TSM-PA05

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-PA05 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 (U.S.), Inc.
100 Century Center,
Suite 340, San Jose CA 95112,
USA

T +1 800 696 7114
F +1 800 696 0166
E usa@trinasolar.com

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.

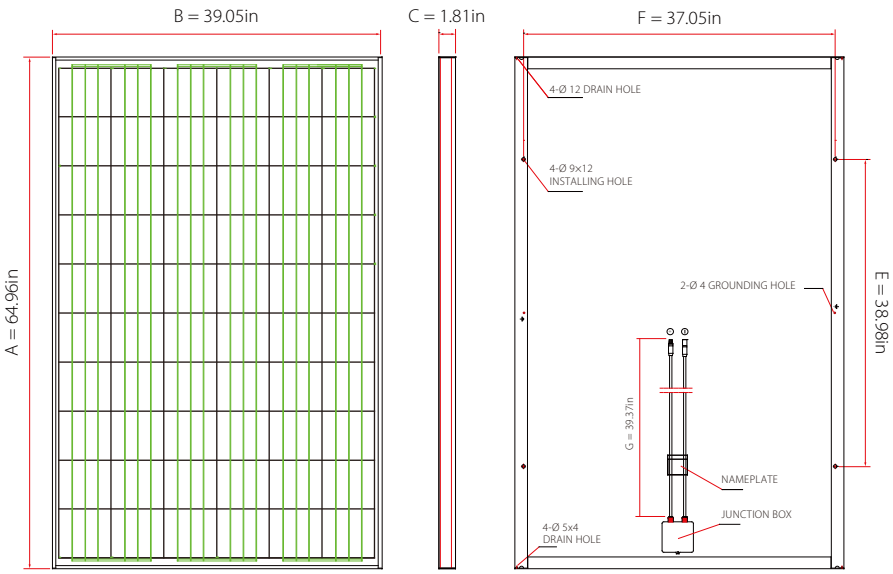
Only by matching an efficient cost-structure with proven performance will we, as an industry, achieve grid parity. And at Trina Solar, we have both.

Trinasolar
The power behind the panel.

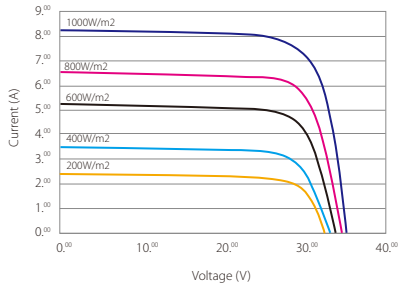
* IEC61215, IEC61730, UL1703, TUV Safety Class II, CE

TSM-PA05 The Universal Solution

Dimensions of PV module TSM-PA05



I-V Curves of PV module TSM-230PA05



Efficiency	up to 14.70
Wattage	up to 240
Years warranty	25

Certification

Electrical Data @ STC	TSM-220PA05	TSM-230PA05	TSM-240PA05
Peak Power Watts-P_{MAX} (WP)	220	230	240
Power Output Tolerance-P_{MAX} (%)	0/+3	0/+3	0/+3
Maximum Power Voltage-V_{MAX} (V)	29.80	30.00	30.60
Maximum Power Current-I_{MPP} (A)	7.39	7.66	7.84
Open Circuit Voltage-V_{OC} (V)	36.80	37.00	37.50
Short Circuit Current-I_{SC} (A)	8.00	8.18	8.38
Encapsulated Cell Efficiency η_c (%)	15.10	15.80	16.40
Module Efficiency η_m (%)	13.40	14.10	14.70

Values at Standard Test Conditions STC (Air Mass AM1.5, Irradiance 1000W/m², Cell Temperature 25°C)

General Data

Cell Type	6 x 6in Multicrystalline silicon, 60pcs in series
Glass	High Transmission, Low Iron, Tempered Glass 0.12in
Frame	Anodized Aluminum, 8 Draining Holes in Frame
Junction Box	12AGW, UL Certified with Tyco 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)	64.96 x 39.05 x 1.81in
Installation Hole Dimensions (E x F)	38.98 x 37.05in
Cable length (G)	39.37in
Weight	43lb
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	600VDC
Number of Bypass Diodes	3pcs
Maximum Series Fuse	15A

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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