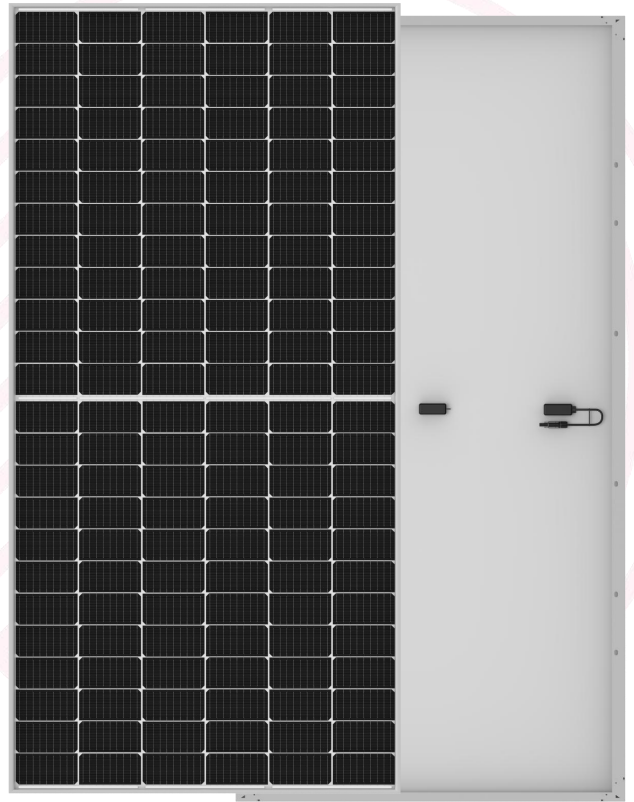


TOPCon N type Mono-crystalline 630-650Watt White

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.



Low attenuation rate
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.

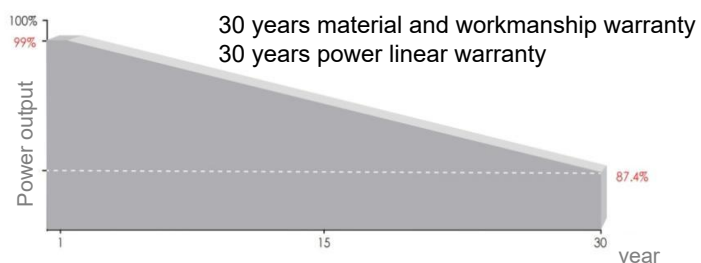


Multiple busbar and Half cell technique
More light utilization and current collection capabilities, effectively improving product power output and reliability.



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



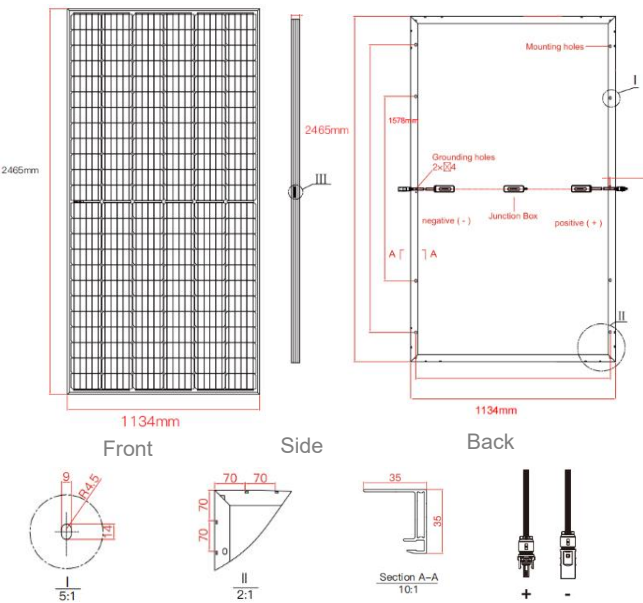
Linear attenuation of 0.4% per year from the 2nd to 30th year.

Electrical Parameters

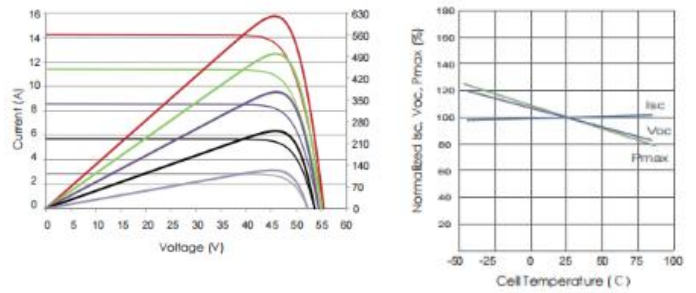
| Model Type | ESM-630T | | ESM-635T | | ESM-640T | | ESM-645T | | ESM-650T | |
|------------------------------------|-----------------|-------|----------|-------|----------|-------|----------|-------|----------|-------|
| | STC | NOCT | STC | NOCT | STC | NOCT | STC | NOCT | STC | NOCT |
| Maximum Power (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) | 5400Mpa/2400Mpa | | | | | | | | | |

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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 Website: www.einnova-solarline.com

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 Anodized Aluminum Alloy |
| Junction Box | IP68 |
| Cable | 400mm (can be customized) |