

N-Type TOPCon (Bifacial)

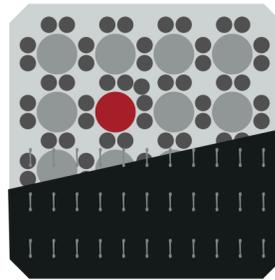
590Wp

Ideal for Utility & Commercial Installations

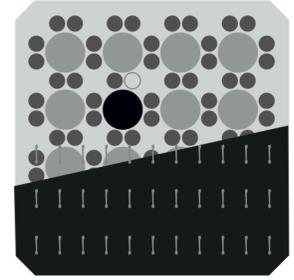


More Power than P-Type Module

● Silicon ● Electron ● Phosphorus ● Boron

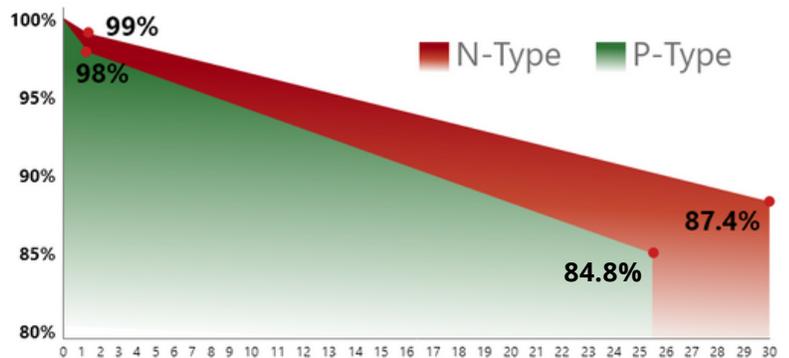


N-Type Solar Cell



P-Type Solar Cell

Lower Performance Degradation



| ELECTRICAL DATA (STC) | |
|-------------------------------|---------------------|
| Model No. | EPNL24590TOP-TOPCON |
| Peak Power Output -Pmax(Wp) | 590 |
| Power Output Tolerance (Wp) | 0~+5 |
| Open Circuit Voltage-Voc (V) | 51.34 |
| Maximum Power Voltage-Vmpp(V) | 42.67 |
| Short circuit current-Isc(A) | 14.59 |
| Maximum Power Current-Impp(A) | 13.84 |
| Module Efficiency (%) | 22.84 |
| Fill Factor (%) | 78.84 |

*(STC) - 1000 W/m2 irradiance, Air Mass 1.5 and 25°C cell temperature

| ELECTRICAL DATA (NOCT) | |
|-------------------------------|--------|
| Peak Power Output -Pmax(Wp) | 438.37 |
| Open Circuit Voltage-Voc (V) | 47.75 |
| Maximum Power Voltage-Vmpp(V) | 39.04 |
| Short circuit current-Isc(A) | 11.85 |
| Maximum Power Current-Impp(A) | 11.24 |

(NOCT) - 800 W/m2 irradiance, Air Mass 1.5, Ambient temperature 20°C and Wind speed 1 m/s

| TOTAL POWER (FRONT+BACK) | | |
|--------------------------|-------------------------|-------|
| With 10% Gain | Peak Power (Wp) | 649 |
| | Efficiency η_m (%) | 25.12 |
| With 15% Gain | Peak Power (Wp) | 679 |
| | Efficiency η_m (%) | 26.27 |
| With 20% Gain | Peak Power (Wp) | 708 |
| | Efficiency η_m (%) | 27.41 |
| With 25% Gain | Peak Power (Wp) | 738 |
| | Efficiency η_m (%) | 28.55 |
| With 30% Gain | Peak Power (Wp) | 767 |
| | Efficiency η_m (%) | 29.69 |

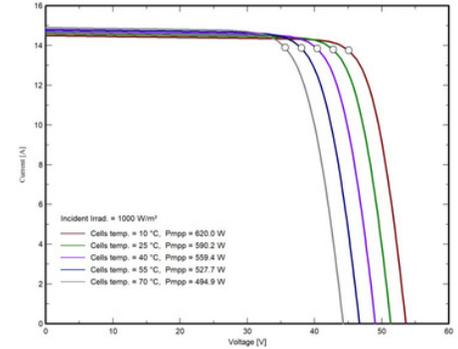
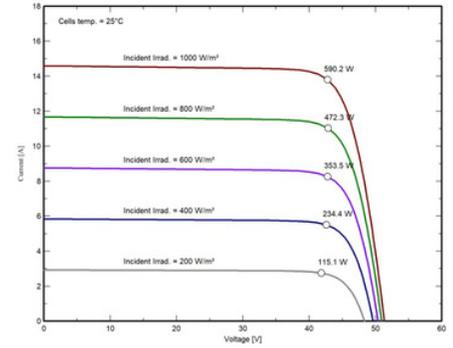
| MECHANICAL DATA | |
|--|------------------|
| Solar Cells Per Module (units) | 144 |
| Cell Configuration (Matrix) | 12X6 II 12X6 |
| Cell Size (mm) | 91X182 |
| Length(L) x Width (W) x Thickness(T) in mm | 2278X1134X35 |
| Area of module (sq-m) | 2.583252 |
| Weight of module(kg) | 27.1 \pm 2% Kg |

| | |
|--------------------------|---|
| Solar Cell | N-Type TOPCon (91 x 182) |
| Junction Box | IP 68 rated Split Junction Box with Individual Bypass Diode |
| Connector | IP 68 rated MC4 Compatible |
| Front Cover(Glass) | 3.2 mm Low Iron High Transmission AR Coated Tempered Glass |
| Back cover(Backsheet) | Transparent Backsheet (Composite Film) |
| Encapsulant | PID Free and UV Resistant |
| Frame | Anodized Aluminum Frame |
| Application Class Rating | Class A |
| Safety Class Rating | Class II |
| Fire Safety | Class C |
| Mechanical Load | Snow Load 5400 pa, Wind Load 2400 Pa |
| Cable Type | 4 mm ² |

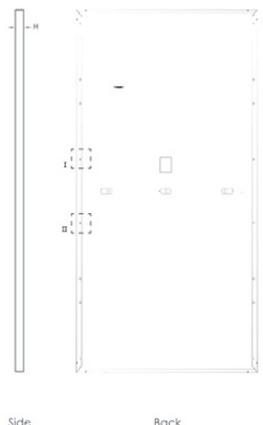
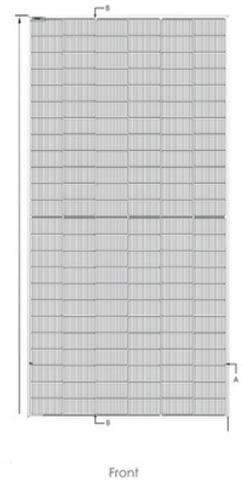
| Temperature Ratings | |
|---------------------------------|------------------|
| NOCT | 45°C \pm 2°C |
| Temperature Coefficient of Pmax | -0.38% /°C |
| Temperature Coefficient of Voc | 0.36% /°C |
| Temperature coefficient of Isc | 0.04% /°C |
| Operating Temperature Range | - 40°C to + 85°C |

| | |
|----------------------------|----------|
| Maximum System Voltage | 1500V DC |
| Maximum Series Fuse Rating | 30A |

Characteristics Curve



Engineering Drawings



25 Years Power Output Warranty

Specifications Provided in the datasheet are subject to change without Prior notice.

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