



Beam 2 Solar Panel

435-460W






Silver / Black Frame (182mm)

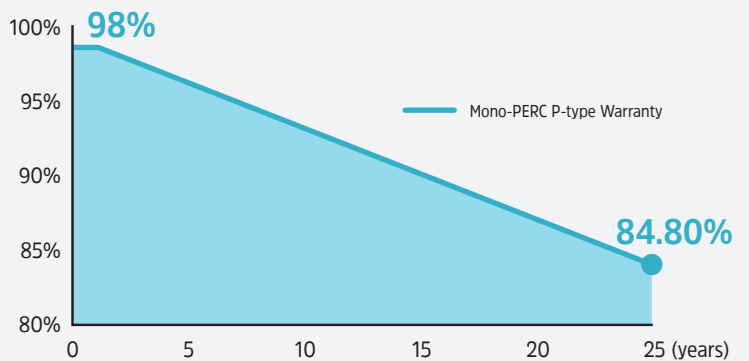
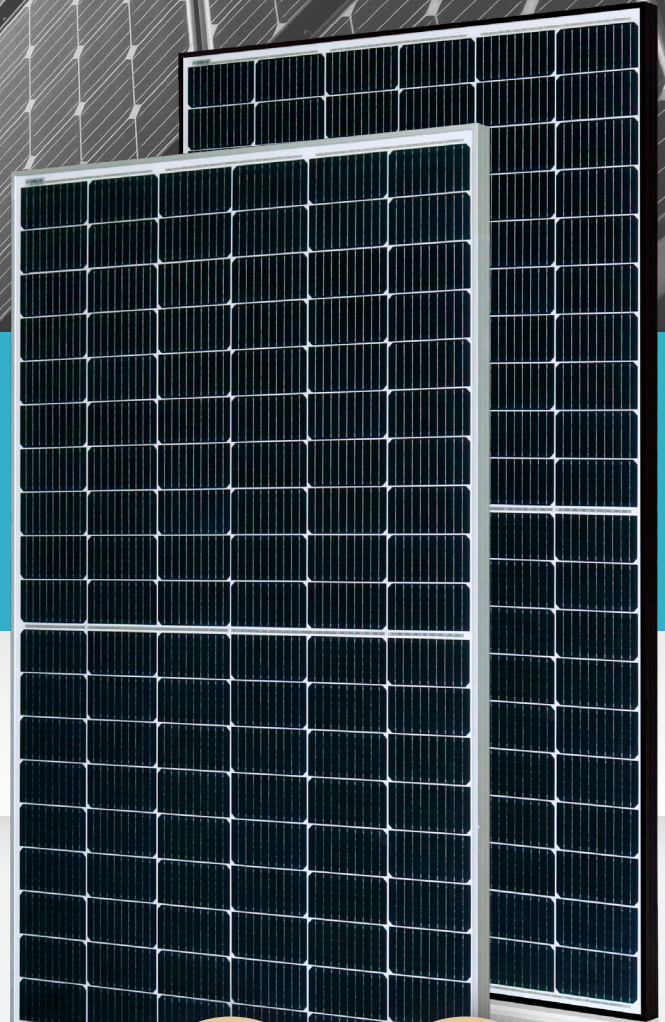
Mono PERC Half Cell Module

- ENSP60M2435BF ENSP60M2450BF
- ENSP60M2440BF ENSP60M2455BF
- ENSP60M2445BF ENSP60M2460BF



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)

hello@energizersolar.com energizersolar.com

Electrical Specifications

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

Rated output (P _{mpp} / W _p)	435	440	445	450	455	460
Rated voltage (V _{mpp} / V)	34.33	34.50	34.66	34.83	35.00	35.17
Rated current (I _{mpp} / A)	12.67	12.76	12.84	12.92	13.00	13.08
Open circuit voltage (V _{oc} / V)	40.85	41.05	41.25	41.45	41.65	41.85
Short circuit voltage (I _{sc} / A)	13.38	13.48	13.59	13.71	13.81	13.91
Module efficiency	20.3%	20.5%	20.8%	21.0%	21.2%	21.5%

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

Rated output (P _{mpp} / W _p)	325.1	328.8	332.6	336.3	340.0	343.8
Rated voltage (V _{mpp} / V)	31.99	32.15	32.31	32.46	32.62	32.78
Rated current (I _{mpp} / A)	10.16	10.23	10.29	10.36	10.42	10.49
Open circuit voltage (V _{oc} / V)	38.60	38.79	39.98	40.17	40.36	40.55
Short circuit current (I _{sc} / A)	10.85	10.94	11.02	11.12	11.20	11.29

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

Temperature Rating (STC)

Temperature coefficient (P _{mpp})	-0.35% / °C
Temperature coefficient (I _{sc})	-0.045% / °C
Temperature coefficient (V _{oc})	-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}

Mechanical 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: 1200mm
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

