



# Beam N DUAL GLASS Solar Panel 420-450W

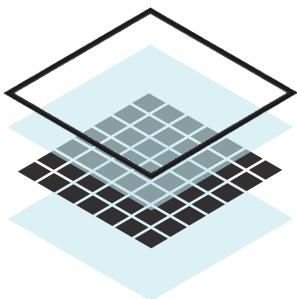
Black Frame (182mm)

## Mono PERC Half Cell Module

ENSP54NDG2420 ENSP54NDG2435  
ENSP54NDG2425 ENSP54NDG2440  
ENSP54NDG2430 ENSP54NDG2450

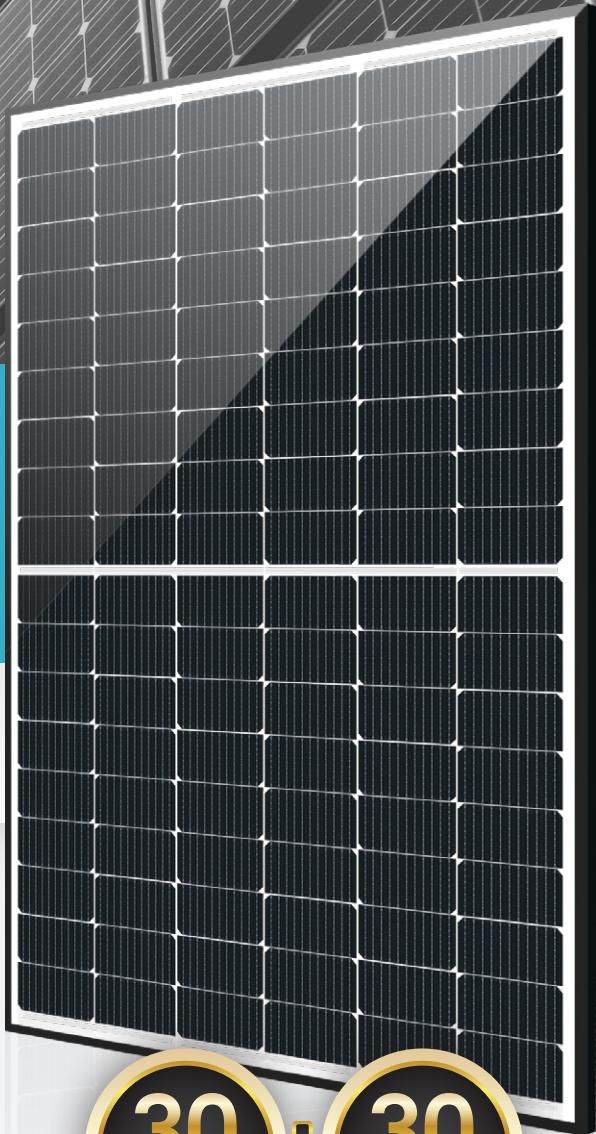


**Built using Mono-crystalline PERC technology, the Energizer® Solar Panels range combine two of the best technologies in the market.**



### Dual Glass Construction

- Panel Frame
- Front Glass Panel
- Solar Cells
- Rear Glass Panel



Dual glass technology



Lower operating temperatures



Improved fire & water resistance

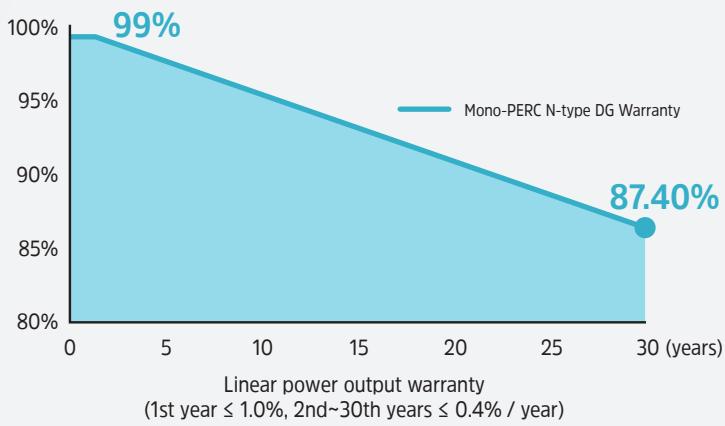


Quality controlled by artificial intelligence

Improved durability with no extra weight



Positive power tolerance of 0~+5W



## Electrical Specifications

STC rated output ( $P_{mpp}$ )	420 Wp	425 Wp	430 Wp	435 Wp	440 Wp	450 Wp
Rated voltage ( $V_{mpp}$ ) at STC	32.62 V	32.74 V	32.87 V	32.99 V	33.12 V	33.37 V
Rated current ( $I_{mpp}$ ) at STC	12.88 A	12.98 A	13.08 A	13.18 A	13.29 A	13.48 A
Open circuit voltage ( $V_{oc}$ ) at STC	38.81 V	38.96 V	39.11 V	39.26 V	39.41 V	39.71 V
Short circuit current ( $I_{sc}$ ) at STC	13.59 A	13.72 A	13.85 A	13.97 A	14.08 A	14.29 A
Module efficiency	21.5%	21.8%	22.0%	22.3%	22.5%	23.0%
Rated output ( $P_{mpp}$ ) at NMOT	315.8 Wp	319.6 Wp	323.4 Wp	327.1 Wp	330.9 Wp	338.4 Wp
Rated voltage ( $V_{mpp}$ ) at NMOT	30.70 V	30.82 V	30.94 V	31.06 V	31.17 V	31.41 V
Rated current ( $I_{mpp}$ ) at NMOT	10.29 A	10.37 A	10.45 A	10.53 A	10.61 A	10.77 A
Open circuit voltage ( $V_{oc}$ ) at NMOT	36.87 V	37.01 V	37.15 V	37.29 V	37.44 V	37.72 V
Short circuit current ( $I_{sc}$ ) at NMOT	10.97 A	11.08 A	11.18 A	11.28 A	11.37 A	11.54 A
Temperature coefficient ( $P_{mpp}$ )	- 0.29%/°C					
Temperature coefficient ( $I_{sc}$ )	+ 0.043%/°C					
Temperature coefficient ( $V_{oc}$ )	- 0.25%/°C					
Nominal module operating temperature (NMOT)	41±2°C					
Maximum system voltage (IEC/UL)	1500V <sub>DC</sub>					
Number of diodes	3					
Junction box IP rating	IP 68					
Maximum series fuse rating	25 A					

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, AM=1.5  
 NMOT: Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, AM=1.5, Wind Speed 1m/s  
 Name plate tolerances: Pmax +/-3.5%, Voc +/-3.5%, Isc +/-5%

## Other Specifications

Outer dimensions (L x W x H)	1722 x 1134 x 30 mm
Cell type	N type Mono-crystalline
No. of cells	108
Frame technology	Black Aluminum frame, White backing
Front glass thickness	1.6+1.6 mm
Cable length (IEC/UL)	Portrait: (+) 350mm, (-) 250mm
Cable diameter (IEC/UL)	4 mm <sup>2</sup> / 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	20.8 kg
Packing unit	36 pcs / box
Weight of packing unit (40ft container)	793 kg
Modules per 40ft container	936 pcs
Fire Class Rating	Class A
Country of Manufacturer	China

## Curve

