# TSM-PC05.08 TSM-PA05.08

THE UNIVERSAL SOLUTION

15.3%
MAX EFFICIENCY

250W
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 coststructure 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** 



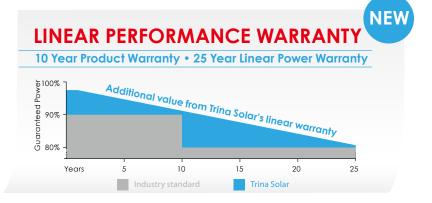
Independently certified by **international** certification bodies



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

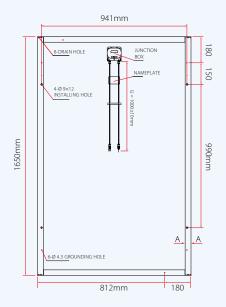


Black frame improves aesthetics

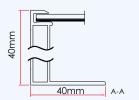


### TSM-PC05.08 / TSM-PA05.08 THE UNIVERSAL SOLUTION

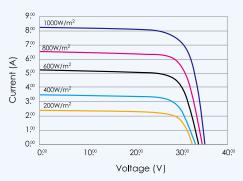
#### **DIMENSIONS OF PV MODULE TSM-PC/PA 05.08**







#### I-V CURVES OF PV MODULE TSM-230 PC/PA 05.08



Average efficiency reduction of 4.5% at 200W/m<sup>2</sup> according to EN 60904-1.

#### CERTIFICATION













ELECTRICAL DATA @ STC	TSM-230 PC/PA05.08	TSM-235 PC/PA05.08	TSM-240 PC/PA05.08	TSM-245 PC/PA05.08	TSM-250 PC/PA05.08
Peak Power Watts-PMAX (Wp)	230	235	240	245	250
Power Output Tolerance-P <sub>MAX</sub> (%)	0/+3	0/+3	0/+3	0/+3	0/+3
Maximum Power Voltage-V <sub>MP</sub> (V)	29.8	30.1	30.4	30.7	30.5
Maximum Power Current-Impp (A)	7.72	7.81	7.89	7.98	8.20
Open Circuit Voltage-Voc (V)	37.0	37.1	37.2	37.3	37.8
Short Circuit Current-Isc (A)	8.26	8.31	8.37	8.47	8.90
Module Efficiency η <sub>m</sub> (%)	14.1	14.4	14.7	15.0	15.3

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

ELECTRICAL DATA @ NOCT	TSM-230 PC/PA05.08	TSM-235 PC/PA05.08	TSM-240 PC/PA05.08	TSM-245 PC/PA05.08	TSM-250 PC/PA05.08
Maximum Power (W)	168	172	175	178	183
Maximum Power Voltage (V)	27.1	27.4	27.7	27.8	27.7
Maximum Power Current (A)	6.20	6.27	6.32	6.41	6.62
Open Circuit Voltage (V)	33.9	34.0	34.1	34.2	34.8
Short Circuit Current (A)	6.68	6.70	6.75	6.83	7.20

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 transparancy solar glass 3.2mm (0.13 inches)
Frame	Anodized aluminium alloy
J-Box	IP 65 rated
Cables / Connector	Photovoltaic Technology cable 4.0mm² (0.006 inches²), 1000mm (39.4 inches), MC4

TEMPERATURE RATINGS	
Nominal Operating Cell Temperature (NOCT)	46°C (±2°C)
Temperature Coefficient of PMAX	- 0.43%/°C
Temperature Coefficient of Voc	- 0.32%/°C
Temperature Coefficient of Isc	0.047%/°C

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Temperature Coefficient of PMAX	- 0.43%/°C
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WARRANTY
10 year workmanship warranty
25 year linear performance warranty
(Please refer to product warranty for details)

#### PACKAGING CONFIGURATION

Modules per box: 24 pcs

Modules per 40' container: 672 pcs

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AVIMON KAIINGS	MAVIMON KAIIIAGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1000V DC(IEC)/ 600V DC(UL)
Max Series Fuse Rating	15A





