

# TSM-PC05

## The Universal Solution



Easy installation and handling for various applications



Module bears load up to 5400Pa



Guaranteed power output (0~+3%)



Independently certified by international certification body (TUV, UL, ICIM, VDE, JET and SGS)\*



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



Currently the most popular panel produced by Trina Solar. Versatile and adaptable, with power output ranging from 220 to 240Wp, the TSM-PC05 panel is perfect for large-scale installations, particularly ground-mounted and commercial rooftop systems. Using reliable and carefully selected components that are tested at the Trina Solar Center of Excellence, this panel comes with a 25-year performance guarantee of 80% power production.

Trina Solar, **the best €/kWh** value under the sun



### Trina Solar Limited

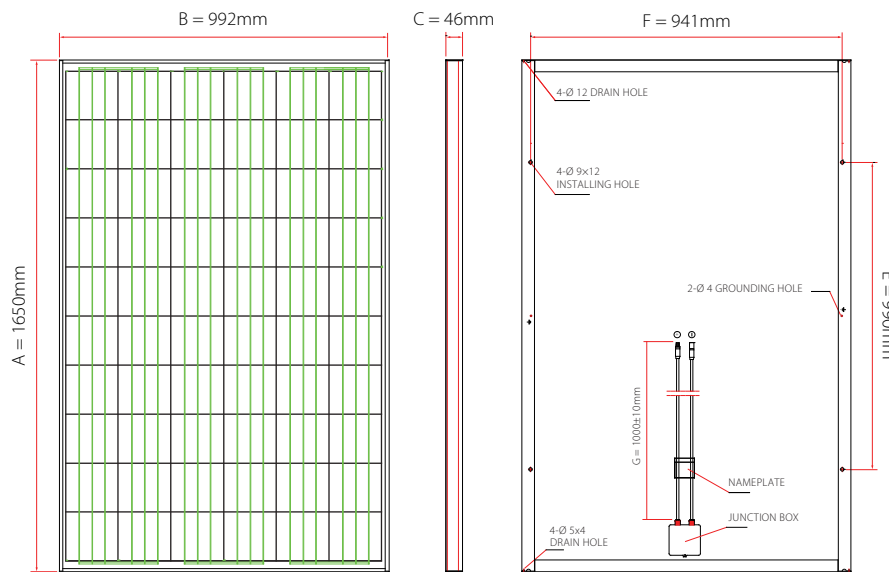
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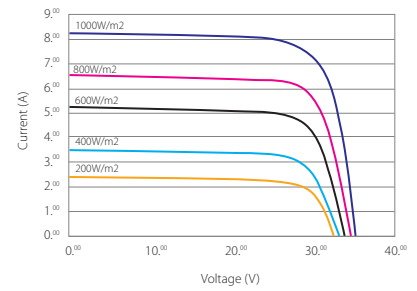
Founded in 1997, Trina Solar is a vertically integrated PV manufacturer, producing everything from ingots to modules, using both mono and multicrystalline technologies. At the end of 2009, the company had a nameplate module capacity of 600MW. Trina Solar's wide range of products are used in residential, 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.

## Dimensions of PV module TSM-PC05



## I-V Curves of PV module TSM-230PC05



Efficiency	up to 14.70
Wattage	up to 240
Years warranty	25

## Certification



Electrical Data @ STC	TSM-220PC05	TSM-225PC05	TSM-230PC05	TSM-235PC05	TSM-240PC05
Peak Power Watts- $P_{MAX}$ (WP)	220	225	230	235	240
Power Output Tolerance- $P_{MAX}$ (%)	0/+3	0/+3	0/+3	0/+3	0/+3
Maximum Power Voltage- $V_{MAX}$ (V)	29.00	29.40	29.80	30.10	30.40
Maximum Power Current- $I_{MPP}$ (A)	7.60	7.66	7.72	7.81	7.89
Open Circuit Voltage- $V_{OC}$ (V)	36.80	36.90	37.00	37.10	37.20
Short Circuit Current- $I_{SC}$ (A)	8.15	8.20	8.26	8.31	8.37
Encapsulated Cell Efficiency $\eta_c$ (%)	15.10	15.40	15.80	16.10	16.40
Module Efficiency $\eta_m$ (%)	13.40	13.70	14.10	14.40	14.70

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

## General Data

Cell Type	156 x 156mm Multicrystalline silicon, 60pcs in series
Glass	High Transmission, Low Iron, Tempered Glass 3.2mm
Frame	Anodized Aluminum, 8 Draining Holes in Frame
Junction Box	TÜV Certified, MC4 connector

## Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	47°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

## Mechanical and Packing Configuration

Dimensions (A x B X C)	1650 x 992 x 46mm
Installation Hole Dimensions (E x F)	990 x 941mm
Cable length (G)	1000mm
Weight	19.5kg
Packing Configuration	20pcs/carton
Quantity/Pallet	1carton/pallet
Loading Capacity	520pcs/40ft, 240pcs/20ft

## Maximum Ratings

Operating Temperature	-40 ~ +85°C
Storage Temperature	-40 ~ +85°C
Maximum System Voltage	1000VDC
Number of Bypass Diodes	6pcs
Maximum Series Fuse	14A

## Warranty

5 years manufacturing warranty
10 years warranty, 90% power output
25 years warranty, 80% power output



**CAUTION:** READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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