

TSM-PC05 TSM-PA05

THE UNIVERSAL SOLUTION

15.0%
MAX EFFICIENCY

245W
MAX POWER OUTPUT

10 YEAR
PRODUCT WARRANTY

25 YEAR
LINEAR POWER WARRANTY

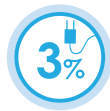
Founded in 1997, Trina Solar is a vertically integrated PV manufacturer, involved in the production of ingots, wafers and cells to the assembly of high quality modules, using both mono and multicrystalline technologies. As of July 2011, the Company has already achieved an annualized nameplate module capacity of approximately 1.9GW. 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.

Trina Solar Limited
www.trinasolar.com



Module can bear snow loads up to **5400Pa** and wind loads up to **2400Pa**



Guaranteed power output
0~+3%



High performance under low light conditions
Cloudy days, mornings and evenings



Independently certified by international certification bodies
IEC61215, IEC61730, UL1703, TUV Safety Class II, CE

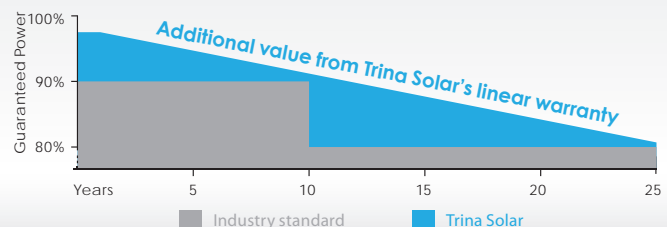


Manufactured according to International Quality and Environment Management System Standards
ISO9001, ISO14001

LINEAR PERFORMANCE WARRANTY

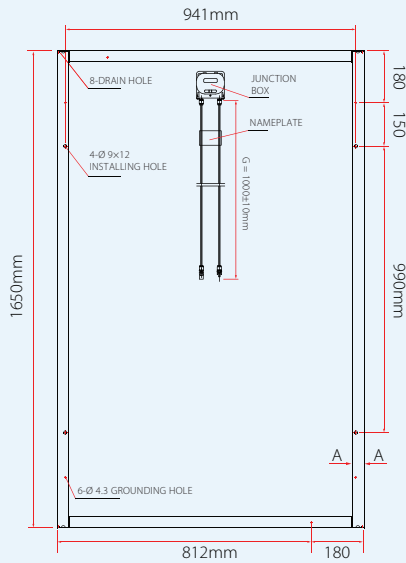
NEW

10 Year Product Warranty • 25 Year Linear Power Warranty

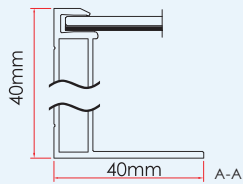


TSM-PC05 / TSM-PA05 THE UNIVERSAL SOLUTION

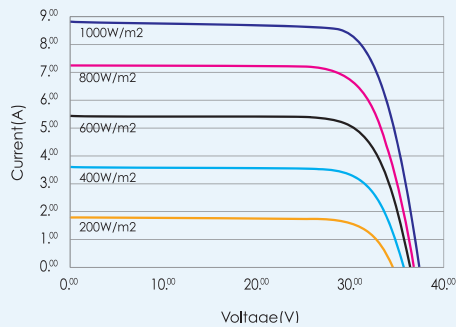
DIMENSIONS OF PV MODULE TSM-PC/PA 05



Back View



I-V CURVES OF PV MODULE TSM-230 PC/PA 05



Average efficiency reduction of 4.5% at 200W/m² according to EN 60904-1.

CERTIFICATION



ELECTRICAL DATA @ STC	TSM-225 PC/PA05	TSM-230 PC/PA05	TSM-235 PC/PA05	TSM-240 PC/PA05	TSM-245 PC/PA05
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 _{MP} (V)	29.4	29.8	30.1	30.4	30.7
Maximum Power Current-I _{MPP} (A)	7.66	7.72	7.81	7.89	7.98
Open Circuit Voltage-V _{OC} (V)	36.9	37.0	37.1	37.2	37.3
Short Circuit Current-I _{SC} (A)	8.20	8.26	8.31	8.37	8.47
Module Efficiency η _m (%)	13.7	14.1	14.4	14.7	15.0

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

ELECTRICAL DATA @ NOCT	TSM-225 PC/PA05	TSM-230 PC/PA05	TSM-235 PC/PA05	TSM-240 PC/PA05	TSM-245 PC/PA05
Maximum Power (W)	164	168	172	175	178
Maximum Power Voltage (V)	26.9	27.1	27.4	27.7	27.8
Maximum Power Current (A)	6.12	6.20	6.27	6.32	6.41
Open Circuit Voltage (V)	33.8	33.9	34.0	34.1	34.2
Short Circuit Current (A)	6.62	6.68	6.70	6.75	6.83

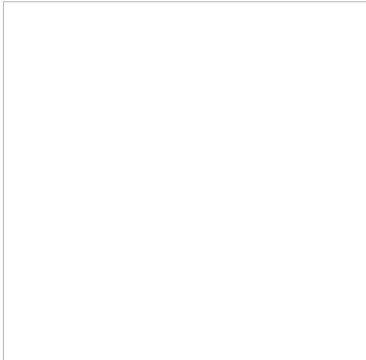
NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1M/s.

MECHANICAL DATA	
Solar cells	Multicrystalline 156 × 156mm (6 inches)
Cell orientation	60 cells (6 × 10)
Module dimension	1650 × 992 × 40mm (64.95 × 39.05 × 1.57 inches)
Weight	19.5kg (43.0 lb)
Glass	High transparency solar glass 3.2mm (0.13 inches)
Frame	Anodized aluminium alloy
J-Box	IP 65 rated
Cables / Connector	Photovoltaic Technology cable 4.0mm ² (0.006 inches ²), 1000mm (39.4 inches), MC4 / H4

TEMPERATURE RATINGS		MAXIMUM RATINGS	
Nominal Operating Cell Temperature (NOCT)	46°C (±2°C)	Operational Temperature	-40~+85°C
Temperature Coefficient of P _{MAX}	- 0.43%/°C	Maximum System Voltage	1000V DC(IEC)/ 600V DC(UL)
Temperature Coefficient of V _{OC}	- 0.32%/°C	Max Series Fuse Rating	15A
Temperature Coefficient of I _{SC}	0.047%/°C		

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

PACKAGING CONFIGURATION	
Modules per box: 25 pcs	
Modules per 40' container: 650 pcs	



TSM_EN_Dec_2011