



Power Your Life

E-Series

280 - 285 W Mono Solar Panel

**+5 / -0
Wp**

Positive power tolerance
+5 / -0 Wp

**PID
FREE**

PID-Free
PID stands for Potential Induced Degradation
Module power loss is less than 5% under IEC 62804

**HOT
SPOT**

Hot-spot protection
Design to withstand localized heating caused by cracked, mismatched cells, interconnection failures, or partial shadowing

Snow

Maximum load
Design to withstand heavy snow and wind pressure under IEC 61215 & 61730

**EL
TEST**

In-House EL tests
Use electroluminescence (EL) measurements to rule out invisible defects such as microcracks, finger defects, and low-current output areas in modules



Warranty & Insurance

25-year limited warranty on power output
10-year limited warranty on workmanship
Contact TSEC AMERICA for warranty information

Product & Management System | Certificates



About TSEC

TSEC Corporation has always been pursuing cutting-edge technology to develop high-efficient solar cells and panels all the time. The word "TSEC" stands for Taiwan Solar Energy Company which represents the symbol of confidence, sustainability, and trust in our products and services. With hands-on experience in solar projects, TSEC America is capable of bringing commercial and residential users the enjoyment of solar-powered lives. It is our mission to provide clean energy to reduce carbon dioxide emissions and enable the Earth to support human life.

E-Series 280 - 285 W Mono Solar Panel

Performance at standard test condition (STC)*

		TS60-6M3-280	TS60-6M3-285	
Maximum Power	P _{max}	280	285	W
Open Circuit Voltage	V _{oc}	39.56	39.98	V
Maximum Power Voltage	V _{mp}	31.90	32.28	V
Short Circuit Current	I _{sc}	9.46	9.50	A
Maximum Power Current	I _{mp}	8.80	8.85	A
Tolerance of Maximum Power		+5 / -0		W
Module Efficiency		17.10	17.41	%
PTC Rating		254.8	259.5	W

*STC: Standard Test Condition, 1000 W/m², AM 1.5, 25°C

*PTC: PVUSA Test Condition

Thermal Characteristics

NOCT*	113.9 °F / 45.5°C
TC I _{sc}	+0.069 % / °C
TC V _{oc}	-0.312 % / °C
TC P _{max}	-0.432 % / °C

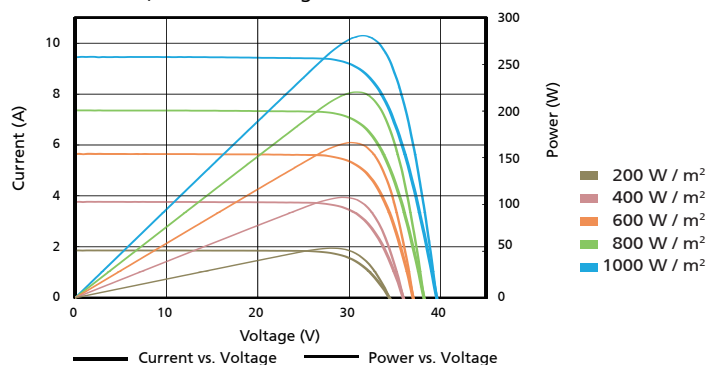
*NOCT: Nominal Operating Cell Temperature
800 W/m², AM 1.5, Ambient Temperature 20°C, Wind Speed 1 m/s

System Integration Parameters

Maximum DC system voltage	1000 V (IEC / UL)
Maximum series fuse	15 A
Number of bypass diodes	3
Snow load	112 psf / 5,400 Pascal
Wind load	50 psf / 2,400 Pascal
Operating range	-40 to 185°F / -40 to 85°C
Fire performance	Type 2 (UL 1703)

IV Curve

Current, Power vs. Voltage Characteristics



Performance at 800 W/m², NOCT, AM 1.5

		TS60-6M3-280	TS60-6M3-285	
Maximum Power	P _{max}	206.11	209.87	W
Open Circuit Voltage	V _{oc}	36.57	36.98	V
Maximum Power Voltage	V _{mp}	29.12	29.47	V
Short Circuit Current	I _{sc}	7.69	7.72	A
Maximum Power Current	I _{mp}	7.08	7.12	A

Module Characteristics

Cell Configuration	60 in series
Cell Type	6.17" Monocrystalline Silicon
Length	64.92 in / 1649 mm
Width	39.09 in / 993 mm
Height	1.57 in / 40 mm
Weight	40.79 lbs / 18.5 Kg
Glass	Low iron tempered with ARC
Frame	Black anodized aluminum
Junction Box	IP 67
Connectors	MC4 Compatible

