

# THE UTILITY MODULE

## TSM-PC14



**72 CELL**  
MULTICRYSTALLINE MODULE

**295–310W**  
POWER OUTPUT RANGE

**16.0%**  
MAXIMUM EFFICIENCY

**0 to +3%**  
POSITIVE POWER TOLERANCE

### TRINA SOLAR: A STRONG AND RELIABLE PARTNER

As a leading global manufacturer of next generation photovoltaic products, Trina Solar is committed to building mutually beneficial alliances with installers, developers, distributors and technological partners as the backbone of our shared goal to drive Smart Energy Together. Thanks to an extensive sales and service network with local expert teams throughout Europe, Trina Solar is perfectly positioned to support your needs. With Trina Solar as your strong, bankable partner you can rest assured knowing that you've made the right choice.

[www.trinasolar.com](http://www.trinasolar.com)



#### Ideal for large scale installations

- High power footprint reduces installation time & BOS costs



#### One of the industry's most trusted modules

- Field proven performance
- Trina Solar's financial solidity consistently confirmed by banks and investors



#### Highly reliable due to stringent quality control

- Over 30 in-house tests (UV, TC, HF, and many more)
- In-house testing goes well beyond certification requirements
- PID resistant

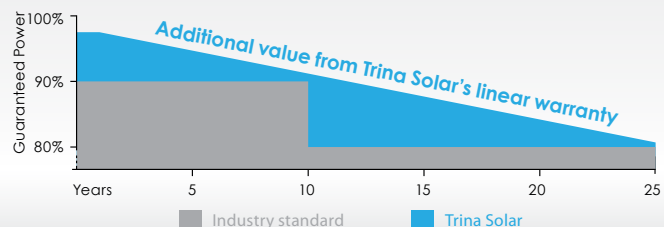


#### Certified to withstand challenging environmental conditions

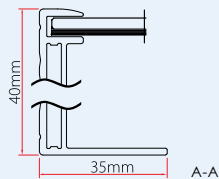
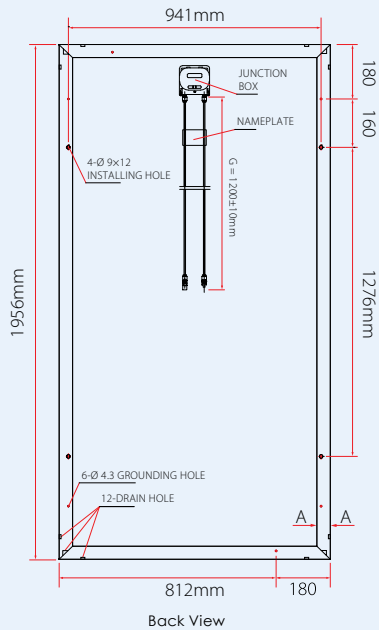
- 2400 Pa wind load
- 5400 Pa snow load
- 25 mm hail stones at 82 km/h

### LINEAR PERFORMANCE WARRANTY

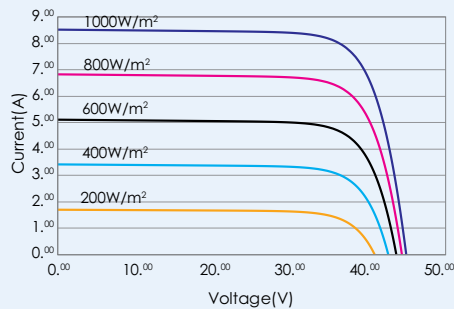
10 Year Product Warranty • 25 Year Linear Power Warranty



## DIMENSIONS OF PV MODULE TSM-PC14



## I-V CURVES OF PV MODULE TSM-290 PC14



## CERTIFICATION

IEC61215/EN61215  
IEC61730/EN61730  
IEC 61701  
IEC 627162 PtG 1917/05.11  
DIN EN 60068-2-68 LC2  
IEC 82/685/NP9  
MCS BRE PV0183



ELECTRICAL DATA @ STC	TSM-295 PC14	TSM-300 PC14	TSM-305 PC14	TSM-310 PC14
Peak Power Watts- $P_{MAX}$ (Wp)	295	300	305	310
Power Output Tolerance- $P_{MAX}$ (%)	0/+3	0/+3	0/+3	0/+3
Maximum Power Voltage- $V_{MPP}$ (V)	35.8	36.2	36.6	37.0
Maximum Power Current- $I_{MPP}$ (A)	8.25	8.28	8.33	8.38
Open Circuit Voltage- $V_{OC}$ (V)	45.1	45.4	45.5	45.5
Short Circuit Current- $I_{SC}$ (A)	8.72	8.77	8.81	8.85
Module Efficiency $\eta_m$ (%)	15.2	15.5	15.7	16.0

STC: Irradiance 1000 W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3. Average efficiency reduction of 4.5% at 200 W/m<sup>2</sup> according to EN 60904-1.

ELECTRICAL DATA @ NOCT	TSM-295 PC14	TSM-300 PC14	TSM-305 PC14	TSM-310 PC14
Maximum Power- $P_{MAX}$ (Wp)	220	223	227	231
Maximum Power Voltage- $V_{MPP}$ (V)	33.2	33.5	33.8	34.1
Maximum Power Current- $I_{MPP}$ (A)	6.61	6.66	6.72	6.77
Open Circuit Voltage- $U_{OC}$ (V)	41.8	42.1	42.2	42.2
Short Circuit Current- $I_{SC}$ (A)	7.04	7.08	7.11	7.15

NOCT: Irradiance at 800 W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1 m/s.

## MECHANICAL DATA

Solar cells	Multicrystalline 156 × 156 mm
Cell orientation	72 cells (6 × 12)
Module dimensions	1956 x 992 x 40 mm
Weight	27.6 kg
Glass	High Transparency, Anti-Reflective, AR Coated and Heat Tempered Solar Glass - 4.0mm
Backsheet	White
Frame	Silver Anodized Aluminium Alloy
J-Box	IP 67 rated
Cables	Photovoltaic Technology cable 4.0 mm <sup>2</sup> , 1200 mm
Connector	Original MC4

## TEMPERATURE RATINGS

Nominal Operating Cell Temperature (NOCT)	45°C (±2°K)
Temperature Coefficient of $P_{MAX}$	- 0.41%/K
Temperature Coefficient of $V_{OC}$	- 0.32%/K
Temperature Coefficient of $I_{SC}$	0.05%/K

## MAXIMUM RATINGS

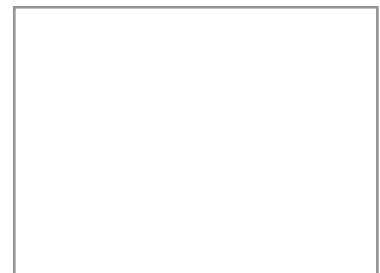
Operational Temperature	-40~+85°C
Maximum System Voltage	1000V DC (IEC)
Max Series Fuse Rating	12A
Mechanical Load	5400pa
Wind Load	2400pa

## WARRANTY

10 year workmanship warranty  
25 year linear performance warranty  
(Please refer to product warranty for details)

## PACKAGING CONFIGURATION

Modules per box: 26 pieces  
Modules per 40' container: 572 pieces



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