

Energizer®

SOLAR PANELS

Beam 2 Plus

Silver Frame (182mm)

590-610W

Mono PERC Half Cell Module
ENSP60M3 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.

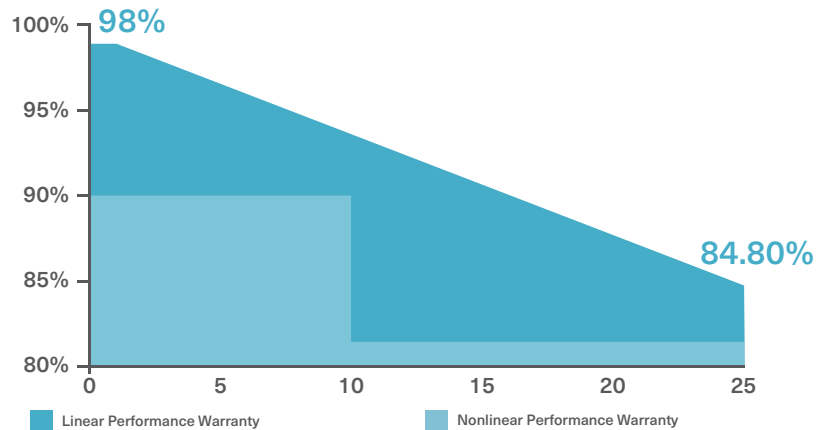
Warranty



Product warranty



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



Electrical Specifications

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

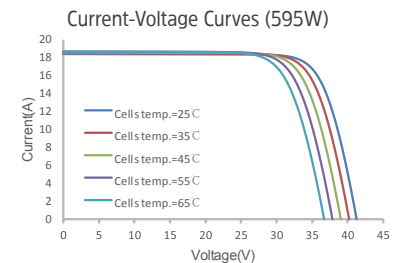
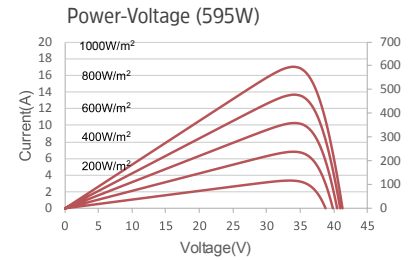
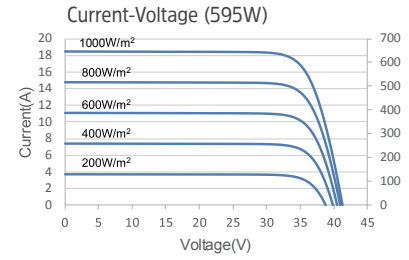
	590	595	600	605	610
Rated output (Pmpp / Wp)	590	595	600	605	610
Rated voltage (Vmpp / V)	34.00	34.20	34.40	34.60	34.80
Rated current (Impp / A)	17.36	17.40	17.45	17.50	17.54
Open circuit voltage (Voc / V)	41.10	41.30	41.50	41.70	41.90
Short circuit voltage (Isc / A)	18.42	18.47	18.52	18.57	16.62
Module efficiency	20.8%	21.0%	21.2%	21.4%	21.6%

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

	440.9	444.6	448.4	452.1	455.9
Rated output (Pmpp / Wp)	440.9	444.6	448.4	452.1	455.9
Rated voltage (Vmpp / V)	31.69	31.87	32.06	32.25	32.43
Rated current (Impp / A)	13.92	13.95	13.99	14.03	14.06
Open circuit voltage (Voc / V)	38.84	39.03	39.22	39.41	39.60
Short circuit current (Isc / A)	14.94	14.98	15.02	15.06	15.11

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

Curve



Temperature Rating (STC) Operating Parameters

Temperature coefficient (Pmpp)	-0.34% / °C	No. of diodes	3
Temperature coefficient (Isc)	-0.04% / °C	Junction box IP rating	IP68
Temperature coefficient (Voc)	-0.25% / °C	Max. series fuse rating	30A
Nominal module operating temperature (NMOT)	43±2°C	Max. system voltage (IEC/UL)	1500V _{DC}

Mechanical Specifications

Outer dimensions (L x W x H)	2172 x 1303 x 35mm
Cell type	P type Mono-crystalline
No. of cells	120
Frame technology	Aluminium (silver)
Front glass thickness	3.2mm
Cable length (IEC/UL)	Portrait: 350mm; Landscape: 1400mm
Cable diameter (IEC/UL)	4mm ² / 12 AWG
Maximum mechanical test load	5400 Pa (front) / 2400 Pa (back)
Connector type (IEC/UL)	PV-HCB40 or PV-KST4-EVO2/xy-UR, PVKBT4-EVO2/xy-UR (optional)
Module weight	32.5kg
Packing unit	31 pcs / box
Weight of packing unit (40ft container)	1047kg
Modules per 40ft container	527 pcs

