

# TSM-DC05

## The Performance Panel



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)



A high-efficiency module, with maximum power outputs ranging from 225 to 245Wp. Made with six-inch Monocrystalline cells, with module efficiencies up to 15.0%, this module is ideal for residential and rooftops installations.

Trina Solar, **the best \$/kWh** value under the sun



### Trina Solar Limited

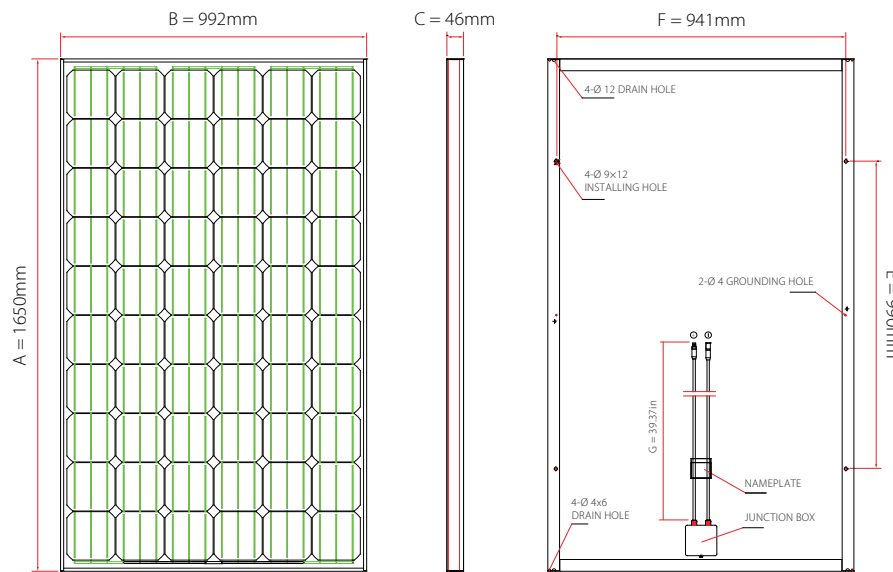
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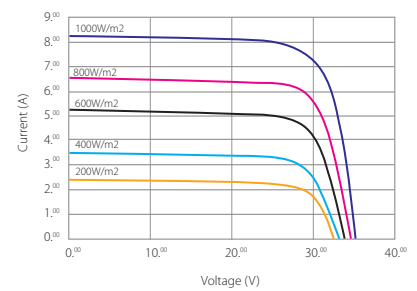
Founded in 1997, Trina Solar is a vertically integrated PV manufacturer, producing everything from ingots to modules, using both mono and multicrystalline technologies. At the end of 2009, the company had a nameplate module capacity of 600MW. Trina Solar's wide range of products are used in residential, 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-DC05



## I-V Curves of PV module TSM-230DC05



Efficiency	up to 15.0
Wattage	up to 245
Years warranty	25

## Certification



Electrical Data @ STC	TSM-225DC05	TSM-230DC05	TSM-235DC05	TSM-240DC05	TSM-245DC05
Peak Power Watts- $P_{MAX}$ (WP)	225	230	235	240	245
Power Output Tolerance- $P_{MAX}$ (%)	0/+3	0/+3	0/+3	0/+3	0/+3
Maximum Power Voltage- $V_{MAX}$ (V)	29.40	29.80	30.10	30.40	30.70
Maximum Power Current- $I_{MPP}$ (A)	7.66	7.72	7.81	7.89	7.98
Open Circuit Voltage- $V_{OC}$ (V)	36.90	37.00	37.10	37.20	37.30
Short Circuit Current- $I_{SC}$ (A)	8.20	8.26	8.31	8.42	8.52
Encapsulated Cell Efficiency $\eta_c$ (%)	15.90	16.20	16.60	16.90	17.30
Module Efficiency $\eta_m$ (%)	13.70	14.10	14.40	14.70	15.00

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 Monocrystalline 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	1 carton/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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