



Beam N Solar Panel

455-465W

All Black (182mm)

Mono PERC Half Cell Module

ENSP60NBL2455BF ENSP60NBL2465BF
ENSP60NBL2460BF



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

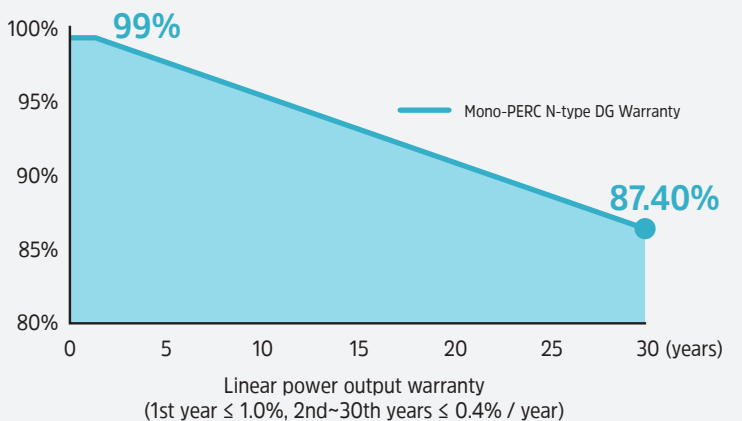
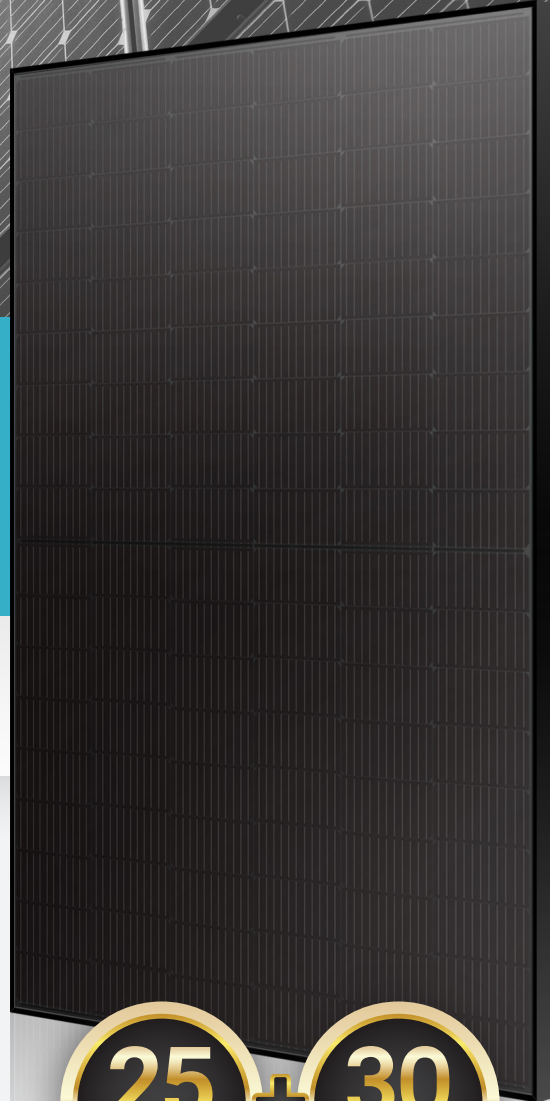
Lower Power Loss
Better performance in shaded and low-light conditions.

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.



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Electrical Specifications

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

Rated output (P _{mpp} / Wp)	455	460	465
Rated voltage (V _{mpp} / V)	34.92	35.08	35.25
Rated current (I _{mpp} / A)	13.03	13.11	13.19
Open circuit voltage (V _{oc} / V)	41.55	41.75	41.95
Short circuit voltage (I _{sc} / A)	13.71	13.81	13.91
Module efficiency	21.1%	21.3%	21.5%

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

Rated output (P _{mpp} / Wp)	342.2	345.9	349.7
Rated voltage (V _{mpp} / V)	32.86	33.02	33.18
Rated current (I _{mpp} / A)	10.41	10.48	10.54
Open circuit voltage (V _{oc} / V)	39.47	39.66	39.85
Short circuit current (I _{sc} / A)	11.06	11.15	11.23

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

Temperature Rating (STC)

Temperature coefficient (P _{mpp})	-0.30% / °C
Temperature coefficient (I _{sc})	-0.043% / °C
Temperature coefficient (V _{oc})	-0.24% / °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 _{DC}

Other Specifications

Outer dimensions (L x W x H)	1903 x 1134 x 30mm
Cell type	N type Mono-crystalline
No. of cells	120
Frame technology	Black Aluminium
Front glass thickness	3.2mm
Cable length (IEC/UL)	Portrait: 350mm; Landscape: 250mm
Cable diameter (IEC/UL)	4mm ² / 12 AWG
Maximum mechanical test load	5400 Pa (front) / 2400 Pa (back)
Connector type (IEC/UL)	MC4 Connector PV-KBT4-EVO2A/xy (Stäubli)
Module weight	23.8kg
Packing unit	36 pcs / box
Weight of packing unit (40ft container)	901kg
Modules per 40ft container	864 pcs
Fire Class Rating	Class C
Country of Manufacturer	China

Curve

