

CLASS LEADING POWER OUTPUT

420 W

POSITIVE POWER TOLERANCE

-0 - +3 %

The 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

- › PERC and 6 busbar drive 19.1% module efficiency
- › Ideal for all applications



EXTREME WEATHER RESILIENCE

- › 5400 Pa front and 3600 Pa back load
- › Tested to UL 61730
- › 40mm 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 0.7% annually from years two to 30 with 81.2% guaranteed in year 25.

CERTIFICATIONS

UL 61730
IEC 61215 - IEC 61730
IEC 61701



CEC



Please contact Mission Solar Energy if you have questions or concerns about certification of our products in your area.

*Standard 12-year product warranty extendable to 25 years with registration:
www.missionsolar.com/warranty/

ELECTRICAL SPECIFICATION

| Product Type | MSE xxx SX6W (xxx =P _{max}) | | | | | | |
|-----------------------|--|----------------|-------|-------|-------|-------|-------|
| Power Output | P _{max} | W _p | 405 | 410 | 415 | 420 | 425 |
| Module Efficiency | | % | 18.4 | 18.6 | 18.9 | 19.1 | 19.3 |
| Tolerance | | % | 0/+3 | 0/+3 | 0/+3 | 0/+3 | 0/+3 |
| Short Circuit Current | I _{sc} | A | 10.89 | 10.93 | 10.99 | 11.05 | 11.09 |
| Open Circuit Voltage | V _{oc} | V | 48.56 | 48.71 | 48.92 | 49.14 | 49.28 |
| Rated Current | I _{mp} | A | 10.23 | 10.32 | 10.39 | 10.46 | 10.55 |
| Rated Voltage | V _{mp} | V | 39.59 | 39.73 | 39.93 | 40.14 | 40.27 |
| Fuse Rating | | A | 20 | 20 | 20 | 20 | 20 |
| System Voltage | | V | 1500 | 1500 | 1500 | 1500 | 1500 |

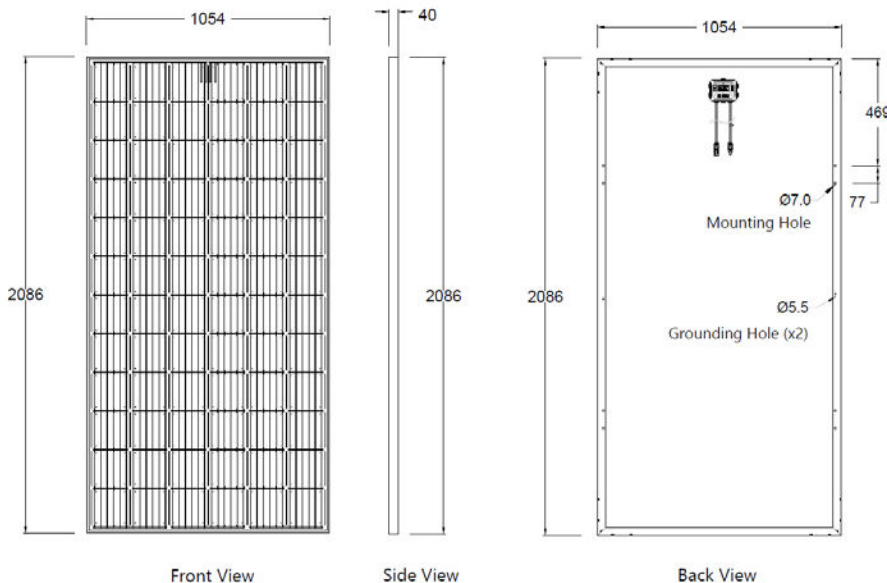
TEMPERATURE COEFFICIENTS

| | |
|---|-----------------|
| 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 |

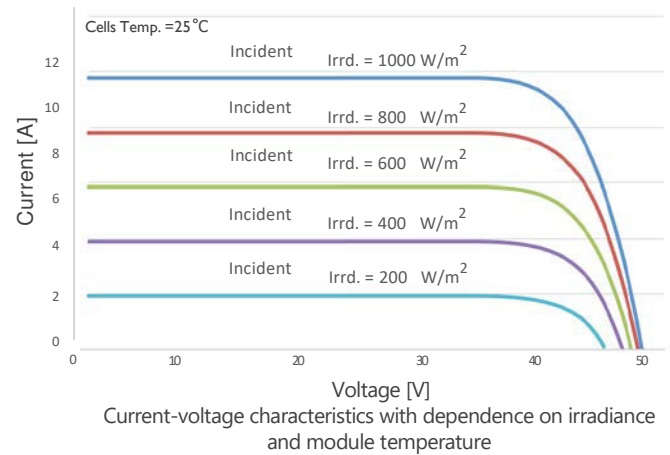
BASIC DIMENSIONS (UNITS: mm)



MECHANICAL DATA

| | |
|------------------|---|
| Solar Cells | P-type mono-crystalline silicon |
| Cell Orientation | 72 cells (6x12) |
| Module | 2086mm x 1054mm 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 |
| Cables | 1.2m, Wire 4mm ² 12AWG) |
| Connector | Renhe 05-8 |

MSE415SX6W: 415WP, 72 CELL SOLAR MODULE CURRENT - VOLTAGE CURVE



CERTIFICATIONS & TESTS

| | |
|-----|---------------------|
| IEC | 61215, 61730, 61701 |
| UL | 61730 |



CEC



SHIPPING INFORMATION

| Container FT | Pallets | Panels | 420 W Bin | |
|--------------------|-------------|-------------|-------------|-----------|
| 53' | Most states | 28 | 728 | 305.76 kW |
| Double Stack | California | 25 | 650 | 273.00 kW |
| Pallet [26 Panels] | | | | |
| Weight | Height | Width | Length | |
| 1450 lbs. | 47.5 in | 46 in | 83.75 in | |
| (657 kg) | (120.65 cm) | (116.84 cm) | (212.72 cm) | |