



Goosun Energy Construction Group Co., Ltd

655W~680W

N-Type Monocrystalline Bifacial Solar Module

► Product Characteristics

N-Type Technology

The N-Type module has lower LID/LeTID attenuation and better low light performance.

multi-master grid technology

Better light utilization and current harvesting capability. Effectively improves product power output and reliability.

load capacity

Integral assembly passes frontal maximum test static at 6000 Pa. load certification.

Anti PID Guarantee

Through the optimization of battery production technology and material control to minimize the chance of degradation caused by PID phenomenon.

double-sided generation

Increased light exposure on the back side of double-sided power generation significantly reduces LCOE

HOT 3.0 Technology

HOT3.0 technology N-type modules offer better reliability and power generation efficiency.

12 Year

Material Workmanship Warranties

30 Year

The nature of the year line protects

1 %

First year power degradation

0.4 %

Linear power attenuation

► certification

- EC61215、IEC61730、CE、CQC
- 1S08001:2015 Quality Management System
- 18014001:2015 Environmental Management System
- 1S045001:2018 Occupational Health and safety management



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N-Type Single Product Bifacial Module

Mechanical Characteristics

Cell Type	N-type monocrystalline cells
No. of cells	132 pieces (6X22)
Dimensions	2384x1303x33mm
Weight	37.9kg
Front Glass	2.0 mm, Anti-reflection Coating
Back Glass	2.0 mm, Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 Rated
Protection Class	Class II
IEC Fire Type	Class C
Connector Type	JK03M/MC4/Others
Output Cables	4.0 mm ² (+): 400 mm, (-): 200 mm or Customized Length

Specifications(STC)

Maximum Power - Pmax [Wp]	655	660	665	670	675	680
Maximum Power Voltage - Vmp [V]	48.48	48.63	48.78	48.91	49.06	49.21
Maximum Power Current - Imp [A]	14.05	14.11	14.17	14.23	14.30	14.36
Open-circuit Voltage - Voc [V]	57.73	57.86	57.99	58.12	58.25	58.38
Short-circuit Current - Isc [A]	14.16	14.22	14.28	14.34	14.40	14.46
Module Efficiency STC [%]	23.5	23.7	23.9	24.1	24.3	24.5
Power Tolerance	0~+3%					
Temperature Coefficients of Pmax	-0.29%/°C					
Temperature Coefficients of Voc	-0.25%/°C					
Temperature Coefficients of Isc	0.045%/°C					

STC: Irradiance 1000W/m², Cell Temperature 25°C, AM=1.5

Specifications(BNPI)

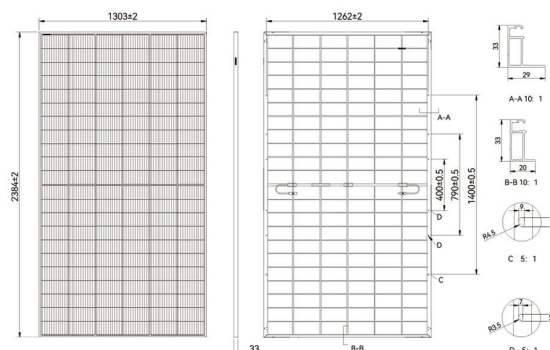
Maximum Power - Pmax [Wp]	722	728	734	740	746	752
Maximum Power Voltage - Vmp [V]	48.57	48.74	48.91	49.08	49.25	49.42
Maximum Power Current - Imp [A]	14.86	14.93	15	15.07	15.14	15.22
Open-circuit Voltage - Voc [V]	57.84	57.98	58.12	58.26	58.40	58.54
Short-circuit Current - Isc [A]	15.67	15.75	15.83	15.91	15.99	16.07

BNPI: Irradiance: front 1000W/m², rear 135W/m², Cell Temperature 25°C, AM=1.5

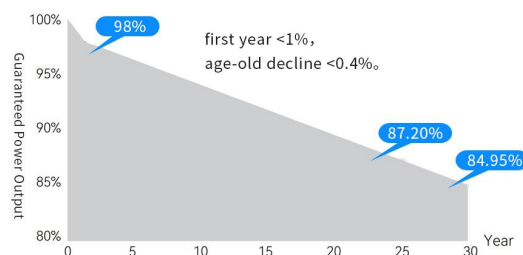
Application Conditions

Operating Temperature	-40 °C ~ +70 °C
Maximum System Voltage	1500 VDC (IEC)
Maximum Series Fuse Rating	30 A
Bifaciality Coefficient	φVoc: 98±5 %, φIsc: 80±5 %, φPmax: 80±5 %

Engineering Drawings

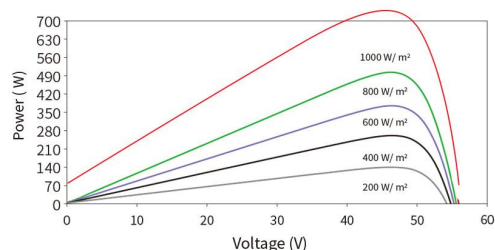


Linear Power Output Warranty

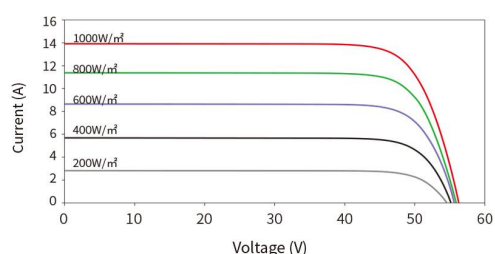


Electrical Performance

Power-Voltage Curves 680w



Current-Voltage Curves 680w



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