

Highly Efficient \* Durable \* Reliable

## Product Features

- High cell efficiency with quality silicon material for long term output stability and reliability
- Stringent quality controls to meet the highest international standards
- High transmittance, low iron, tempered glass with enhanced stiffness and impact resistance
- Unique frame design with high level mechanical strength for easy installation
- Advanced encapsulation material with multilayer sheet lamination to provide long-life and enhanced cell performance
- Outstanding electrical performance under high temperature and low irradiance conditions
- 60 polycrystalline high-efficiency solar cells (approx. 17%)
- Entire module certified to withstand high wind loads (2400 Pascal) and snow loads (6400 Pascal)
- All critical components from well-known manufacturers

**ENP-M240PO**  
**ENP-M230PO**  
**ENP-M220PO**  
**ENP-M210PO**



## Applications

- Any large or small on-grid /off-grid solar power station
- Residential/Commercial/Industrial building roof-top systems
- Any commercial/industrial ground mount system
- Other industrial and commercial applications

## Warranty & Certifications

- 5 year limited product warranty on materials and workmanship
- 10 years for 90% power output
- 25 years for 80% power output



IEC 61215 IEC 61730,



CE Certified,



UL 1703

### Components & Mechanical Data

<b>Front Glass</b>	High Transparency Tempered Glass, 3.2mm - Saint Gobain (Albarino) // CSG
<b>Junction Box</b>	Tyco, 1740971-1
<b>Bypass Diode</b>	Diotec SL1515 (15A)
<b>Output Cables</b>	Cable Tyco 1m, ZHSCG (4mm <sup>2</sup> and 12AWG), IEC and UL approved
<b>Connectors</b>	MC4 // Tyco, IP67, IEC & UL approved
<b>Frame</b>	Anodized aluminum alloy type 6063-T5
<b>Encapsulation Material</b>	Bridgestone EVAS11 (0.50 + 0.03mm thickness)
<b>Back Foil</b>	White TPT ISOVOLTA 3469(0.32mm thickness, Dupont cast film) //Krempel PTL 1000 (0.32mm thickness, Dupont cast film) //SFC TT350 (0.35mm thickness, Dupont original film)
<b>Silicone Sealant</b>	Dow Corning 7091 // TONSUN 1527
<b>Max Load</b>	6400 Pa
<b>Impact Resistance</b>	Steel ball - 1040g dropped from 1m high
<b>Dimensions</b>	1640 × 992 × 40mm (64.7 × 39.0 × 1.57 inch)
<b>Weight</b>	20 kg (44.1 lbs.)
<b>Solar Cell</b>	Polycrystalline 156 × 156 mm (6 inch)
<b>Number of Cells</b>	60 (6 x 10)

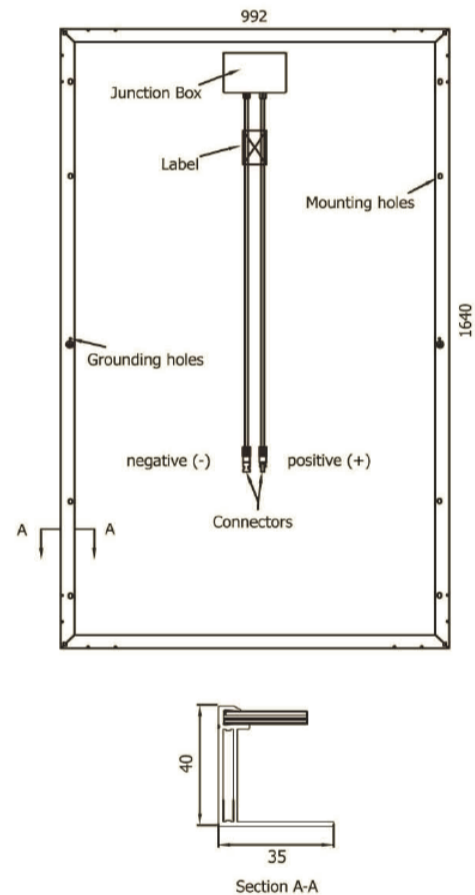
<b>Electrical Characteristics</b>				
Standard Test Conditions (STC)	ENP-M240PO	ENP-M230PO	ENP-M220PO	ENP-M210PO
Maximum Power at STC $P_{max}$ (W)	240	230	220	210
Max-Power Voltage $V_m$ (V)	30.2	29.7	28.7	28.2
Max-Power Current $I_m$ (A)	7.95	7.75	7.67	7.45
Open-Circuit Voltage $V_{oc}$ (V)	37.6	37.2	36.7	36.1
Short-Circuit Current $I_{sc}$ (A)	8.40	8.30	8.25	8.10
Cell Efficiency	16.8%	16.1%	15.4%	14.7%
Maximum System Voltage (V)	1000V(TUV), 600V(UL)			
Maximum Series Fuse Rating	15 A			
Power Tolerance	±3.0%			
Operating Temperature	-40 °C to +90 °C			

STC: irradiance 1000 W/m<sup>2</sup>, module temperature 25 °C, AM=1.5. Deviation of  $V_m$ ,  $I_m$ ,  $V_{oc}$ ,  $I_{sc}$  of ±10%

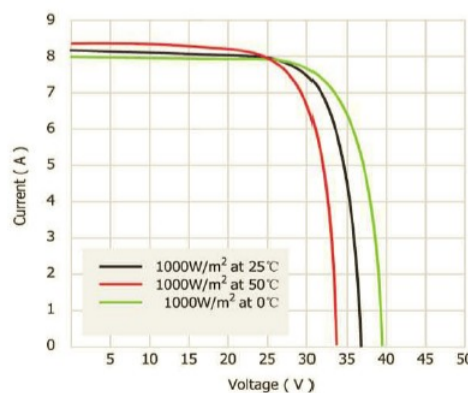
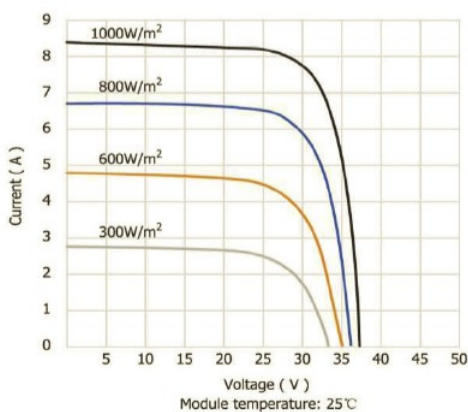
<b>Temperature Coefficients</b>	
NOCT (°C)	45±2
Current Temperature Coefficient of $I_{sc}$ (%/°C)	0.06±0.01
Voltage Temperature Coefficient of $V_{oc}$ (%/°C)	-0.34±0.01
Temperature Coefficient of $I_m$ (%/°C)	-0.02±0.01
Temperature Coefficient of $V_m$ (%/°C)	-0.50±0.01
Temperature Coefficient of $P_m$ (%/°C)	-0.40±0.05

NOCT: Irradiance 800 W/m<sup>2</sup>, ambient temperature 20 °C, wind speed 1 m/s

<b>Packing Configuration</b>	
Number of modules per box	23
Box size L x W x H (mm)	1693 x 1045 x 120
Box Gross Weight	460 kg (1014 lbs)
Boxes per Pallet	1
Pallets per 20'GP container	14
Pallets per 40'GP container	28



**Current-Voltage & Power-Voltage Curve**



Electrical equipment, check with your installer

Dealer Information Box

Specifications are subject to change without prior notification