

# TSM-PA14

## Utility Scale Solar Module



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)



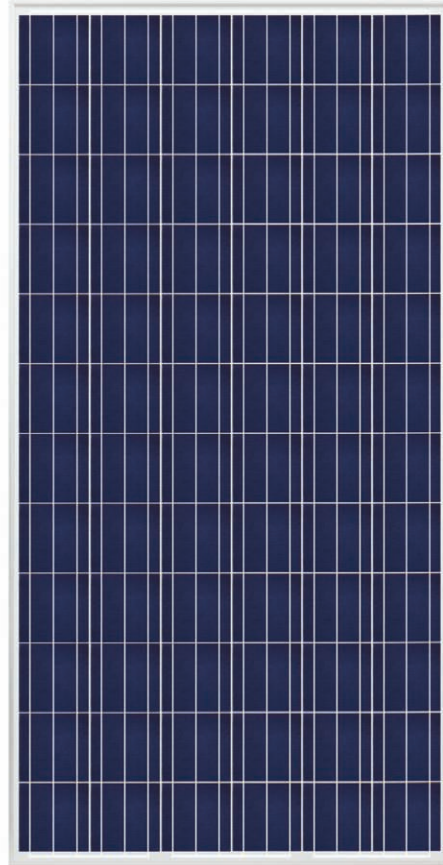
Enhanced module durability with 4.0mm thick tempered glass



Independently certified by international certification bodies\*



Manufactured according to International Quality and Environment Management System (ISO9001, ISO14001)

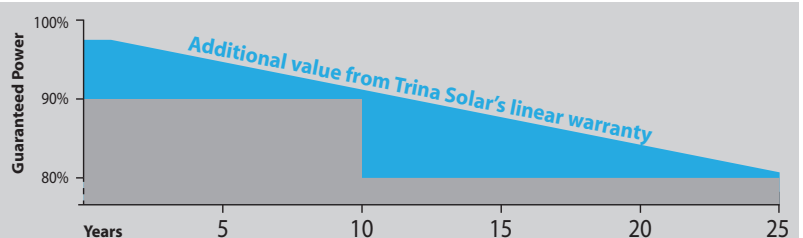


The NEW TSM-PA14 is the newest addition to Trina Solar's premium portfolio of Multicrystalline modules. With power outputs ranging from 265 to 285 Watt, the modules are designed specially for utility-scale installations. Along with the rest of Trina Solar's module portfolios, the PA14 provides the highest Quality and power output to our utility-scale customers.



**linear performance warranty**

**10 year product warranty**  
**25 year linear power warranty**



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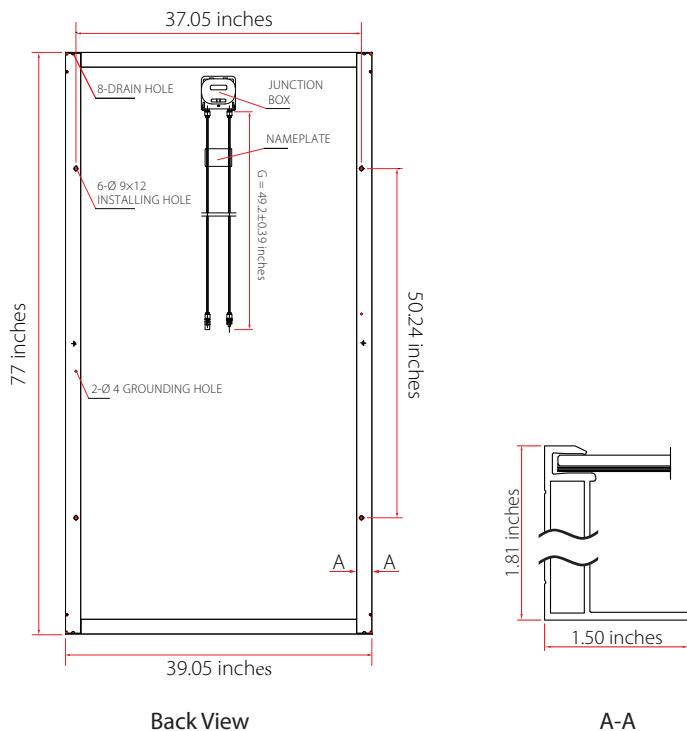
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Founded in 1997, Trina Solar is a vertically integrated PV manufacturer, producing everything from ingots to modules, using both mono and multicrystalline technologies. By the end of 2011, the company will have a nameplate module capacity of 1.9GW. Trina Solar's wide range of products are used in residential, commercial, industrial and public utility applications throughout the world.

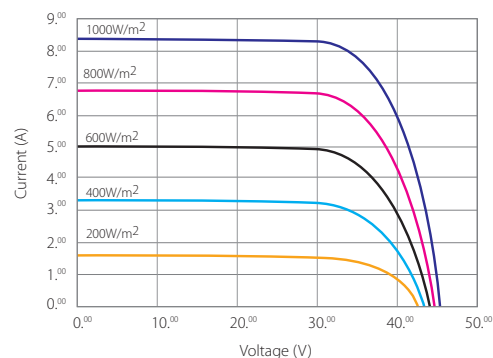
Only by matching an efficient cost-structure with proven performance will we, as an industry, achieve grid parity. And at Trina Solar, we have both.

# TSM-PA14 Utility Scale Solar Module

## Dimensions of PV module TSM-PA14



## I-V Curves of PV module TSM-280PA14



Efficiency	up to 14.7%
Wattage	up to 285W
Years warranty	25

## Certification



Electrical Data @ STC	TSM-265PA14	TSM-270PA14	TSM-275PA14	TSM-280PA14	TSM-285PA14
Peak Power Watts- $P_{MAX}$ (WP)	265	270	275	280	285
Power Output Tolerance- $P_{MAX}$ (%)	0/+3	0/+3	0/+3	0/+3	0/+3
Maximum Power Voltage- $V_{MAX}$ (V)	35.3	35.5	35.9	36.0	36.3
Maximum Power Current- $I_{MPP}$ (A)	7.50	7.60	7.68	7.78	7.86
Open Circuit Voltage- $V_{OC}$ (V)	44.2	44.3	44.4	44.4	44.5
Short Circuit Current- $I_{SC}$ (A)	8.20	8.29	8.39	8.45	8.49
Module Efficiency $\eta_m$ (%)	13.7	13.9	14.2	14.4	14.7

Values at Standard Test Conditions STC (Air Mass AM1.5, Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C)

## Mechanical Data

Solar cells	Multicrystalline 6 inches (156 x 156mm)
Cells orientation	72 cells (6x12)
Module dimension	77 x 39.05 x 1.81 inches (1956 x 992 x 46mm)
Weight	61.7lb (28kg)
Glass	High transparency solar glass 0.16inches (4.0mm)
Frame	Anodized aluminium alloy
J-Box	IP 65 rated
Cables/Connector	Photovoltaic Technology cable 0.006inches <sup>2</sup> (4.0mm <sup>2</sup> ), 49.2inches (1250mm), MC4

## Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	46°C (±2°C)
Temperature Coefficient of $P_{MPP}$	-0.45%/°C
Temperature Coefficient of $V_{OC}$	-0.35%/°C
Temperature Coefficient of $I_{SC}$	0.05%/°C

## Maximum Ratings

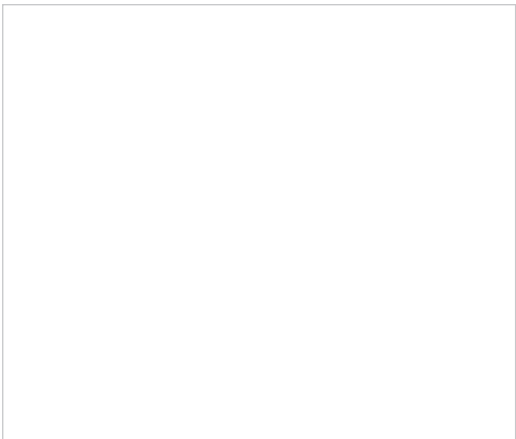
Operational Temperature	-40~+85°C
Maximum System Voltage	600VDC
Max Series Fuse Rating	15A

## Warranty

10 years workmanship warranty  
 25 years linear performance warranty  
 (Please refer to Trina Solar product warranty for details)

## Packaging Configuration

Modules per box	20 pcs
Modules per 40' container	440 pcs



TSM\_US\_2011\_RevB