

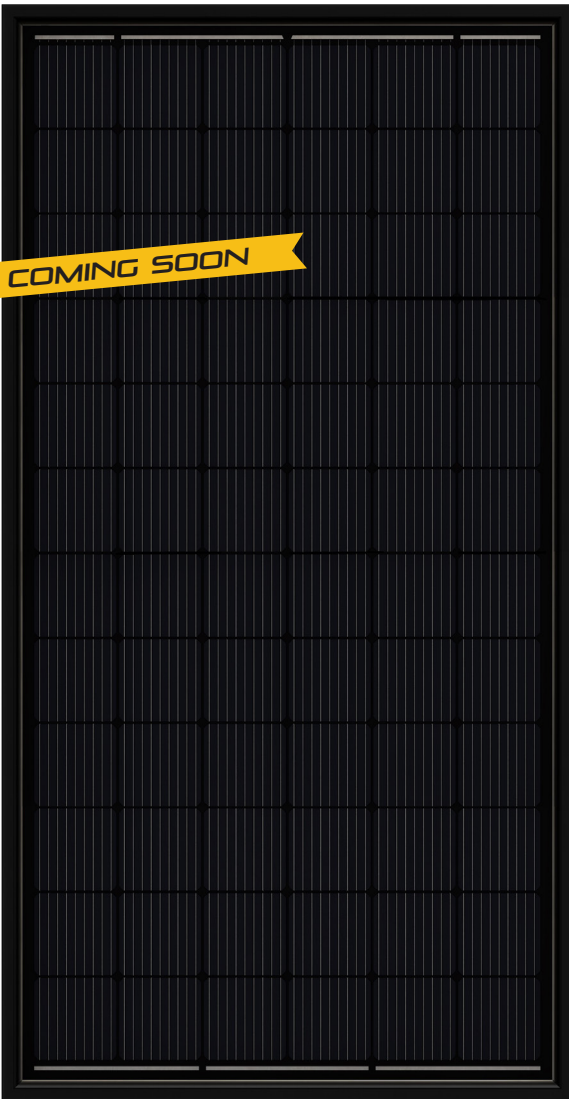
MSE PERC 72



425W

Positive Power Tolerance

Class leading power output **-0 to +3%**



True American Quality True American Brand

Mission Solar Energy is headquartered in San Antonio, Texas where we manufacture our modules. We produce American, high-quality solar modules ensuring the highest-in-class power output and best-in-class reliability. Our product line is tailored for residential, commercial and utility applications. Every Mission Solar Energy solar module is certified and surpasses industry standard regulations, proving excellent performance over the long term.

Demand the best. Demand Mission Solar Energy.



Certified Reliability

- Tested to UL 61730 & IEC Standards
- PID resistant
- Resistance to salt mist corrosion



Advanced Technology

- 9 Busbar
- Passivated Emitter Rear Contact
- Ideal for all applications



Extreme Weather Resilience

- Up to 5,400 Pa front load & 3,600 Pa back load
- Tested load to UL 61730
- 40 mm frame



BAA Compliant for Government Projects

- Buy American Act
- American Recovery & Reinvestment Act

FRAME-TO-FRAME WARRANTY

Degradation guaranteed not to exceed 2% in year one and 0.58% annually from years two to 30 with 84.08% capacity guaranteed in year 25.

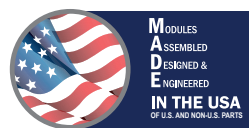
CERTIFICATIONS

CEC



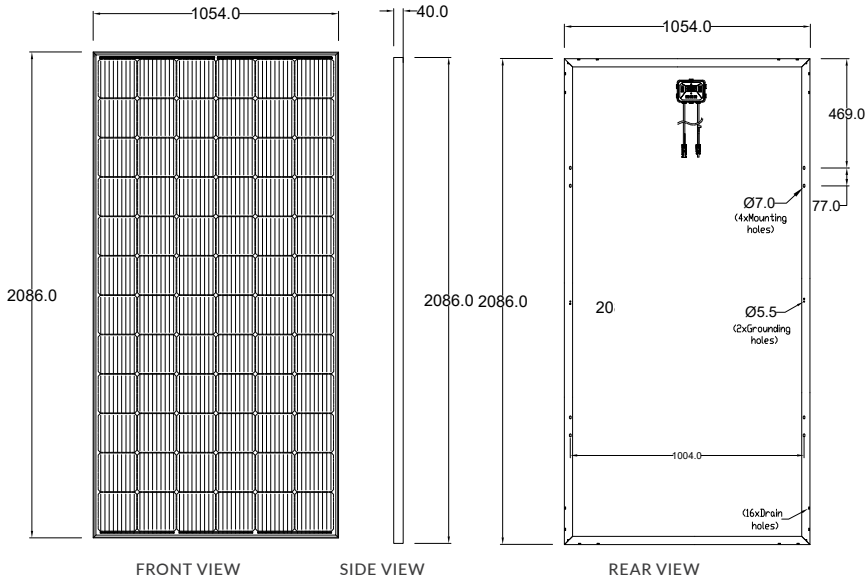
If you have questions or concerns about certification of our products in your area, please contact Mission Solar Energy.

UL 61730 / IEC 61215 / IEC 61730 / IEC 61701



BASIC DIMENSIONS

[UNITS: MM]



ELECTRICAL SPECIFICATION

PRODUCT TYPE	MSExxxSX9Z (xxx = P _{max})				
Power Output	P _{max}	W _p	420	425	430
Module Efficiency	%		19.1	19.3	19.6
Tolerance	%		0/+3	0/+3	0/+3
Short Circuit Current	I _{sc}	A	11.15	11.19	11.24
Open Circuit Voltage	V _{oc}	V	48.85	49.14	49.28
Rated Current	I _{mp}	A	10.58	10.62	10.66
Rated Voltage	V _{mp}	V	39.69	40.01	40.32
Fuse Rating	A		20	20	20
System Voltage	V		1,500	1,500	1,500

TEMPERATURE COEFFICIENTS

Normal Operating Cell Temperature (NOCT)	44.69°C (±3.7%)
Temperature Coefficient of P _{max}	-0.359%/°C
Temperature Coefficient of V _{oc}	-0.261%/°C
Temperature Coefficient of I _{sc}	0.044%/°C

OPERATING CONDITIONS

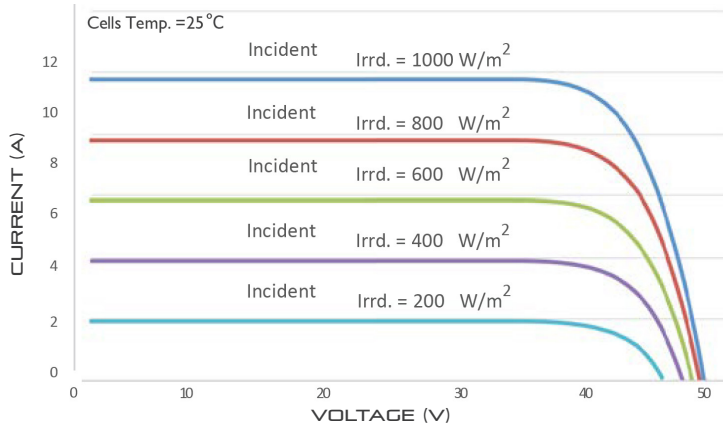
Maximum System Voltage	1,500Vdc
Operating Temperature Range	-40°C (-40°F) to +85°C (185°F)
Maximum Series Fuse Rating	20A
Fire Safety Classification	Type 1*
Front & Back Load (UL Standard)	5400 Pa front and 3600 Pa back load Tested to UL 61730
Hail Safety Impact Velocity	25mm at 23 m/s

*Mission Solar Energy uses quality sourced materials that result in a Type 1 fire rating. Please note, the 'Fire Class' Rating is designated for the fully-installed PV system, which includes, but is not limited to, the module, the type of mounting used, pitch and roof composition.

CURRENT-VOLTAGE CURVE

MSE415SX9Z: 415WP, 72 CELL SOLAR MODULE

Current-voltage characteristics with dependence on irradiance and module temperature



MECHANICAL DATA

Solar Cells	P-type mono-crystalline silicon
Cell Orientation	72 cells (6x12)
Module Dimension	2,086mm x 1,054mm x 40mm
Weight	23.4 kg (51.6 lbs.)
Front Glass	3.2mm, tempered, low-iron, anti-reflective
Frame	Anodized
Encapsulant	Ethylene vinyl acetate (EVA)
Junction Box	Protection class IP67 with 3 bypass-diodes
Cable	1.4m, Wire 4mm ² (12AWG)
Connector	MC4 Staubli PV-KBT4-EVO 2/6II-UR and PV-KST4-EVO 2/6II-UR, Renhe 05-8

CERTIFICATIONS AND TESTS

IEC	61215, 61730, 61701
UL	61730



CEC



Mission Solar Energy

8303 S. New Braunfels Ave., San Antonio, Texas 78235

SHIPPING INFORMATION

Container Feet	Ship To	Pallet	Panels	425W Bin
53'	Most States	28	728	309.40 kW
Double Stack	CA	25	650	276.25 kW

PALLET [26 PANELS]

Weight	Height	Width	Length
1,450 lbs. (657 kg)	47.5 in (120.65 cm)	46 in (116.84 cm)	83.75 in (212.72 cm)