

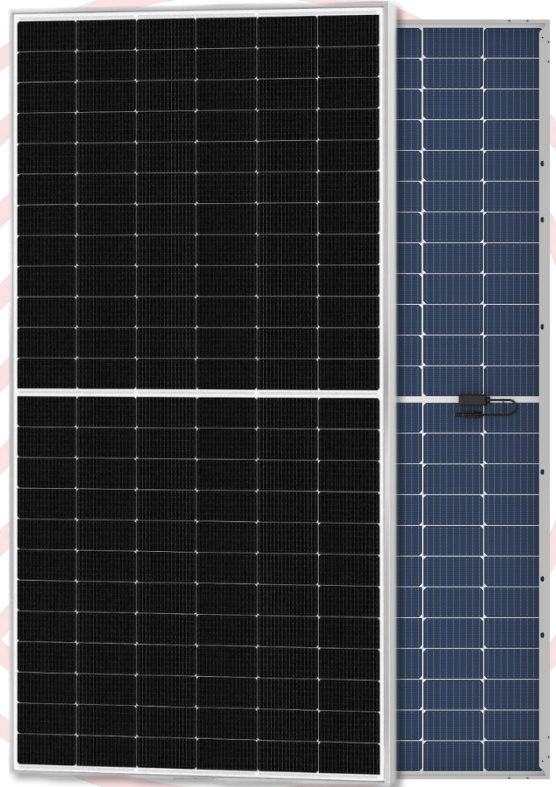
TOPCon N type Bifacial Mono-crystalline 630-650Watt

0~+5% POWER TOLERANCE

High efficiency TOPCon N - type solar module



16/18BB



Module characteristics



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



Lower attenuation
N-type, Components have better reliability and lower LID/LETID attenuation



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



Harsh environmental adaptation
Third party certification for salt spray and ammonia corrosion tests

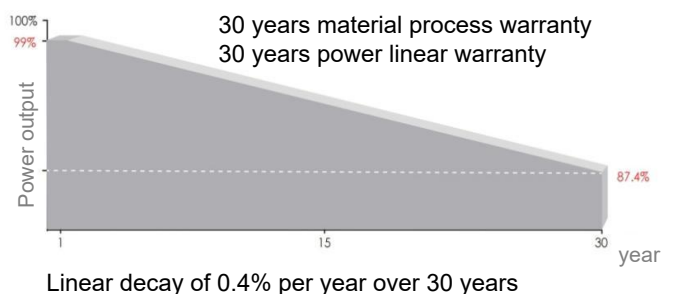


Multiple busbar and Half cell technique
More light utilization and current collection capabilities, effectively improving product power output and reliability



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

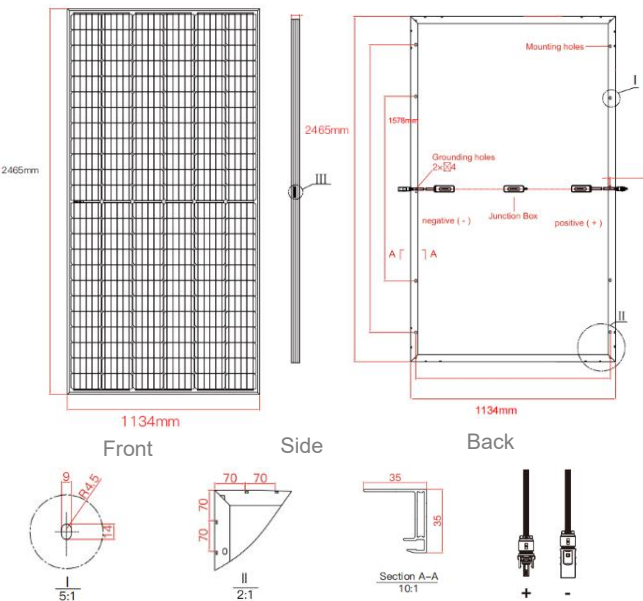


Electrical Parameters

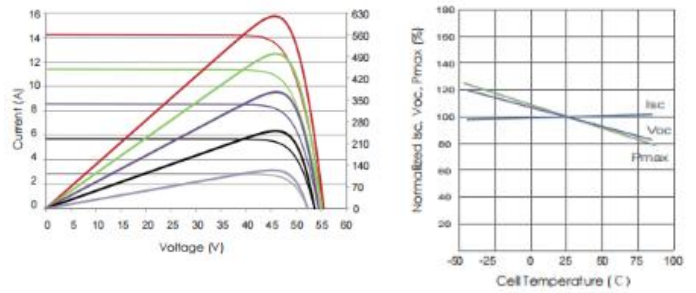
Model Type	ESM-630T		ESM-635T		ESM-640T		ESM-645T		ESM-650T	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	630	473	635	477	640	481	645	485	650	489
Open Circuit Voltage (Voc)	55.93	53.12	56.08	53.27	56.23	53.42	56.38	53.57	56.53	53.72
Short Circuit Current (Isc)	14.37	11.60	14.44	11.67	14.51	11.74	14.58	11.81	14.65	11.89
Maximum Power Voltage (Vmp)	46.06	42.83	46.18	42.95	46.28	43.05	46.38	43.15	46.48	43.25
Maximum Power Current (Imp)	13.67	11.04	13.75	11.10	13.83	11.17	13.91	11.24	13.98	11.31
Module Efficiency - η_m (%)	22.53		22.71		22.89		23.07		23.25	
Operational Temperature	-40°C ~ +85°C									
Maximum System Voltage	1500VDC									
Maximum Series Fuse Rating	25A									
Power Tolerance	0 ~ +5W									
Temperature Coefficient of Pmax	-0.360%/°C									
Temperature Coefficient of Voc	-0.260%/°C									
Temperature Coefficient of Isc	+0.04%/°C									
Nominal Operating Cell Temperature	45 ± 2°C									
Safety Class	Class II									
Max Load (Front/back)	5400Pa/2400Pa									

STC: Irradiance 1000W/m² Cell temperature 25°C Atmospheric quality = 1.5
 NOCT: Irradiance 800W/m² Ambient temperature 20°C Atmospheric quality = 1.5 Wind speed 1m/S

Mechanical Diagrams



Curve



Packing Details:

36pcs/pallet

40GP: 16 pallets/HQ, 572pcs/40'HQ

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Specification

Cell type	N type mono crystalline 182mm
Half-cell quantity	156pcs (26×6)
Dimension	2465×1134×30mm
Weight	31kg±3%
Glass	3.2mm
Frame	Silver/Black Anodized Aluminum Alloy
Junction Box	IP68
Cable	400mm (can be customized)

The company reserves the right of final right of adjustment of this file.