

NEOSUN™ Duo 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

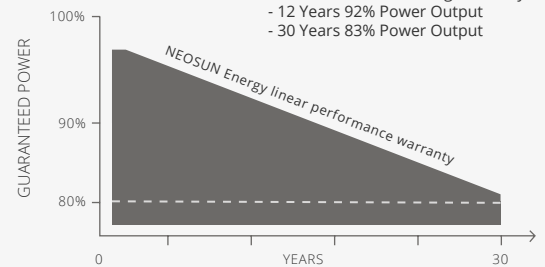
YEARS POWER WARRANTY

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.

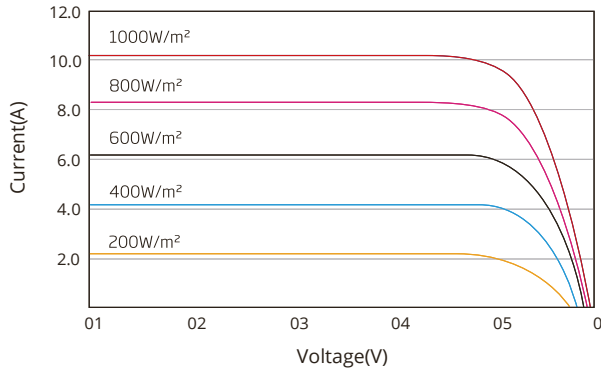
The Warranty Start Date shall be defined as the date of the Bill of Lading date



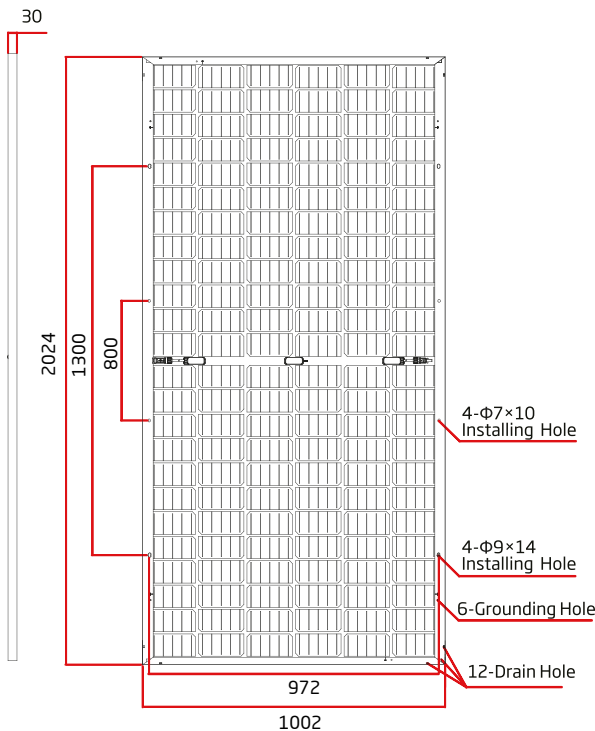
Caution: read safety and installation instructions before using this product

I-V curves

I-V Curves of PV module NEOSUN Duo 405W at different light power



Dimensions



Packaging Configuration

Container	40'HQ
Pieces per pallet	35
Pallets per container	22
Pieces per container	770

Electrical characteristics

Solar cells:	Mono PERC Half-cut 144 cells 9BB, 6x24 pcs		
Max Power	405W	410W	415W
Power Tolerance	+5W		
Voltage at Pmax (Vmp)	40.8V	41.0V	41.2V
Current at Pmax (Imp)	9.93A	10.00A	10.07A
Open-Circuit Voltage (Voc)	49.9V	50.2V	50.4V
Short-Circuit Current (Isc)	10.40A	10.47A	10.56A
Module Efficiency	19.72%	20.22%	20.46%
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)

Characteristics with different rear side power gain

Reference to 405W Front

Backside Power Gain	5%	10%	15%	20%	25%
Max Power (Pmax)	425	446	466	486	506
Short Circuit Current (Isc)	10.90A	11.43A	11.95A	12.40A	12.91A
Open Circuit Voltage (Voc)	49.9V	49.9V	49.9V	50.0V	50.0V
Max Power Current (Imp)	10.42A	10.93A	11.42A	11.85A	12.34A
Max Power Voltage (Vmpp)	40.8V	40.8V	40.8V	41.0V	41.0V

Mechanical Characteristics

Cable type, Diameter and Length	∅ =4mm ² , L=300±5mm
Type of Connector	Compatible type MC4
Dimension AxBxC	2024x1002x30mm
Weight	26.5kg
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