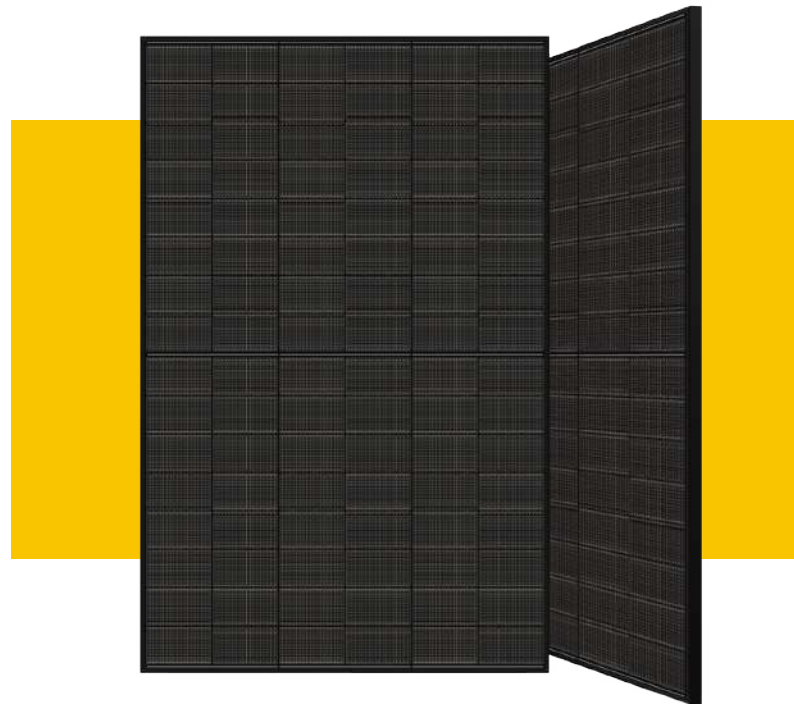


MSMDxxxM10-HJT96DSB

445-460W

96-cell Bifacial HJT Black Solar Module
Double-glass Solar Module



Product Advantages



HJT 3.0
Combining gettering process and double-sided $\mu\text{-Si}$ to maximize cell efficiency and module power.



Up to 90% Bifaciality
Natural symmetrical bifacial structure bringing more energy yield from the backside.



Sealing with PIB based sealant
Stronger water resistance, greater air impermeability to extent module lifespan.



Higher reliability
Industrial leading product and performance warranty, ensuring modules' consistent outstanding performance.

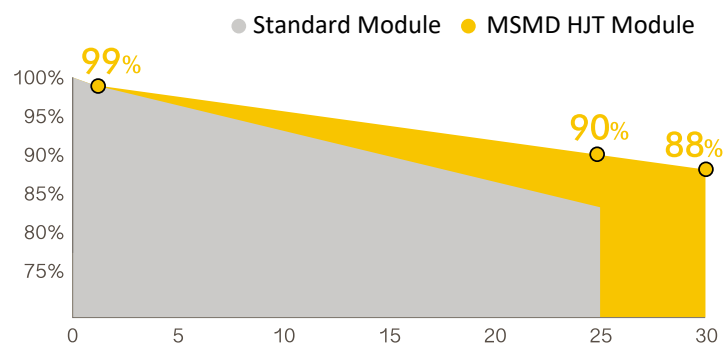


Ideal choice for solar rooftop system
Suitable for various rooftop projects.

23.02%
Module efficiency

460W
Highest power output

Performance Warranty



-1.00%
First year power degradation

-0.375%
Annual degradation

15
Years
Materials and workmanship warranty

30
Years
Linear power warranty

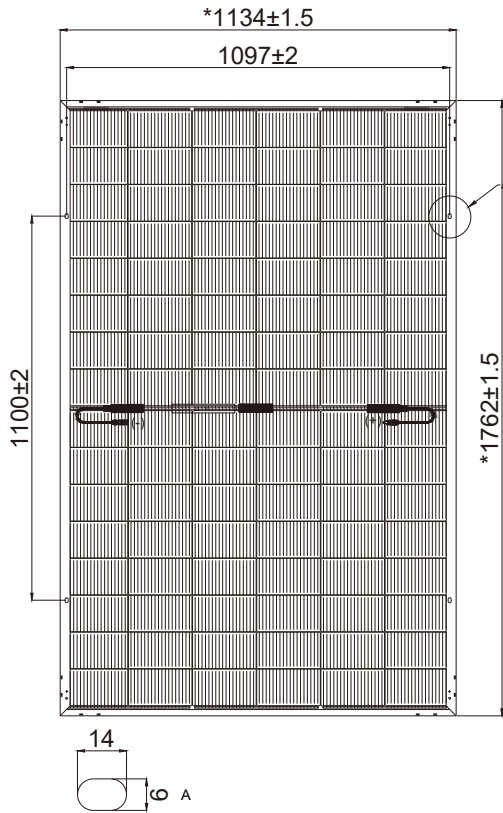
Product Certification



MSMDxxxM10-HJT96DSB

Engineering Drawings

Unit: mm



Electrical Characteristics (STC*)

MSMDxxxM10-HJT96DSB	445	450	455	460
Maximum Power (Pmax)	445W	450W	455W	460W
Module Efficiency (%)	22.27%	22.52%	22.77%	23.02%
Optimum Operating Voltage (Vmp)	30.61V	30.76V	30.90V	31.05V
Optimum Operating Current (Imp)	14.54A	14.64A	14.73A	14.82A
Open Circuit Voltage (Voc)	36.45V	36.61V	36.77V	36.93V
Short Circuit Current (Isc)	15.24A	15.34A	15.43A	15.52A
Operating Module Temperature	-40 to +85 °C			
Maximum System Voltage	DC1500V (IEC)			
Maximum Series Fuse	30A			
Power Tolerance	0~+5W			
Bifaciality	85% ± 5%			

*STC: Irradiance 1000 W/m², cell temperature 25 °C, AM=1.5, Tolerance of Pmax is within +/- 3%.

BSTC**/NOCT**

Maximum Power (Pmax)	496W	501W	507W	512W
Optimum Operating Voltage (Vmp)	30.72V	30.86V	31.01V	31.16V
Optimum Operating Current (Imp)	16.15A	16.25A	16.36A	16.46A
Open Circuit Voltage (Voc)	36.58V	36.74V	36.90V	37.06V
Short Circuit Current (Isc)	16.99A	17.10A	17.20A	17.30A

**BSTC: Front side irradiation 1000W/m², back side reflection irradiation 135W/m², AM=1.5, ambient temperature 25 °C.

Maximum Power (Pmax)	338W	342W	346W	349W
Optimum Operating Voltage (Vmp)	29.12V	29.26V	29.40V	29.54V
Optimum Operating Current (Imp)	11.62A	11.70A	11.77A	11.84A
Open Circuit Voltage (Voc)	34.79V	34.94V	35.09V	35.25V
Short Circuit Current (Isc)	12.18A	12.26A	12.33A	12.40A

**NOCT: Irradiance 800W/m², Ambient Temperature 20 °C, Wind Speed 1m/s.

Temperature Characteristics

Nominal Operating Cell Temp. (NOCT)	44 °C ± 2 °C
Temperature Coefficient of Pmax	-0.26%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	0.04%/°C

Safety & Warranty

Safety Class	Class II
Product Warranty	15 yrs Workmanship
Performance Warranty	30 yrs Linear Warranty*

* 1st year 99%, after 2nd year 0.375% annual degradation to year 30.

Mechanical Characteristics

Cell Type	HJT Mono 182×105mm
Cell Connection	96 (6×16)
Module Dimension	1762×1134×30 mm
Weight	23 kg
Junction Box	IP68
Output Cable	4mm ² , 300mm in length, length can be customized / UV resistant
Connectors Type	MC4 original / MC4 compatible
Frame	Anodised aluminum alloy (Black)
Front Load	5400 Pa
Rear Load	2400 Pa
Glass Thickness	Double glass, 1.6mm

Shipping Configurations

Container Length	40'
Pallets Per Container	26
Modules Per Pallet (pcs)	36
Modules Per Container (pcs)	936