



Beam 2 Plus Solar Panel

450-465W

Silver/Black Frame (182mm)

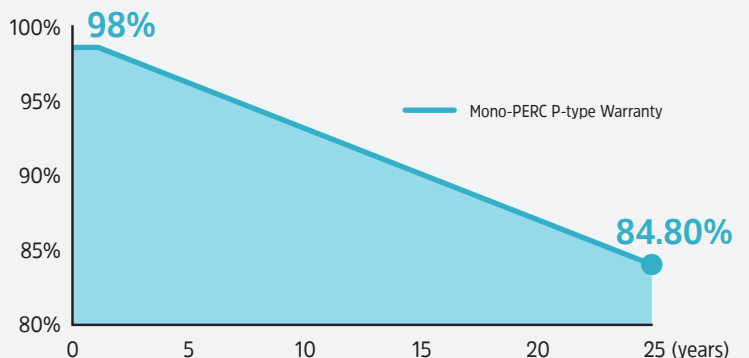
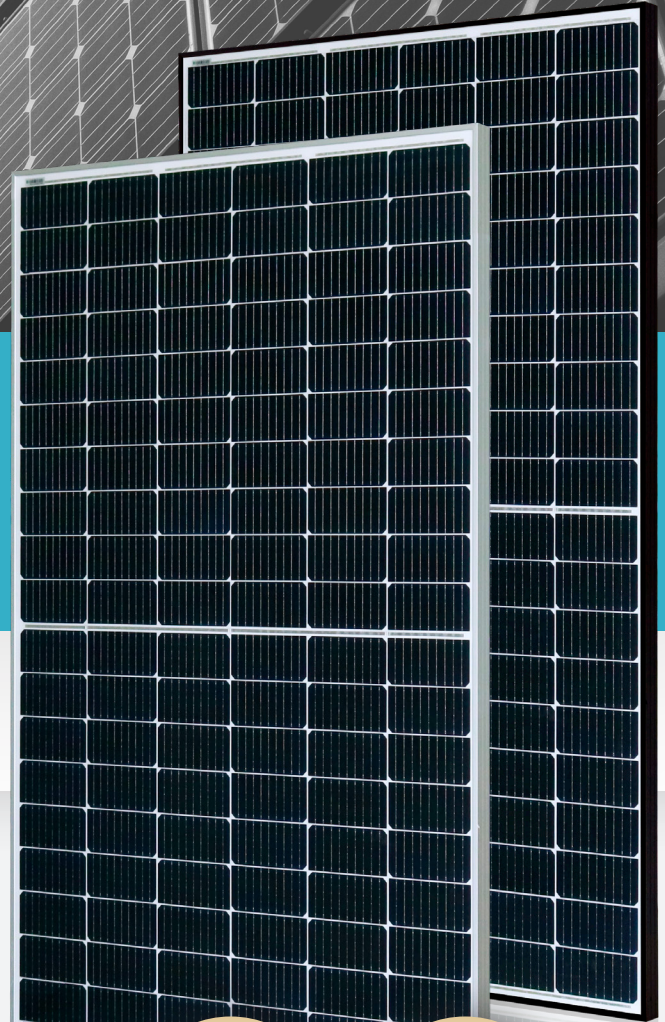
Mono PERC Half Cell Module

ENSP60M2450BF ENSP60M2460BF
ENSP60M2455BF ENSP60M2465BF



Built using Mono-crystalline PERC technology, the Energizer® Solar Panels range combine two of the best technologies in the market.

- Lower Power Loss**
Better performance in shaded and low-light conditions.
- Higher efficiency**
Higher module power efficiency up to 20.6%.
- Lower operating temperatures**
Low operating temperatures and coefficients increases performance.
- Half Cell technology**
Excellent performance under real conditions.
- Keeps going and going**
Engineered and designed to withstand harsh environments.



Linear power output warranty
(1st year ≤ 2.0%, 2nd~25th years ≤ 0.55% / year)

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Electrical Specifications

STC: Irradiance 1000W/m², Cell Temperature 25°C, AM=1.5

| | | | | |
|---------------------------------|-------|-------|-------|-------|
| Rated output (Pmpp / Wp) | 450 | 455 | 460 | 465 |
| Rated voltage (Vmpp / V) | 34.83 | 35.00 | 35.17 | 35.34 |
| Rated current (Impp / A) | 12.92 | 13.00 | 13.08 | 13.16 |
| Open circuit voltage (Voc / V) | 41.45 | 41.65 | 41.85 | 42.05 |
| Short circuit voltage (Isc / A) | 13.71 | 13.81 | 13.91 | 13.98 |
| Module efficiency | 20.9% | 21.1% | 21.3% | 21.5% |

NMOT: Irradiance 800W/m², Ambient Temperature 20°C, AM=1.5, Wind Speed 1m/s

| | | | | |
|---------------------------------|-------|-------|-------|-------|
| Rated output (Pmpp / Wp) | 336.3 | 340.0 | 343.8 | 347.5 |
| Rated voltage (Vmpp / V) | 32.46 | 32.62 | 32.78 | 32.93 |
| Rated current (Impp / A) | 10.36 | 10.42 | 10.49 | 10.55 |
| Open circuit voltage (Voc / V) | 39.17 | 39.36 | 39.55 | 39.74 |
| Short circuit current (Isc / A) | 11.12 | 11.20 | 11.29 | 11.34 |

Power Sorting: +/-5W Measurement tolerance +/-3%

Temperature Rating (STC)

| | |
|---|--------------|
| Temperature coefficient (Pmpp) | -0.35% / °C |
| Temperature coefficient (Isc) | -0.045% / °C |
| Temperature coefficient (Voc) | -0.27% / °C |
| Nominal module operating temperature (NMOT) | 41±2°C |

Operating Parameters

| | |
|------------------------------|---------------------|
| No. of diodes | 3 |
| Junction box IP rating | IP68 |
| Max. series fuse rating | 25A |
| Max. system voltage (IEC/UL) | 1500V _{oc} |

Other Specifications

| | |
|---|---|
| Outer dimensions (L x W x H) | 1890 x 1133 x 30mm |
| Cell type | P type Mono-crystalline |
| No. of cells | 120 |
| Frame technology | Aluminium (silver or black) |
| Front glass thickness | 3.2mm |
| Cable length (IEC/UL) | Portrait: 300mm; Landscape: 1300mm |
| Cable diameter (IEC/UL) | 4mm ² / 12 AWG |
| Maximum mechanical test load | 5400 Pa (front) / 2400 Pa (back) |
| Connector type (IEC/UL) | PV-HCB40 (Astronergy) or PV-KST4-EVO2/xy-UR, PVKBT4-EVO2/xy (Stäubli) |
| Module weight | 23.8kg |
| Packing unit | 36 pcs / box |
| Weight of packing unit (40ft container) | 892kg |
| Modules per 40ft container | 864 pcs |
| Fire Class Rating | Class C |
| Country of Manufacturer | China |

Curve

