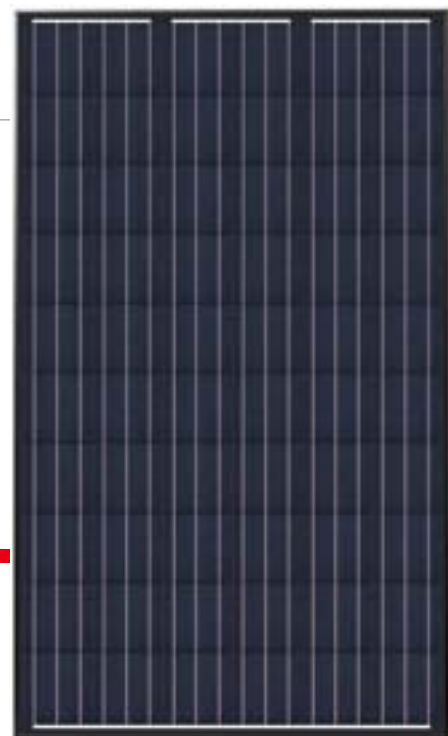


TSM-PA05.05

THE AESTHETIC MODULE



60 CELL

MULTICRYSTALLINE MODULE

230-250W

POWER OUTPUT RANGE

15.3%

MAX EFFICIENCY

0~+3%

POWER OUTPUT GUARANTEE

As a leading global manufacturer of next generation photovoltaic products, we believe close cooperation with our partners is critical to success. With local presence around the globe, Trina is able to provide exceptional service to each customer in each market and supplement our innovative, reliable products with the backing of Trina as a strong, bankable partner. We are committed to building strategic, mutually beneficial collaboration with installers, developers, distributors and other partners as the backbone of our shared success in driving Smart Energy Together.

Trina Solar Limited
www.trinasolar.com

Trinasolar
Smart Energy Together



Our most versatile product

- Compatible with all major BOS components and system designs



One of the industry's most trusted modules

- Over 2 GW sold across all major global markets
- Field proven performance



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

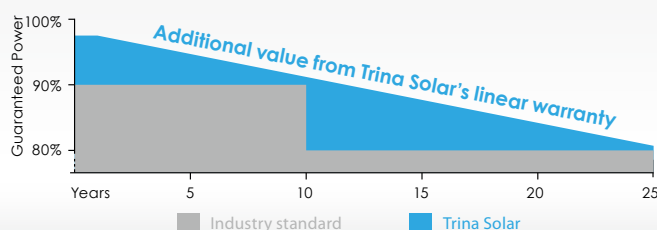


Certified to withstand challenging environmental conditions

- 130 km/hr wind load (2400 Pa)
- 900 kg snow load per module (5400 Pa)

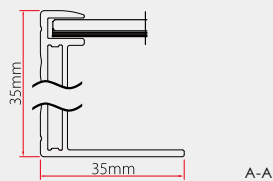
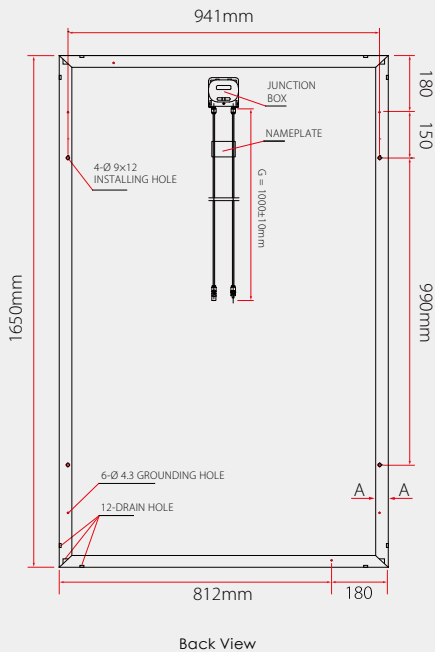
LINEAR PERFORMANCE WARRANTY

10 Year Product Warranty • 25 Year Linear Power Warranty

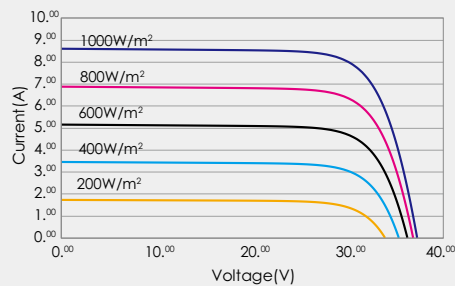


TSM-PA05.05 THE AESTHETIC MODULE

DIMENSIONS OF PV MODULE TSM-PA05.05



I-V CURVES OF PV MODULE TSM-240 PA05.05



CERTIFICATION



ELECTRICAL DATA @ STC	TSM-230 PA05.05	TSM-235 PA05.05	TSM-240 PA05.05	TSM-245 PA05.05	TSM-250 PA05.05
Peak Power Watts- P_{MAX} (Wp)	230	235	240	245	245
Power Output Tolerance- P_{MAX} (%)	0/+3	0/+3	0/+3	0/+3	0/+3
Maximum Power Voltage- V_{MPP} (V)	29.2	29.3	29.7	30.2	30.3
Maximum Power Current- I_{MPP} (A)	7.90	8.03	8.10	8.13	8.27
Open Circuit Voltage- V_{OC} (V)	37.1	37.2	37.3	37.5	37.6
Short Circuit Current- I_{SC} (A)	8.53	8.55	8.62	8.68	8.85
Module Efficiency η_m (%)	14.1	14.4	14.7	15.0	15.3

STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.
Average efficiency reduction of 4.5% at 200 W/m² according to EN 60904-1.

ELECTRICAL DATA @ NOCT	TSM-230 PA05.05	TSM-235 PA05.05	TSM-240 PA05.05	TSM-245 PA05.05	TSM-250 PA05.05
Maximum Power- P_{MAX} (Wp)	167	171	174	178	181
Maximum Power Voltage- V_{MPP} (V)	26.3	26.4	26.6	26.8	27.0
Maximum Power Current- I_{MPP} (A)	6.35	6.48	6.55	6.64	6.70
Open Circuit Voltage (V)- V_{OC} (V)	33.9	34.0	34.1	34.2	34.3
Short Circuit Current (A)- I_{SC} (A)	6.95	6.97	7.04	7.10	7.25

NOCT: Irradiance at 800 W/m², Ambient Temperature 20°C, Wind Speed 1 m/s.

MECHANICAL DATA

Solar cells	Multicrystalline 156 × 156 mm (6 inches)
Cell orientation	60 cells (6 × 10)
Module dimensions	1650 × 992 × 35 mm (64.95 × 39.05 × 1.37 inches)
Weight	18.6 kg (41.0 lbs)
Glass	High transparency solar glass 3.2 mm (0.13 inches)
Backsheet	Black
Frame	Black Anodized aluminium alloy
J-Box	IP 65 or IP 67 rated
Cables	Photovoltaic Technology cable 4.0 mm² (0.006 inches²), 1000 mm (39.4 inches)
Connector	Original MC4

TEMPERATURE RATINGS

Nominal Operating Cell Temperature (NOCT)	45°C (±2°C)
Temperature Coefficient of P_{MAX}	-0.45%/°C
Temperature Coefficient of V_{OC}	-0.31%/°C
Temperature Coefficient of I_{SC}	0.05%/°C

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	600V DC(UL)
Max Series Fuse Rating	15A

WARRANTY

10 year Product Workmanship Warranty

25 year Linear Power Warranty

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

Modules per box: 29 pieces

Modules per 40' container: 812 pieces