

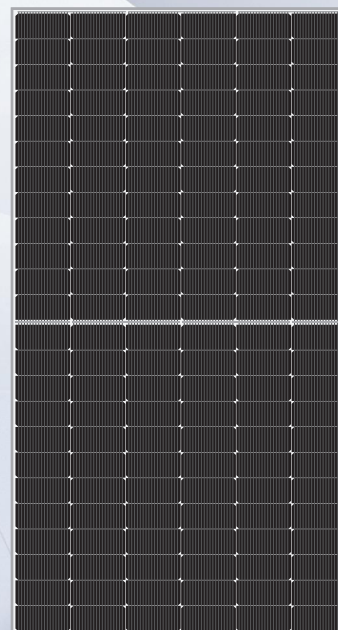
TOPCON

Double Glass Bifacial

590~620W

SN(590~620W)-144MTB 18BB >

Mono MBB N-type large size half cut module



KEY FEATURES



Sine Energy Topcon solar modules adopts the latest 18 bus bar technology decrease the current transverse propagation path by 50% and improve the efficiency of the modules up to 22%.



5~25w higher than Perc modules with the same size result in lower LCOE and O/M cost.



N type topcon modules has better reliability in harsh environment and lower LID/LETID.



N type Topcon solar cells makes longer life span, lower degradation and better performance in weak light conditions.



Half cut cell and optimized circuit design as well split junction box makes lower the power loss caused by shadow and mismatch.



Lower thermal coefficient for higher power generation at higher temperature.



Selected encapsulating materials and stringent production process controls ensures highly PID resistant.



Ideal for usage in residential rooftops, commercial and large-scale plants.

CERTIFICATION

IEC61215 | IEC61730 | IEC 61701 | CE | INMETRO

ISO 9001

2015 Quality Management System

ISO 14001

2015 Environmental Management System

ISO45001

2018 Occupational Health and Safety Management System



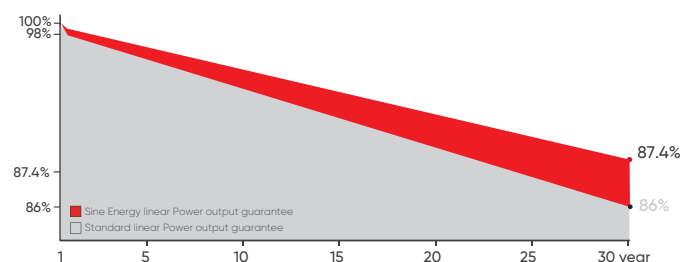
INDUSTRY LEADING WARRANTY

12 years

Guarantee on product material and workmanship

30 years

Linear power output warranty



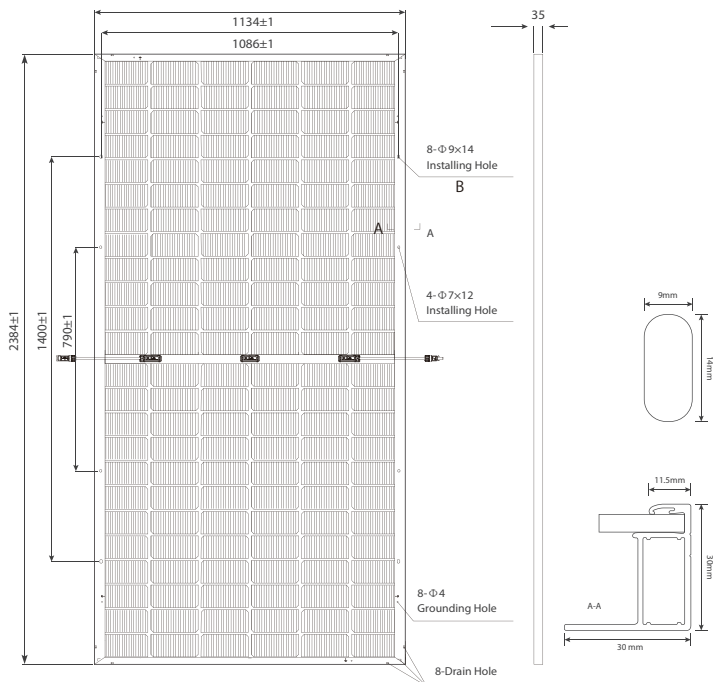
SN(590~620W)-144MTB

Weight
34kg

Number of Cells
144pcs(24×6)

Module Size
2384×1134×30mm

Packing
37pcs/pallet,740pcs/40HQ



MECHANICAL SPECIFICATIONS

Solar Cell Type	182×91mm
Glass	Dual glass, 2.0mm coated tempered glass
Frame	Silver Anodized Aluminium Alloy
Junction Box	IP68
No. of Diodes	3pcs
Output Cable	4.0mm ² 400/400mm (custmized available)
Connector	MC4 Compatible (MC4 Original optional)
Wind/Snow Load	2400pa/5400pa

TEMPERATURE COEFFICIENT

Nominal Operating Cell Temp(NOCT)	45±2 °C
Temperature Coefficient of ISC	0.045% / °C
Temperature Coefficient of VOC	-0.230% / °C
Temperature Coefficient of Pmax	-0.280% / °C
Operational Temperature	-40 °C ~ +85 °C
Maximum System Voltage	1500V DC(IEC)
Maximum Series Fuse Rating	25A

STC — Electrical Characteristics

Test conditions	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power -Pmax(W)	590W	449.1W	595W	452.9W	600W	456.7W	605W	460.6W	610W	464.4W	615W	468.2W	620W	472.0W
Maximum Power Voltage-Vmp(V)	43.92V	41.72V	43.92V	41.83V	44.06V	41.93V	44.78V	42.03V	45.00V	42.14V	43.44V	42.23V	45.36V	42.34V
Maximum Power Current-Imp(A)	13.44A	10.77A	13.52A	10.83A	13.60A	10.89A	13.68A	10.96A	13.76A	11.03A	13.84A	11.09A	13.92A	11.15A
Open Circuit Voltage -Voc(V)	52.00V	49.42V	52.11V	49.53V	52.22V	49.63V	52.33V	49.73V	52.44V	49.84V	52.55V	49.94V	52.66V	50.05V
Short Circuit Current-Isc(A)	13.33A	11.51A	14.41A	11.58A	14.49A	11.64A	14.57A	11.70A	14.65A	11.76A	14.73A	11.83A	14.81A	11.90A
Module Efficiency(STC) -ηm(%)	23.3%		23.5%		23.7%		23.9%		24.1%		24.3%		24.5%	

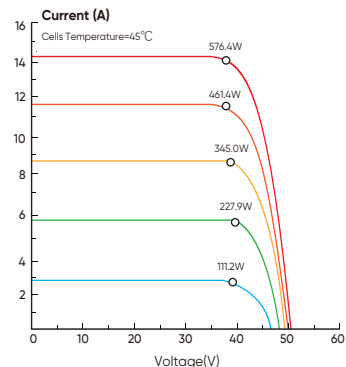
TC:Irradiance:1000W/m², Module Temperature:25°C,Air Mass:1.5

NOCT:Irradiance:800W/m², Ambient Temperature:20°C,Air Mass:1.5,Wind Speed:1m/s

Bifacial Output-Rearside Power Gain

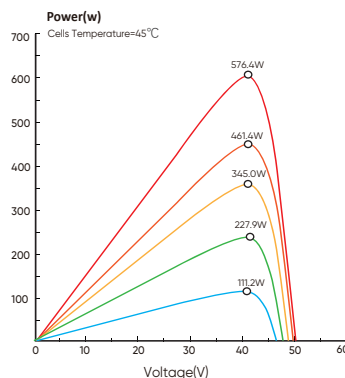
5%	Maximum Power(Pmax)	619.5W	624.75W	630W	635.25W	640.5W	645.75W	651W
	Module Efficiency STC(%)	22.91%	23.11%	23.30%	23.50%	23.69%	23.86%	24.08%
10%	Maximum Power(Pmax)	649W	654.5W	660W	665.5W	671W	676.75W	682W
	Module Efficiency STC(%)	24.01%	24.21%	24.41%	24.62%	24.828%	25.03%	25.23%
15%	Maximum Power(Pmax)	678.5W	684.25W	690W	695.75W	701.5W	707.25W	713W
	Module Efficiency STC(%)	25.10%	25.31%	25.52%	25.73%	25.95%	26.16%	26.37%

I-V Curve



Current-Voltage Curve(610W)

— 1000W/m²
— 800W/m²
— 600W/m²
— 400W/m²
— 200W/m²



Power-Voltage Curve(610W)

— 1000W/m²
— 800W/m²
— 600W/m²
— 400W/m²
— 200W/m²