144 HALF-CELL MONOFACIAL MODULE

435-455W

HSSP*XXX*M - B72/Vnh

Features

High module conversion efficiency
Module efficiency up to 20.9 % achieved through advanced cell technology and manufacturing process

Henergy Solar current sorting process
Up to 2 % power loss caused by current mismatch could be diminished by current sorting technique to maximize system power output

Excellent weak light performance
More power output in weak light condition, such as cloudy, morning and sunset

Lower operating temperature
Lower operating temperature and temperature coefficient increases the power output

Extended wind and snow load tests
Module certified to withstand extreme wind (3800 Pascal) and snow loads (5400 Pascal) *

Withstanding harsh environment
Reliable quality leads to a better sustainability even in harsh environment like desert, farm and coastline

Certifications and standards:
IEC 61215, IEC 61730, conformity to CE

Munich RE   MCS CERTIFIED   CE   DVE   SOLAR

Trust Henergy Solar to Deliver Reliable Performance Over Time

• World-class manufacturer of crystalline silicon photovoltaic modules
• Rigorous quality control meeting the highest international standards: ISO 9001, ISO 14001 and ISO17025
• Regular independently checked production process from international accredited institute/company
• Tested for harsh environments (IEC 61701, IEC 62716, DIN EN 60068-2-68) ****
• Long-term reliability tests
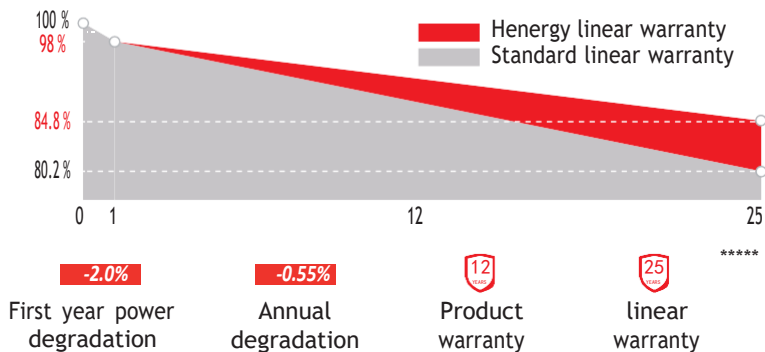• 2 × 100% EL inspection ensuring defect-free modules

Special Cell Design

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The unique cell design leads to reduced electrodes resistance and smaller current, thus enables higher fill factor. Meanwhile, it can reduce losses of mismatch and cell wear, and increase total reflection.

Industry-leading Warranty based on nominal power

Henergy linear warranty
Standard linear warranty

100 %
98 %
84.8 %
80.2 %
0 1   12   25

-2.0% First year power degradation

-0.55% Annual degradation

12 Product warranty

25 linear warranty

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IP68 Rated Junction Box

IP68

The Henergy Solar IP68 rated junction box ensures anoutstanding waterproof level, supports installations in all orientations and reduces stress on the cables.

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* Please refer to Henergy Solar Standard Module Installation Manual for details.   ** Henergy Solar reserves the right to the final interpretation of the warranty by Munich Re.
*** WEEE only for EU market.   **** Please refer to Henergy Solar Product Near-coast Installation Manual for details.
***** Please refer to Henergy Solar Product Warranty for details.

STC	HSSP*XXX*M-B72/Vnh				
Maximum Power at STC (Pmax)	455W	450W	445W	440W	435W
Optimum Operating Voltage (Vmp)	41.6V	41.4V	41.2V	41.0V	40.8V
Optimum Operating Current (Imp)	10.94A	10.87A	10.81A	10.74A	10.67A
Open Circuit Voltage (Voc)	49.4V	49.2V	49.0V	48.8V	48.6V
Short Circuit Current (Isc)	11.67A	11.61A	11.54A	11.47A	11.40A
Module Efficiency	20.9%	20.7%	20.4%	20.2%	20.0%
Operating Module Temperature	-40 °C to +85 °C				
Maximum System Voltage	1500 V DC (IEC)				
Maximum Series Fuse Rating	20 A				
Power Tolerance	0/+5 W				

STC: Irradiance 1000 W/m², module temperature 25 °C, AM=1.5;
Tolerance of Pmax is within +/- 3%.
For tracker installation, the module could withstand maximum 1600Pa at both front and rear side.

NMOT	HSSP*XXX*M-B72/Vnh				
Maximum Power at NMOT (Pmax)	343.1W	339.4W	335.8W	332.7W	327.7W
Optimum Operating Voltage (Vmp)	38.4V	38.2V	38.0V	37.8V	37.6V
Optimum Operating Current (Imp)	8.94A	8.89A	8.84A	8.78A	8.73A
Open Circuit Voltage (Voc)	46.3V	46.2V	46.0V	45.8V	45.5V
Short Circuit Current (Isc)	9.42A	9.37A	9.31A	9.25A	9.20A

NMOT: Irradiance 800 W/m², ambient temperature 20 °C, AM=1.5, wind speed 1 m/s.
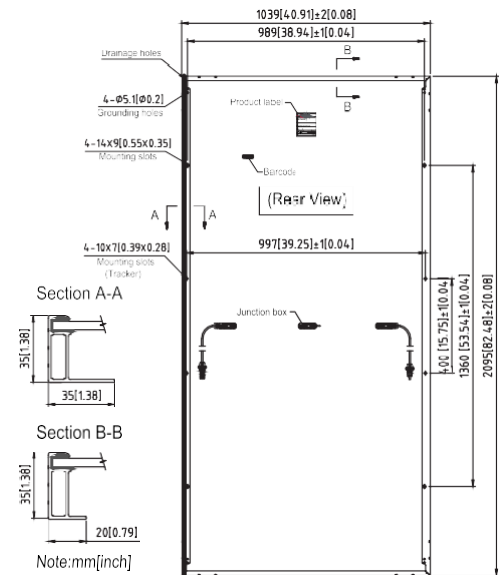
Temperature Characteristics

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Nominal Module Operating Temperature (**NMOT**)	42 ± 2 °C
Temperature Coefficient of Pmax	-0.36%/°C
Temperature Coefficient of Voc	-0.304%/°C
Temperature Coefficient of Isc	0.050%/°C

Mechanical Characteristics

Solar Cell	Monocrystalline silicon 166 mm
No. of Cells	144 (6 × 24)
Dimensions	2095 × 1039 × 35 mm (82.5 × 40.9 × 1.4 inches)
Weight	24.5 kgs (54.0 lbs.)
Front Glass	3.2 mm (0.13 inches) tempered glass
Frame	Anodized aluminium alloy
Junction Box	IP68 rated (3 bypass diodes)
Output Cables	4.0 mm², Portrait: (-) 350 mm and (+) 160 mm in length or customized length
Connectors	MC4 EVO2, Cable 01S

Current-Voltage & Power-Voltage Curve (455S)

1000 W/m²   800 W/m²   600 W/m²   400 W/m²   200 W/m²
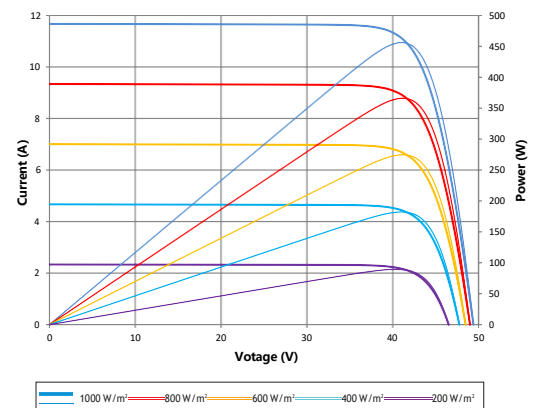
Dealer information
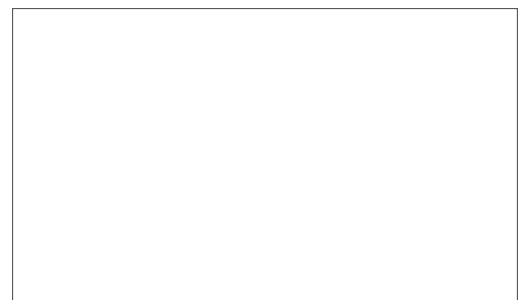
Packing Configuration

Container	20' GP	40' HC
Pieces per pallet	31	31
Pallets per container	5	22
Pieces per container	155	682
Packaging box dimensions	2125×1130×1205 mm	
Packaging box weight	814 kg	

Information on how to install and operate this product is available in the installation instruction. All values indicated in this data sheet are subject to change without prior announcement. The specifications may vary slightly. All specifications are in accordance with standard EN 50380. Color differences of the modules relative to the figures as well as discolorations of/in the modules which do not impair their proper functioning are possible and do not constitute a deviation from the specification.