



2019
PV Module
Index
HIGH ACHIEVER

Mission Solar
Energy



300-310W

CLASS LEADING POWER OUTPUT

18.65%

MAXIMUM EFFICIENCY

-0~+3%

POSITIVE POWER TOLERANCE

The True American Brand

Mission Solar Energy is headquartered in San Antonio, TX., where we manufacture our modules. We produce American, high quality solar modules ensuring the highest in class power output and best in-class reliability to our customers. 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 UL1703 & IEC standards
- › PID resistant



SUPERIOR AESTHETICS

- › All-black design coupled with outstanding power output
- › Ideal for residential & commercial applications



EXTREME WEATHER RESILIENCE

- › 5631 Pa front and back load (117 psf) tested load to UL1703



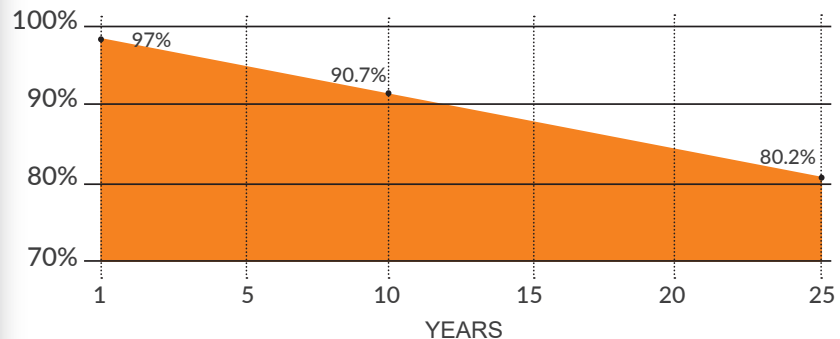
BAA COMPLIANT FOR GOVERNMENT PROJECTS

- › Buy American Act
- › American Recovery & Reinvestment Act



MODULES
ASSEMBLED &
ENGINEERED
IN THE USA
OF U.S. AND NON-U.S. PARTS

FRAME-TO-FRAME WARRANTY



CERTIFICATIONS

IEC 61215/ IEC 61730/ IEC 61701/ UL 1703/ Salt mist



CEC



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

¹ Standard 12-year product warranty extendable to 25 years with registration.



ELECTRICAL SPECIFICATIONS

Electrical Parameters at Standard Test Conditions (STC)

Module Type			MSE300SQ8T	MSE305SQ8T	MSE310SQ8T
Power Output	P _{max}	W _p	300	305	310
Module Efficiency		%	18.05	18.35	18.65
Tolerance			0 ⁻ +3%	0 ⁻ +3%	0 ⁻ +3%
Short-Circuit Current	I _{sc}	A	9.571	9.664	9.760
Open Circuit Voltage	V _{oc}	V	40.08	40.10	40.12
Rated Current	I _{mp}	A	9.058	9.202	9.345
Rated Voltage	V _{mp}	V	33.12	33.14	33.17
Fuse Rating			15	20	20

CERTIFICATIONS & TESTS

IEC

61215 / 61730 / 61701/ Salt mist

UL

UL 1703 listed



CEC



TEMPERATURE COEFFICIENTS

Normal Operating Cell Temperature (NOCT)	46.09°C (±2°C)
Temperature Coefficient of P _{max}	-0.377%/°C
Temperature Coefficient of V _{oc}	-0.280%/°C
Temperature Coefficient of I _{sc}	0.039%/°C

OPERATING CONDITIONS

Maximum System Voltage	1,000Vdc
Operating Temperature Range	-40°C (-40°F) to +85°C (185°F)
Maximum Series Fuse Rating	20A
Fire Safety Classification	Type 1, Class C
Front & Back Load (UL standard)	5631 Pa (117 psf) Tested to UL1703 standard
Hail Safety Impact Velocity	25mm at 23 m/s

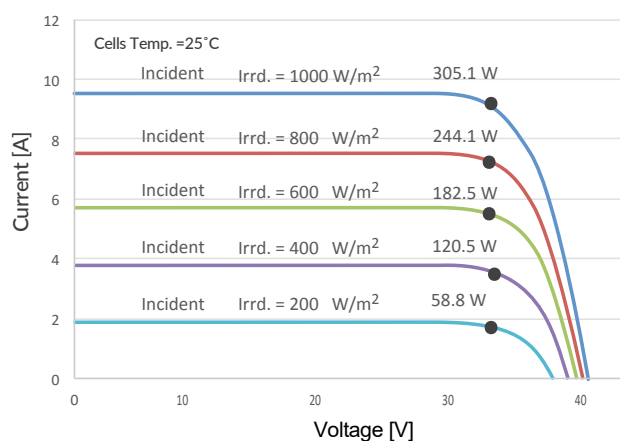
MECHANICAL DATA

Solar Cells	P-type mono-crystalline silicon (156.75mm)
Cell Orientation	60 cells (6x10), 5 busbar
Module Dimension	1664mm x 999mm x 40mm (65.53 in. x 39.33 in. x 1.58 in.)
Weight	18.2 kg (40.1 lb)
Front Glass	3.2mm (0.126 in.) tempered, low-iron, anti-reflective coating
Frame	Anodized aluminum alloy
Encapsulant	Ethylene vinyl acetate (EVA)
J-Box	Protection class IP67 with 3 bypass-diodes
Cables	PV wire, 1m (39.37 in.), 4mm ² / 12 AWG
Connector	MC4

SHIPPING INFORMATION

Container FT		Pallets	Panels	310 W		
53'	Double stack	36	936	290.16 kW		
40'	Double stack	28	728	225.68 kW		
Pallet		Panels	Weight	Height	Width	Length
		26	1,105lbs	45.50"	45.50"	67.00"

MSE305SQ8T: 305WP, 60 CELL SOLAR MODULE CURRENT - VOLTAGE CURVE



Current-voltage characteristics with dependence on irradiance and module temperature

BASIC DESIGN (UNITS: mm)

