

# N-Type Bifacial 144HC

Dual Glass



## 580-600W

Class leading power output

Positive Power  
Tolerance  
0 to +3%



## Solar Built for the Long Haul

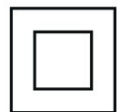
Mission Solar Energy is headquartered in San Antonio, Texas. This product is tailored for commercial and utility applications. Every Mission Solar Energy solar module is certified and surpasses industry standard regulations, providing excellent performance over the long term. Mission Solar Energy is a proud member of the OCI family of companies.

America's Module Company®

- ▶ **Fair Trade Practices**
  - Free of forced labor at all stages of the supply chain
  - Not subject to AD/CVD tariffs or investigations
- ▶ **Certified Reliability**
  - Tested to UL 61730
  - PID resistant
- ▶ **Advanced Technology**
  - SMBB Technology
  - N-Type Cell
  - Ideal for utility and commercial applications
- ▶ **Extreme Weather Resilience**
  - Up to 5,400 Pa front load & 2,400 Pa back load
  - Tested load to UL 61730
  - Hail tests results exceed 25mm at 23 m/s

### CERTIFICATIONS

CEC



### FRAME-TO-FRAME WARRANTY

Degradation guaranteed not to exceed 1% in year 1 and 0.4% annually from years 2 to 30, with 87.4% guaranteed in year 30; 15-year product warrant and 30-year warranty on power output.

For more information, visit [www.missionsolar.com/warranty](http://www.missionsolar.com/warranty)

UL 61730

If you have questions or concerns about certification of our products in your area, please contact Mission Solar Energy.

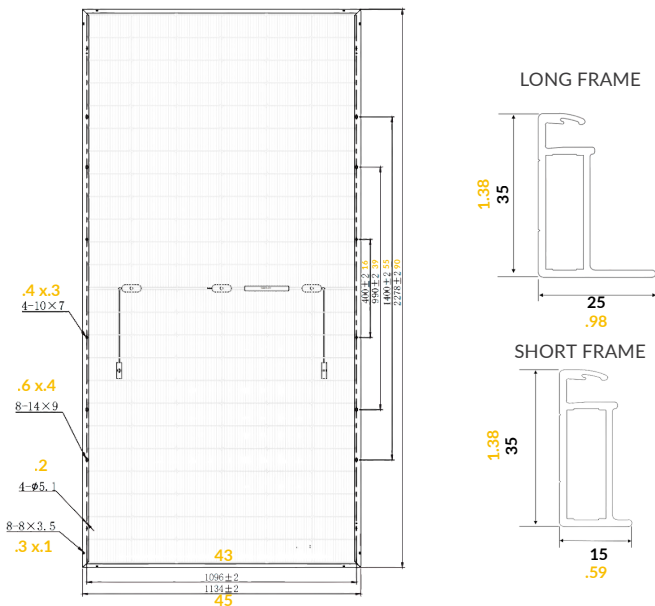
[www.missionsolar.com](http://www.missionsolar.com) | [info@missionsolar.com](mailto:info@missionsolar.com)

## ELECTRICAL SPECIFICATION

PRODUCT TYPE	MSH10-xxxHN4G (xxx = P <sub>max</sub> )				
Power Output	P <sub>max</sub>	Wp	585	590	595
Module Efficiency	%		22.6	22.8	23
Tolerance	%		0/+3	0/+3	0/+3
Short Circuit Current	I <sub>sc</sub>	A	14.47	14.55	14.62
Open Circuit Voltage	V <sub>oc</sub>	V	51.5	51.7	51.85
Rated Current	I <sub>mp</sub>	A	13.53	13.59	13.67
Rated Voltage	V <sub>mp</sub>	V	43.3	43.5	43.55
Fuse Rating	A		25	25	25
System Voltage	V		1,500	1,500	1,500

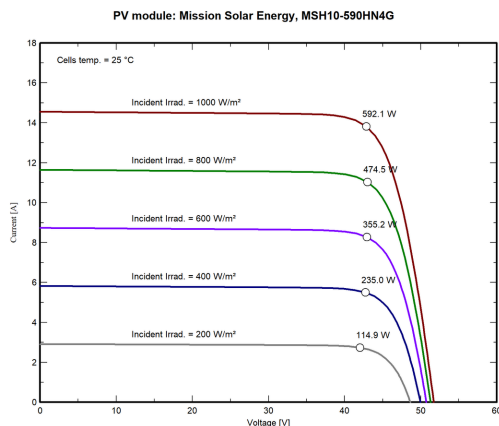
## BASIC DIMENSIONS

[UNITS: MM/IN]



## CURRENT-VOLTAGE CURVE

MSH10-590HN4G: 590W, 144 CELL SOLAR MODULE



## ELECTRICAL SPECIFICATION (BACKSIDE)

Power Output	P <sub>max</sub>	Wp	445	449	453
Short Circuit Current	I <sub>sc</sub>	A	11.66	11.73	11.79
Open Circuit Voltage	V <sub>oc</sub>	V	49.4	49.6	49.8
Rated Current	I <sub>mp</sub>	A	10.7	10.77	10.82
Rated Voltage	V <sub>mp</sub>	V	41.6	41.7	41.9

## TEMPERATURE COEFFICIENTS

Nominal Module Operating Temperature (NMOT)	45°C (±2°C)
Temperature Coefficient of P <sub>max</sub>	-0.29%/°C
Temperature Coefficient of V <sub>oc</sub>	-0.23%/°C
Temperature Coefficient of I <sub>sc</sub>	0.046%/°C

## OPERATING CONDITIONS

Maximum System Voltage	1,500 Vdc
Operating Temperature Range	-40°F to 185°F (-40°C to +85°C)
Maximum Series Fuse Rating	25A
Fire Safety Classification	Type 29
Front & Back Load (UL Standard)	Up to 5,400 Pa front and 2,400 Pa back load.

## MECHANICAL DATA

Solar Cells	N-type TOPCON Monocrystalline
Cell Orientation	144 cells
Module Dimension	2278 mm x 1134 mm x 35 mm
Weight	71.65 lbs. (32.5±0.5kg)
Front Glass	2.0 mm High Transmission Tempered Glass
Back Glass	2.0 mm High Transmission Tempered Glass
Frame	Anodized Aluminum Alloy
Encapsulant	Polyolefin Elastomer (POE)
Junction Box	IP 68 Rated
Cable	Wire 4 mm <sup>2</sup> (12AWG)
Connector	MC4 Compatible

## SHIPPING INFORMATION

Truck Load	Ship To	Pallets	Modules	590W Bin
53'	Most States	16	496	292.64 kW
Double Stack: (Horizontal Orientation): 31 modules per pallet				

## PALLET [31 MODULES]

Weight	Height	Width	Length
1000 kg (2205 lbs)	49 in (1243 mm)	45 in (1145 mm)	91 in (2304 mm)

## CERTIFICATIONS



UL 61730

## Mission Solar Energy

8303 S. New Braunfels Ave., San Antonio, Texas  
78235 www.missionsolar.com | info@missionsolar.com

Mission Solar Energy reserves the right to make specification changes without notice.

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