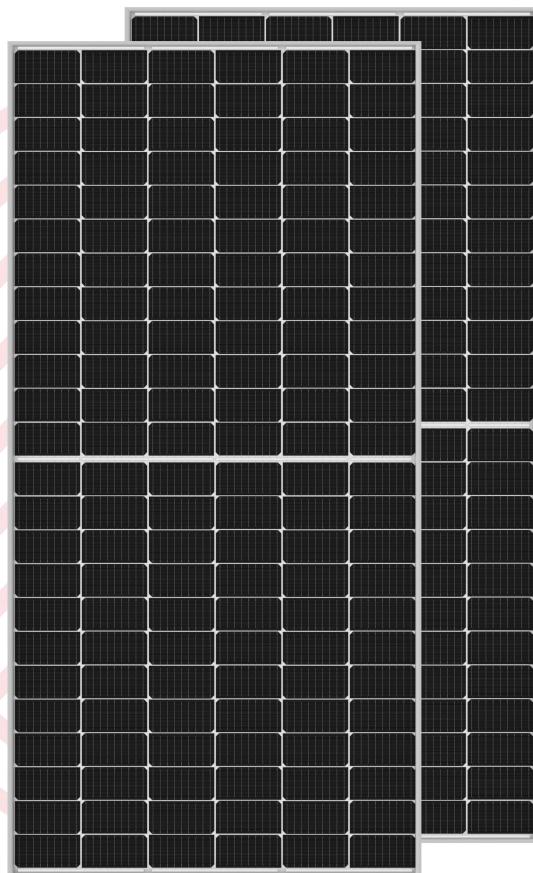


# TOPCon N type Mono-crystalline *505-525Watt white*

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



### 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



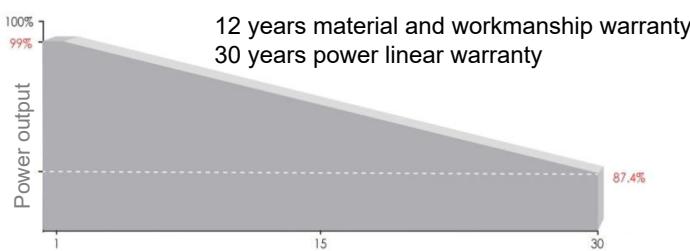
## Long and reliable quality assurance

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.

12 years material and workmanship warranty  
30 years power linear warranty

## 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								
MaximumPowerVoltage (Vm <sub>p</sub> )	38.89	36.06	38.78	35.95	38.67	35.84	38.56	35.73	38.45	35.62								
MaximumPowerCurrent (Im <sub>p</sub> )	13.50	10.95	13.41	10.89	13.32	10.83	13.23	10.77	13.14	10.72								
ModuleEfficiency - η <sub>m</sub> (%)	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																	

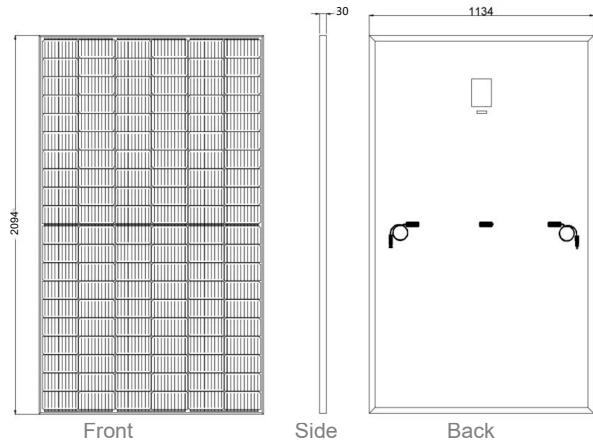
STC: Irradiance 1000W/m<sup>2</sup> NOCT: Irradiance 800W/m<sup>2</sup>

Cell temperature 25°C Ambient temperature 25°C

Atmospheric quality = 1.5 Atmospheric quality = 1.5

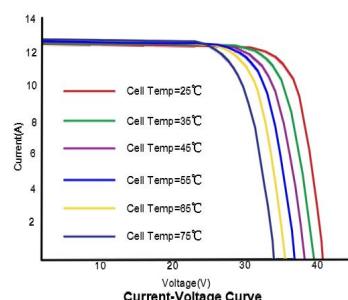
Wind speed 1m/S

## Mechanical Diagrams

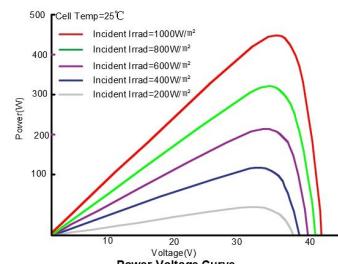


Length: ± 2mm  
Width: ± 2mm  
Thickness: ± 1mm  
Hole pitch: ± 2mm

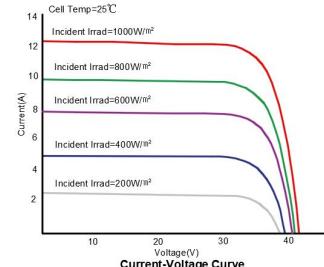
## Curve



Current-Voltage Curve



Power-Voltage Curve



Current-Voltage Curve

## Packing Details:

36pcs/pallet

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

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Website: www.einnova-solarline.com

## Specification

Cell type	N type mono crystalline 182mm
Half-cell quantity	132pcs (6×22)
Dimension	2094×1134×30mm
Weight	25kg±3%
Glass	3.2mm, tempered and AR coated
Frame	Sliver Anodized Aluminum Alloy
Junction Box	IP68
Cable	1000mm (can be customized)