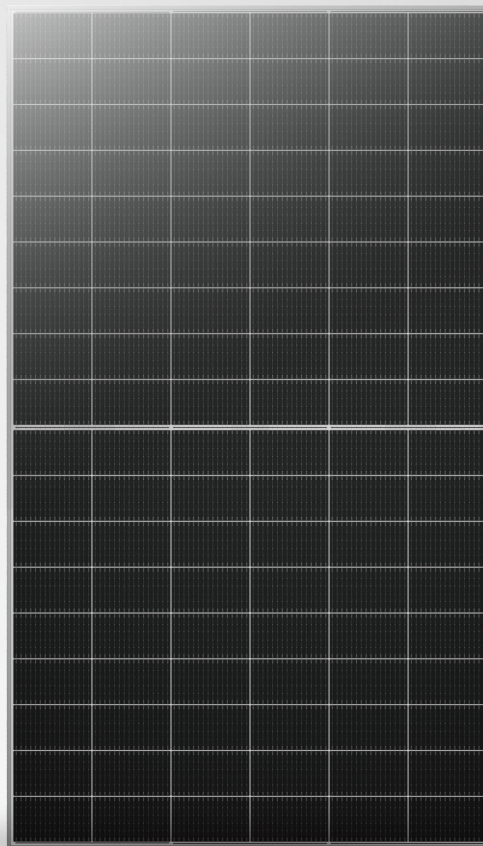


MT5N**490-510W**

MS510M-54HD

N-Type TOPCon Bifacial
Double-glass Solar Module**Qualidade Garantida****25-Year** Warranty for Materials and Processing**30-Year** Warranty for Extra Linear Power Output**22.93%**

Max. Module Efficiency

**N-type 182*210mm Cell**

Adopting the 182*210mm N-type TOPCon battery cells with highest efficiency.

Bifacial with Dual Glass

Module adopts 182*210mm half cells, bifacial module provide an additional 5%~25% output.

Harsh Environmental Adaptability

Strict salt spray and ammonia corrosion test by TUV Nord.

Low Light Features

Higher performance under low light environment.

PID Protection

Ensure the attenuation probability caused by PID phenomenon is minimized.

Load Capacity

Mechanical load tests including wind load 2400Pa and snow load 5400Pa done by TUV Nord.

Quality Management System and Product Certification

IEC61215/61730, IEC62804(PID), IEC61701(Salt).

IEC62716 (Ammonia), IEC60068-2-68(Sand).

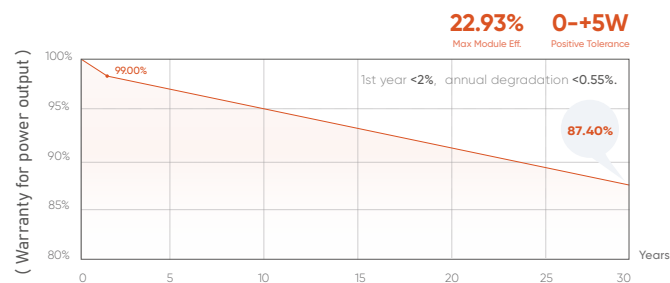
ISO 9001:2015/quality management system.

ISO 14001:2015/environmental management system.

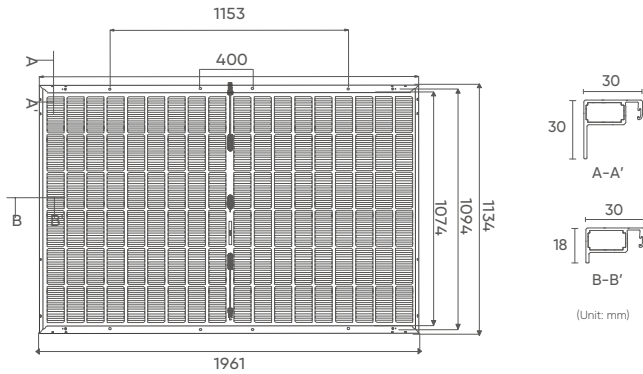
ISO 45001:2018/occupation health safety management system.

ISO 50001:2011/energy management system.

IEC TS 62941-2016/PV industry quality management system.

Quality Guarantee

Design(mm)



Solar Cells	TOPCon 182 x 210mm
No. of Cells	108 (6x18)
Dimensions	1961 x 1134 x 30mm
Weight	27.7kg
Glass Thickness	(F)2.0mm anti-reflective solar glass (B) 2.0mm solar glass
Frame	Anodized aluminium alloy
Junction Box	IP68
Output Cables	4mm ² , 300mm ² in length, length can be customized/UV resistant
Connectors	MC4 original /MC4 compatible
Mechanical load test	5400Pa
Packaging	36pcs/box, 864pcs/40'HQ

Temperature Characteristics

NMOT (Nominal Module Operating Temperature)	44°C(±2°C)
Temperature Coefficient of Voc	-0.250%/°C
Temperature Coefficient of Isc	+0.046%/°C
Temperature Coefficient of Pmax	-0.300%/°C

Operating Characteristics

Operating Module Temperature	-40°C~+85°C
Maximum System Voltage	DC 1500 (IEC)
Maximum Series Fuse Rating	25A
Power Tolerance	0~+5W
Bifaciality	85%±5%

Electrical Parameters (STC*)

Module Type: MS510M-54HD	490	495	500	505	510
Maximum Power (Pmax/W)	490	495	500	505	510
Optimum Operating Voltage (Vmp/V)	32.93	33.13	33.33	33.53	33.73
Optimum Operating Current (Imp/A)	14.88	14.94	15.00	15.06	15.12
Open Circuit Voltage (Voc/V)	39.57	39.82	40.07	40.32	40.57
Short Circuit Current (Isc/A)	15.78	15.84	15.90	15.96	16.01
Module Efficiency (%)	22.03	22.26	22.48	22.71	22.93

BSTC*

Maximum Power (Pmax/W)	373	377	381	384	389
Optimum Operating Voltage (Vmp/V)	30.92	31.12	31.32	31.52	31.72
Optimum Operating Current (Imp/A)	12.06	12.11	12.16	12.18	12.26
Open Circuit Voltage (Voc/V)	37.52	37.79	38.06	38.33	38.60
Short Circuit Current (Isc/A)	12.68	12.76	12.79	12.81	12.87

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

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

I-V Curve

