th year after the Warranty Start Date.

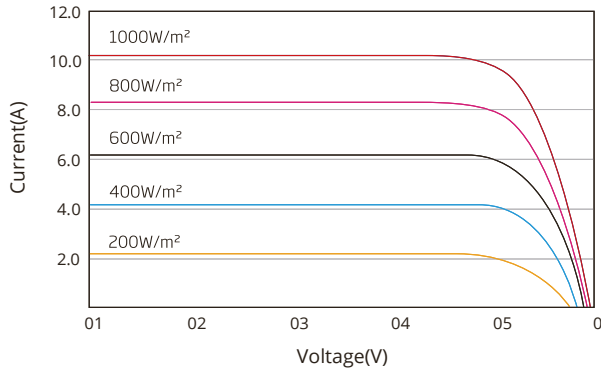
The Warranty Start Date shall be defined as the date of the Bill of Lading date



Caution: read safety and installation instructions before using this product

I-V curves

I-V Curves of PV module NEOSUN Duo 440W at different light power

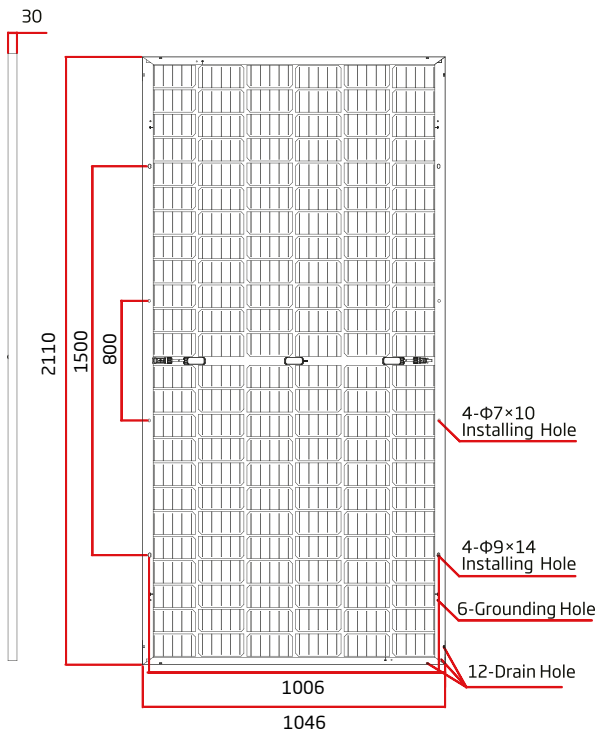


Electrical characteristics

| | | | |
|---------------------------------|--|--------|--------|
| Solar cells: | Mono PERC Half-cut 144 cells 9BB M6, 6x24 pcs | | |
| Max Power | 440W | 445W | 450W |
| Power Tolerance | +5W | | |
| Voltage at Pmax (Vmp) | 41.0V | 41.2V | 41.4V |
| Current at Pmax (Imp) | 10.73A | 10.80A | 10.87A |
| Open-Circuit Voltage (Voc) | 49.4V | 49.7V | 50.0V |
| Short-Circuit Current (Isc) | 11.21A | 11.29A | 11.36A |
| Module Efficiency | 19.93% | 20.15% | 20.38% |
| 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



Characteristics with different rear side power gain

Reference to 440W Front

| | | | | | |
|-----------------------------|--------|--------|--------|--------|--------|
| Backside Power Gain | 5% | 10% | 15% | 20% | 25% |
| Max Power (Pmax) | 462 | 484 | 506 | 528 | 550 |
| Short Circuit Current (Isc) | 11.78A | 12.34A | 12.90A | 13.42A | 13.98A |
| Open Circuit Voltage (Voc) | 49.4V | 49.4V | 49.4V | 49.5V | 49.5V |
| Max Power Current (Imp) | 11.27A | 11.80A | 12.34A | 12.85A | 13.38A |
| Max Power Voltage (Vmpp) | 41.0V | 41.0V | 41.0V | 41.1V | 41.1V |

Mechanical Characteristics

| | |
|----------------------------------|---------------------------------|
| Cable type, Diameter and Length | ∅ =4mm ² , L=300±5mm |
| Type of Connector | Compatible type MC4 |
| Dimension AxBxC | 2110x1046x30mm |
| Weight | 29.0kg |
| Glass | 2.0/2.0mm - Tempered |
| 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 Positive/Negative | 5400Pa/2400Pa |
| Hailstone impact | 25mm at 23m/s |
| Fire safety class | Class C |

Packaging Configuration

| | |
|-----------------------|-------|
| Container | 40'HQ |
| Pieces per pallet | 35 |
| Pallets per container | 20 |
| Pieces per container | 700 |