

TOPCon N type Bifacial Mono-crystalline 505-525Watt

0~+5W POWER TOLERANCE

High efficiency TOPCon N - type solar module



Module characteristics



Strong Mechanical Strength
Passes the wind load test of 2400Mpa and the snow load test of 5400Mpa.



Lower attenuation
N-type, good reliability and lower LID/LETID attenuation rate.



PID resistance
The attenuation probability of PID phenomenon is minimized through solar cell production technology optimization and raw material control



Harsh environmental adaptation
Robust design for demanding climate conditions.

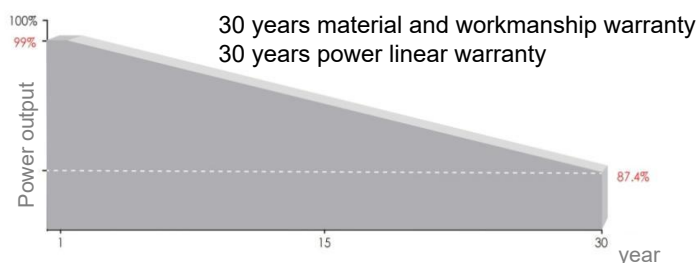


Multiple busbar and Half cell technique
More light utilization and current collection capabilities, effectively improving product power output and reliability



Long and reliable quality assurance

IEC61215(2016), IEC61730(2016)
ISO9001:2015: Quality management system
ISO14001:2015: Environmental management system
ISO45001:2018: Occupational health and safety management system



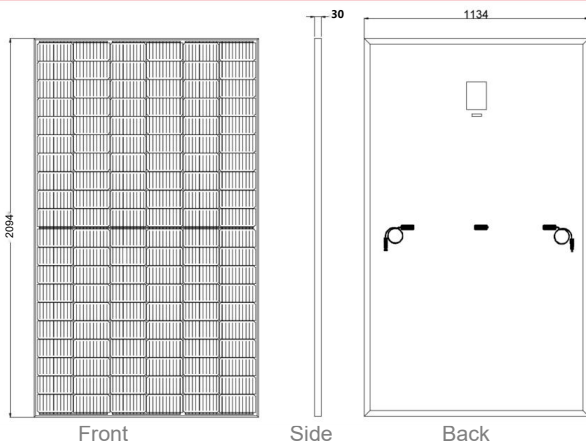
Linear attenuation of 0.4% per year from the 2nd to 30th year.

Electrical Parameters

Model Type	ESM-525T		ESM-520T		ESM-515T		ESM-510T		ESM-505T	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	525	395	520	391	515	388	510	385	505	382
Open Circuit Voltage (Voc)	46.15	43.84	46.00	43.71	45.85	43.60	45.7	43.49	45.55	43.28
Short Circuit Current (Isc)	14.19	11.45	14.11	11.39	14.04	13.98	13.96	13.92	13.88	13.86
Maximum Power Voltage (Vmp)	38.89	36.06	38.78	35.95	38.67	35.84	38.56	35.73	38.45	35.62
Maximum Power Current (Imp)	13.50	10.95	13.41	10.89	13.32	10.83	13.23	10.77	13.14	10.72
Module Efficiency - η_m (%)	22.10		21.89		21.68		21.47		22.26	
Operational Temperature	-40°C ~ +85°C									
Maximum System Voltage	1500VDC									
Maximum Series Fuse Rating	25A									
Power Tolerance	0 ~ +3%									
Temperature Coefficient of Pmax	-0.310%/°C									
Temperature Coefficient of Voc	-0.260%/°C									
Temperature Coefficient of Isc	+0.046%/°C									
Nominal Operating Cell Temperature	45 ± 2°C									
Safety Class	Class II									
Max Load (Front/back)	5400Mpa/2400Mpa									

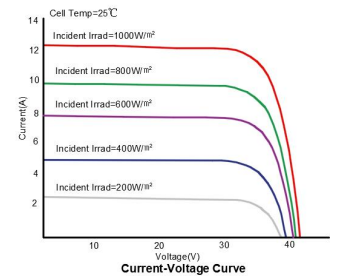
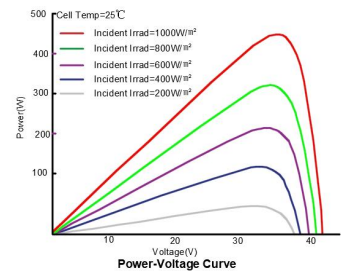
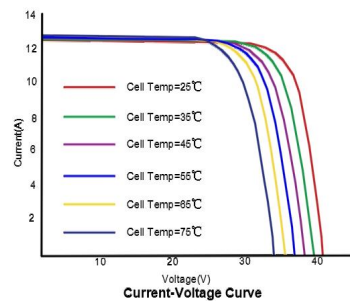
STC: Irradiance 1000W/m² Cell temperature 25°C Atmospheric quality = 1.5
 NOCT: Irradiance 800W/m² Ambient temperature 25°C Atmospheric quality = 1.5 Wind speed 1m/S

Mechanical Diagrams



Length: + 2mm
 Width: + 2mm
 Thickness: + 1mm
 Hole pitch: + 2mm

Curve



Packing Details:

36pcs/pallet
 40GP: 22 pallets/container, 792pcs/40'HQ

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Specification

Cell type	N type mono crystalline 182mm
Half-cell quantity	132pcs (6×22)
Dimension	2094×1134×30
Weight	25kg±3%
Glass	3.2mm, tempered and AR coated
Frame	Sliver Anodized Aluminum Alloy
Junction Box	IP68
Cable	1100mm (can be customized)