

## TOPCon N type Bifacial Mono-crystalline 435-455Watt

0~+5% POWER TOLERANCE

High efficiency TOPCon N - type solar module



16/18BB



### Module characteristics



#### Strong Mechanical Strength

Passes the wind load test of 2400Mpa and the snow load test of 5400Mpa



#### 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



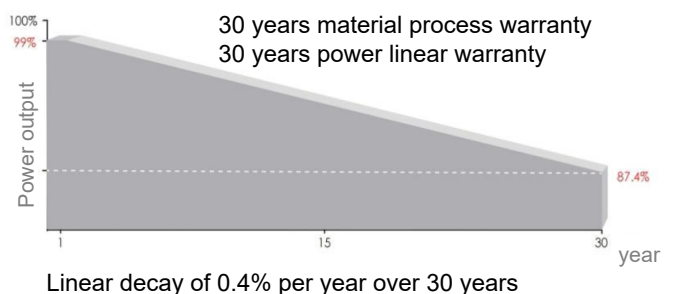
### Long and reliable quality assurance

IEC61215(2016), IEC61730(2016)

ISO9001:2015: Quality management system

ISO14001:2015: Environmental management system

ISO45001:2018: Occupational health and safety management system

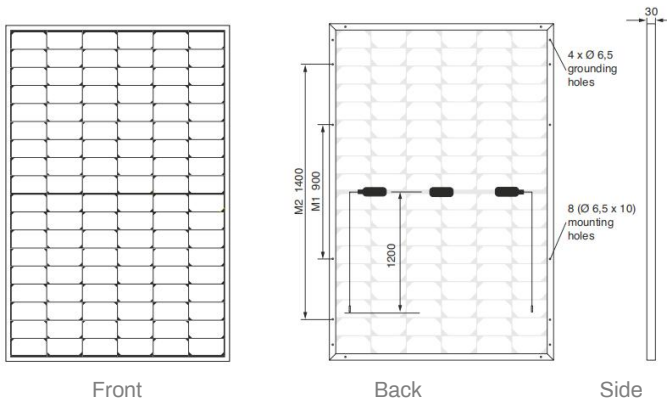


## Electrical Parameters

Model Type	ESM-435T		ESM-440T		ESM-445T		ESM-450T		ESM-455T	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	435	329	440	333	445	337	450	340	455	345
Open Circuit Voltage (Voc)	40.02	38.24	40.31	38.52	40.60	38.80	40.90	39.04	41.20	39.28
Short Circuit Current (Isc)	13.58	10.90	13.64	10.91	13.7	10.91	13.76	10.92	13.82	10.93
Maximum Power Voltage (Vmp)	33.14	30.99	33.44	31.27	33.75	31.56	34.05	31.84	34.34	32.11
Maximum Power Current (Imp)	13.13	10.62	13.16	10.64	13.19	10.67	13.22	10.69	13.25	10.72
Module Efficiency - $\eta_m$ (%)	22.27		22.53		22.78		23.04		23.30	
Operational Temperature	-40°C~+85°C									
Maximum System Voltage	1500VDC									
Maximum Series Fuse Rating	25A									
Power Tolerance	0~+5w									
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									

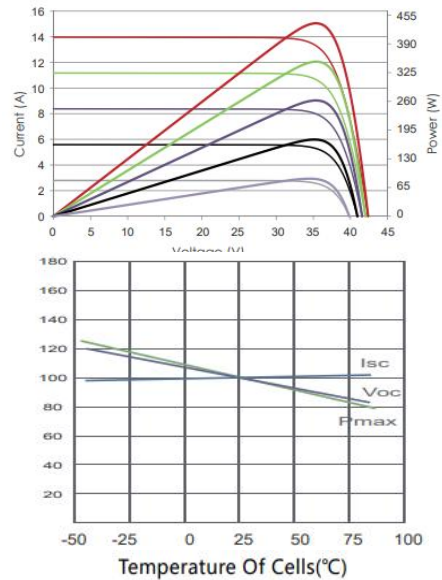
STC: Irradiance 1000W/m<sup>2</sup> Cell temperature 25°C Atmospheric quality =1.5  
 NOCT: Irradiance 800W/m<sup>2</sup> Ambient temperature 25°C Atmospheric quality =1.5 Wind speed 1m/S

## Mechanical Diagrams



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

## IV Curve



## Packing Details

36pcs/pallet, Pallet size: 1760×1120×1260mm

40HQ: 26 pallets/container, 936pcs.

20GP: 12 pallets/container, 384pcs.

### EINNOVA SOLARLINE ENERGY CORP. LIMITED

210000 Nanjing  
 PEOPLE'S REPUBLIC OF CHINA  
 TEL: +86-25-8479-2033  
 Cell: +86-138-13088384  
 EMAIL: emma.wu@einnova-solarline.com  
 Website: www.einnova-solarline.com

## Specification

Cell type	N type mono crystalline 16/18BB
Half-cell quantity	108 (6×18)
Dimension	1722×1134×30
Weight	21kgs±3%
Glass	AR coated & toughened 3.2mm
Frame	Sliver/Black Anodized Aluminum Alloy
Junction Box	IP68 MC4 Compatible connectors
Cable	1000mm (can be customized)