

450W-470W

N-Type Bifacial



Excellent temperature coefficient (Pmax): $-0.29/^{\circ}\text{C}$



Excellent low-light performance: extended power generation up to 1H or so in the morning and evening



Has lower LID/LeTID attenuation



With a bifacial rate of $80\% \pm 5\%$, the bifacial power gain significantly reduces the LCOE as the backside is exposed to more light.



IEC61215:2021/IEC61730:2023

IEC61701/IEC62716/IEC60068/IEC62804

ISO9001:2015(Quality management systems)

ISO14001:2015(Environmental management systems)

ISO45001:2018(Occupational health and safety)

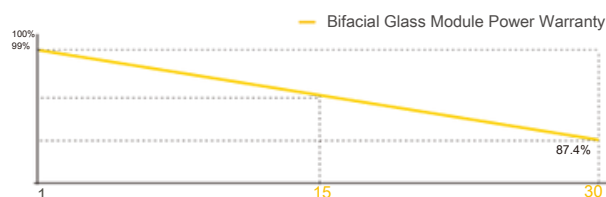
ISO14067:2018/PAS2050:2011



Guarantee



Warranty



NINGBO OSDA SOLAR CO., LTD.

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SPECIFICATION (STC) Irradiance at 1000 W/m², Cell Temp 25°C, Air Mass AM1.5

MODEL TYPE	ODA450-24V-MHDBRz	ODA455-24V-MHDBRz	ODA460-24V-MHDBRz	ODA465-24V-MHDBRz	ODA470-24V-MHDBRz
Rated Peak Power-Pmax(Wp)	450.00	455.00	460.00	465.00	470.00
Maximum Power Voltage-Vmp(V)	29.38	29.43	29.47	29.51	29.55
Maximum Power Current-Imp(A)	15.31	15.46	15.60	15.76	15.91
Open Circuit Voltage-Voc(V)	34.57±3%	34.62±3%	34.67±3%	34.72±3%	34.77±3%
Short Circuit Current-Isc(A)	16.27±3%	16.43±3%	16.58±3%	16.74±3%	16.90±3%
Module Efficiency(%)	22.52	22.77	23.01	23.27	23.53

ELECTRICAL DATA(BNPI) Irradiance at 1000 W/m², Back irradiance 135 W/m², Cell Temp 25°C, Air Mass AM1.5

Rated Peak Power-Pmax(Wp)	499.00	504.00	510.00	515.00	521.00
Maximum Power Voltage-Vmp(V)	29.47	29.52	29.56	29.60	29.64
Maximum Power Current-Imp(A)	16.92	17.09	17.24	17.41	17.58
Open Circuit Voltage-Voc(V)	34.67±3%	34.72±3%	34.77±3%	34.82±3%	34.87±3%
Short Circuit Current-Isc(A)	17.98±3%	18.16±3%	18.32±3%	18.50±3%	18.67±3%

MECHANICAL CHARACTERISTICS

Cell Type (mm)	182*105 N-Type Mono
No. Of Cells	96(12*8)
Module Dimensions(mm)	1762*1134*30
Weight	24.70 kg
Bifacial Glass Front Glass(mm)	2.0mm AR Coating Tempered Glass
Bifacial Glass Back Glass(mm)	2.0mm Glazed Glass
Frame	Anodized Aluminium Alloy(Black)
Junction Box	IP68, 1500VDC, 3 Schottky Bypass Diodes
Cables	4.0mm ² , Positive(+)300mm, Negative(-)300mm, Or Customized Length
Connector	IP68
Snow Load/Wind Load	5400Pa/4000Pa
Class Of Safety Protection	UNI 9177: Class 1
IEC Component Fire Rating	IEC 61730 - Class A

OPERATING PARAMETERS

Maximum System Voltage	1500V
Operational Temp	-40~+85 °C
Max Series Fuse Rating	28A
Nominal Module Operating Temp (NMOT)	45±2°C

TEMP COEFFICIENT

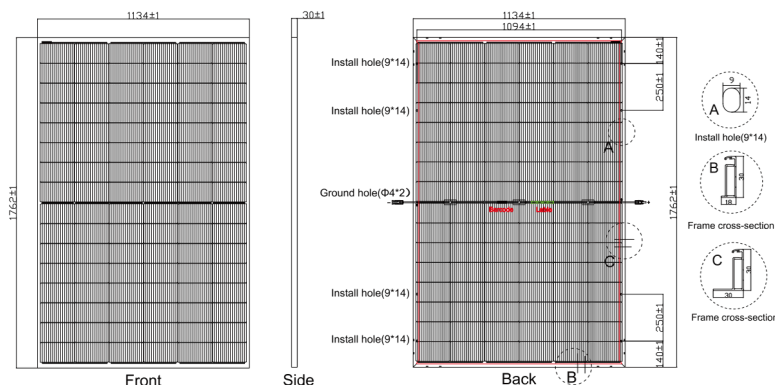
Temp Coefficient Of Pmax	-0.290%/°C
Temp Coefficient Of Voc	-0.250%/°C
Temp Coefficient Of Isc	+0.045%/°C

PACKING STANDARD 40ft (HQ)

Number Of Modules Per Pallet	37
Number Of Pallets Per Container	26
Number Of Modules Per Container	962

ASSEMBLY DRAWING

Unit:mm



IV CURVE (470W)

