

# TSM-PA14

## THE UTILITY SOLUTION

**15.7%**  
MAX EFFICIENCY

**305W**  
MAX POWER OUTPUT

**10 YEAR**  
PRODUCT WARRANTY

**25 YEAR**  
LINEAR POWER WARRANTY

Founded in 1997, Trina Solar (NYSE: TSL) has established itself as a leader in the solar community with its vertically integrated business model. Our modules and system solutions provide clean solar power in on-grid and off-grid residential, commercial, industrial and utility-scale systems.

With more than 22 offices worldwide, Trina Solar has partnerships with leading installers, distributors, utilities and developers in all major PV markets. Trina Solar is committed to driving smarter energy choices.

Trina Solar Limited  
[www.trinasolar.com](http://www.trinasolar.com)

**Trina**solar  
Smart Energy Together



Module can bear snow loads up to **5400Pa** and wind loads up to **2400Pa**



Guaranteed power output  
**0~+3%**



High performance under low light conditions  
**Cloudy days, mornings and evenings**



Enhanced module durability with **4.0mm** thick tempered glass



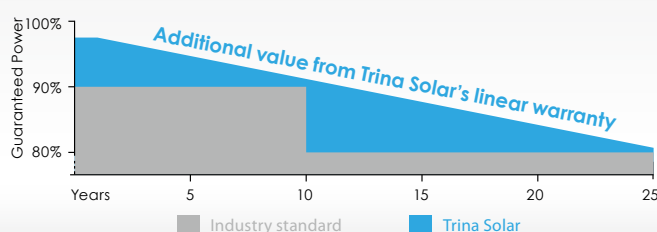
Manufactured according to International Quality and Environment Management System Standards  
**ISO9001, ISO14001**



**MC4** photovoltaic connectors increase system reliability

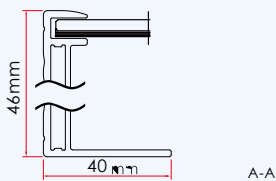
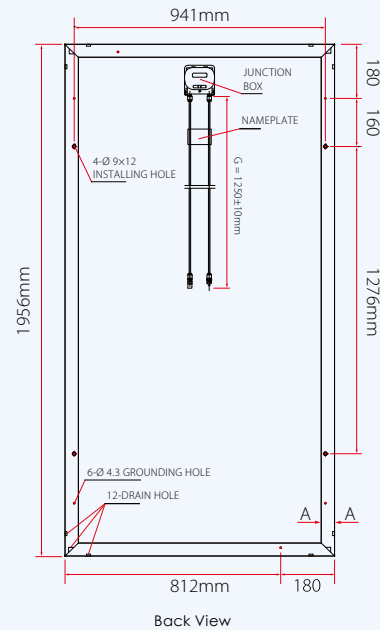
### LINEAR PERFORMANCE WARRANTY

10 Year Product Warranty • 25 Year Linear Power Warranty

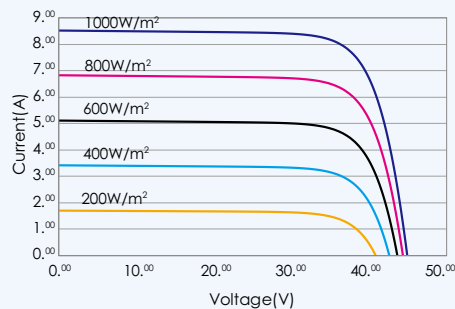


# TSM-PA14 Utility Scale Solar Module

## DIMENSIONS OF PV MODULE TSM-PA14

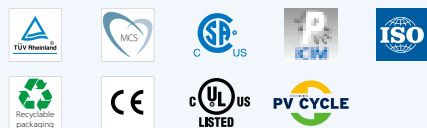


## I-V CURVES OF PV MODULE TSM-290 PA14



Average efficiency reduction of 4.5% at 200W/m² according to EN 60904-1.

## CERTIFICATION



ELECTRICAL DATA @ STC	TSM-285 PA14	TSM-290 PA14	TSM-295 PA14	TSM-300 PA14	TSM-305 PA14
Peak Power Watts- $P_{MAX}$ (Wp)	285	290	295	300	305
Power Output Tolerance- $P_{MAX}$ (%)	0/+3	0/+3	0/+3	0/+3	0/+3
Maximum Power Voltage- $V_{MP}$ (V)	35.6	36.1	36.6	36.9	37.0
Maximum Power Current- $I_{MPP}$ (A)	8.02	8.04	8.07	8.13	8.25
Open Circuit Voltage- $V_{OC}$ (V)	44.7	44.9	45.2	45.3	45.4
Short Circuit Current- $I_{SC}$ (A)	8.50	8.53	8.55	8.60	8.75
Module Efficiency $\eta_m$ (%)	14.7	14.9	15.2	15.5	15.7

Values at Standard Test Conditions STC (Air Mass AM1.5, Irradiance 1000W/m², Cell Temperature 25°C). Power measurement tolerance: ±3%

ELECTRICAL DATA @ NOCT	TSM-285 PA14	TSM-290 PA14	TSM-295 PA14	TSM-300 PA14	TSM-305 PA14
Maximum Power- $P_{MAX}$ (Wp)	207	211	214	218	221
Maximum Power Voltage- $V_{MP}$ (V)	32.1	32.6	33.0	33.3	33.4
Maximum Power Current- $I_{MPP}$ (A)	6.46	6.47	6.48	6.55	6.62
Open Circuit Voltage (V)- $V_{OC}$ (V)	40.7	40.9	41.2	41.3	41.4
Short Circuit Current (A)- $I_{SC}$ (A)	6.93	6.97	7.00	7.04	7.17

NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s. Power measurement tolerance: ±3%

## MECHANICAL DATA

Solar cells	Multicrystalline 156 × 156mm (6 inches)
Cell orientation	72 cells (6 × 12)
Module dimensions	1956 × 992 × 46mm (77 × 39.05 × 1.81 inches)
Weight	27.6kg (60.8 lb)
Glass	High transparency solar glass 4.0mm (0.16 inches)
Frame	Anodized aluminium alloy
J-Box	IP 67 rated
Cables	Photovoltaic Technology cable 4.0mm² (0.006 inches²), 1250mm (49.2 inches)
Connector	Original MC4



## TEMPERATURE RATINGS

Nominal Operating Cell Temperature (NOCT)	45°C (±2°C)
Temperature Coefficient of $P_{MAX}$	-0.44%/°C
Temperature Coefficient of $V_{OC}$	-0.33%/°C
Temperature Coefficient of $I_{SC}$	0.046%/°C

## MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1000V DC(IEC)/600V DC(UL)
Max Series Fuse Rating	15A

## WARRANTY

10 year Product Workmanship Warranty

25 year Linear Power Warranty

(Please refer to product warranty for details)

## PACKAGING CONFIGURATION

Modules per box: 24 pieces

Modules per 40' container: 528 pieces