

Energizer®

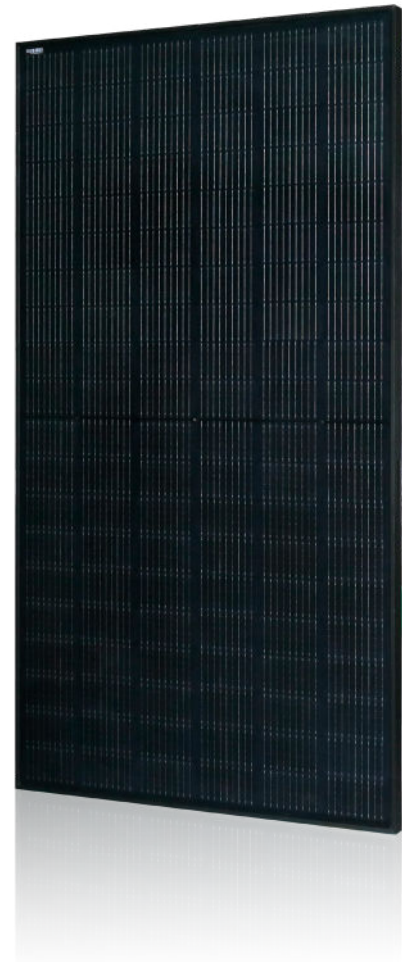
SOLAR PANELS

Beam All Black

Black Frame (166mm)

365-380W

Mono PERC Half Cell Module
ENSP60M1 Series



Key Features



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.

Warranty

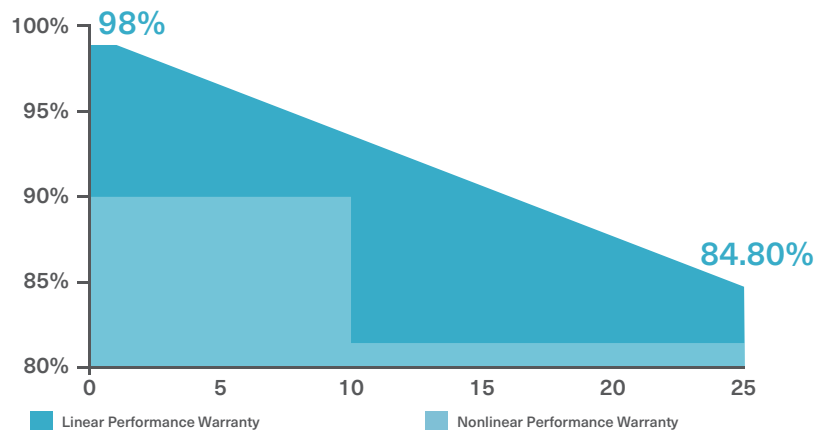


Product warranty



Linear power output warranty

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



Electrical Specifications

| | | | | |
|---------------------------------------------|---------------------|----------|-------------------|----------|
| STC rated output (P_{mpp}) | 365 Wp | 370 Wp | 375 Wp | 380 Wp |
| Rated voltage (V_{mpp}) at STC | 33.73 V | 33.98 V | 34.28 V | 34.51 V |
| Rated current (I_{mpp}) at STC | 10.82 A | 10.89 A | 10.94 A | 11.01 A |
| Open circuit voltage (V_{oc}) at STC | 40.41 V | 40.75 V | 41.05 V | 41.34 V |
| Short circuit current (I_{sc}) at STC | 11.29 A | 11.35 A | 11.42 A | 11.49 A |
| Module efficiency | 20.0% | 20.3% | 20.6% | 20.9% |
| Rated output (P_{mpp}) at NMOT | 272.2 Wp | 275.9 Wp | 279.6 Wp | 283.4 Wp |
| Rated voltage (V_{mpp}) at NMOT | 31.45 V | 31.68 V | 31.96 V | 32.18 V |
| Rated current (I_{mpp}) at NMOT | 8.65 A | 8.71 A | 8.75 A | 8.81 A |
| Open circuit voltage (V_{oc}) at NMOT | 37.99 V | 38.31 V | 38.59 V | 38.87 V |
| Short circuit current (I_{sc}) at NMOT | 9.08 A | 9.13 A | 9.19 A <td 9.24 A | |
| Temperature coefficient (P_{mpp}) | - 0.35%/°C | | | |
| Temperature coefficient (I_{sc}) | + 0.050%/°C | | | |
| Temperature coefficient (V_{oc}) | - 0.27%/°C | | | |
| Nominal module operating temperature (NMOT) | 41±2°C | | | |
| Maximum system voltage (IEC/UL) | 1500V _{DC} | | | |
| Number of diodes | 3 | | | |
| Junction box IP rating | IP 68 | | | |
| Maximum series fuse rating | 20 A | | | |

STC: Irradiance 1000W/m², Cell Temperature 25°C, AM=1.5
 NMOT: Irradiance 800W/m², Ambient Temperature 20°C, AM=1.5, Wind Speed 1m/s
 Name plate tolerances: Pmax +/-3%, Voc +/-3%, Isc +/-5%

Mechanical Specifications

| | |
|--------------------------------|----------------------------------------------------------------|
| Outer dimensions (L x W x H) | 1755 x 1038 x 30 mm |
| Frame technology | Aluminum, black anodized |
| Front glass thickness | 3.2 mm |
| Cable length (IEC/UL) | Portrait: 300 mm Landscape (standard): 1200 mm |
| Cable diameter (IEC/UL) | 4 mm ² / 12 AWG |
| ① Maximum mechanical test load | 5400 Pa (front) / 2400 Pa (back) |
| Fire performance (IEC/UL) | Class C (IEC) or Type 4 (UL) |
| Connector type (IEC/UL) | Stäubli MC4 EVO2 connectors (PV-KST4 EVO 2 & PV-KBT4 EVO 2) |

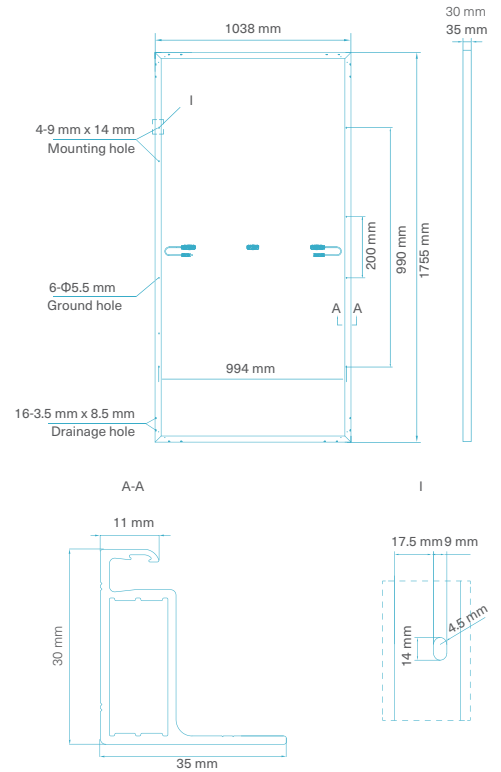
① Refer to Energizer crystalline installation manual or contact technical department.
 Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.

Packing Specifications

| | |
|----------------------------------------------|--------------|
| ① Module Weight | 19.8 kg |
| ② Packing unit | 31 pcs / box |
| Weight of packing unit (for 40'HQ container) | 647 kg |
| Number of modules per 40'HQ container | 806 pcs |

① Tolerance +/- 1.0kg
 ② Subject to sales contract

Module Dimensions



Curve

