

### CERTIFIED RELIABILITY

› Tested to UL1703 standards



### SUPERIOR AESTHETICS

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

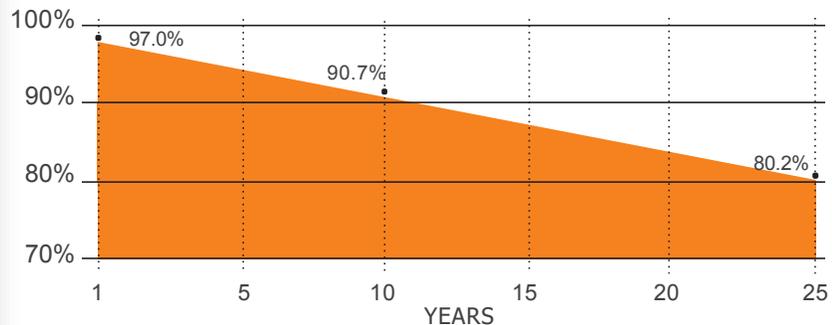


### EXCELLENT WEATHER RESILIENCE

› Max. design loads for two rail system  
› 113 psf, 5410 Pa, downward; 64 psf, 3064 Pa, upward  
› Max. design loads for three rail system  
› 178 psf, 8523 Pa, downward; 64 psf, 3064 Pa, upward



### FRAME-TO-FRAME WARRANTY



# 310W

CLASS LEADING POWER OUTPUT

# 18.5%

MODULE EFFICIENCY

### 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.

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:  
<https://www.missionsolar.com/warranty/>



# MSE PERC TS60

## ELECTRICAL SPECIFICATIONS

Electrical Parameters at Standard Test Conditions (STC)

Module Type			MSE305TS60	MSE310TS60
Power Output	P <sub>max</sub>	W <sub>p</sub>	305	310
Module Efficiency			18.2	18.5
Tolerance			- / + 3%	- / + 3%
Short-Circuit Current	I <sub>sc</sub>	A	9.90	9.94
Open-Circuit Voltage	V <sub>oc</sub>	V	40.10	40.30
Rated Current	I <sub>mp</sub>	A	9.38	9.45
Rated Voltage	V <sub>mp</sub>	V	32.80	33.10

## TEMPERATURE COEFFICIENTS

Normal Operating Cell Temperature (NOCT)	46.7°C(±2°C)
Temperature Coefficient of P <sub>max</sub>	-0.38%/°C
Temperature Coefficient of V <sub>oc</sub>	-0.28%/°C
Temperature Coefficient of I <sub>sc</sub>	0.04%/°C

## OPERATING CONDITIONS

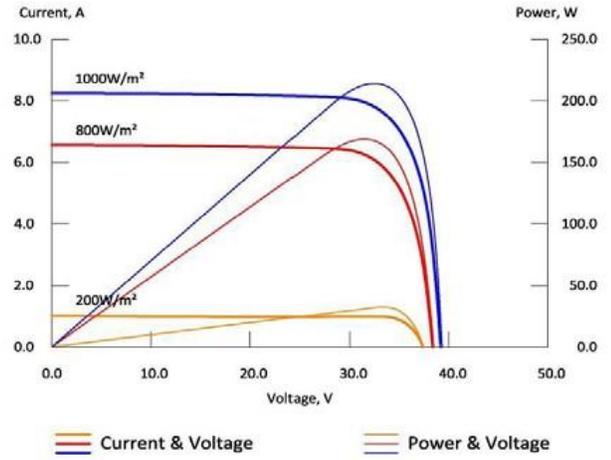
Maximum System Voltage	1,000VDC
Operating Temperature Range	-40°C to +85°C
Maximum Series Fuse Rating	20A
Fire Rating	TYPE 1
Front & Back Load	Max. design loads for 2 rail system 113 psf, downward, 64 psf, upward Max. design loads for 3 rail system 178 psf, downward, 64 psf, upward

## MECHANICAL DATA

Solar Cells	P-type mono-crystalline silicon (156.75mm)
Cell Orientation	60 cells (6x10), 5-busbar
Module Dimensions	1675mm x 1001mm x 33mm (65.95in. x 39.40in. x 1.30in.)
Weight	18.0kg (39.7lb)
Front Glass	3.2mm (0.126in.) tempered, low-iron, anti-reflective coating
Frame	Anodized aluminum alloy
Encapsulant	Ethylene vinyl acetate (EVA)
J-Box	Protection class IP65 with 3 bypass-diodes
Cables	PV wire, 1m (39.37in.), 4mm <sup>2</sup> / 12 AWG
Connector	MC4 connector

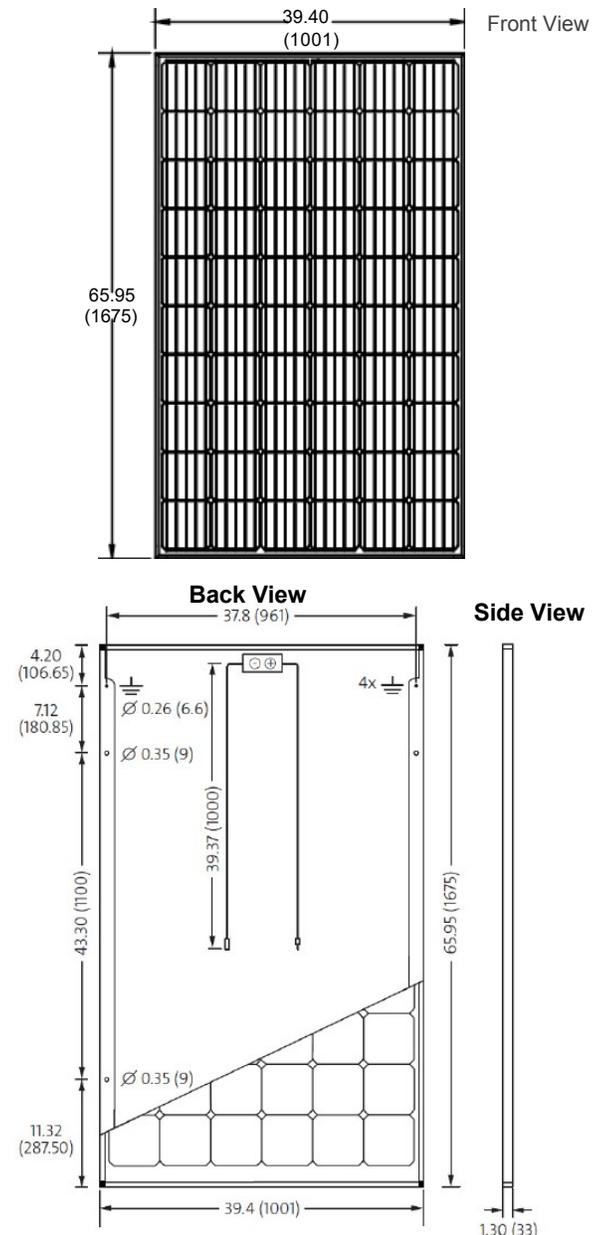
## SHIPPING INFORMATION

Container	FT	Pallets	Panels	310W
53'		30	900	279.0kW



Current-voltage characteristics with dependence on irradiance

## BASIC DESIGN [ UNITS: Inch ( mm ) ]



MISSION SOLAR ENERGY

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