

TRINA TSM-DA05, 220W to 240W

TYPICAL ELECTRICAL CHARACTERISTICS

Type	TSM-DA05	220	230	240
Max-Power	Pm(W)	220	230	240
Power Tolerance	(%)	±3	±3	±3
Max-Power Voltage	Vm(V)	29.8	30.0	30.6
Max-Power Current	Im(A)	7.39	7.66	7.84
Open-Circuit Voltage	Voc(V)	36.8	37.0	37.5
Short-Circuit Current	Isc(A)	8.00	8.18	8.38
Max-System Voltage	(VDC)	600		
Cell Efficiency	η_c (%)	15.5	16.2	16.9
Module Efficiency	η_m (%)	13.4	14.1	14.7
Number, type and arrangement of cells		60 pcs. Mono-Crystalline Silicon (6x10)		
Cell Size		6" x 6" 156 mm x 156 mm		
No. of Bypass Diodes	(pcs.)	3		
Max. Series Fuse	(A)	14		
Pm Temperature Coefficient	(%/°C)	-0.45		
Isc Temperature Coefficient	(%/°C)	0.05		
Voc Temperature Coefficient	(%/°C)	-0.35		
NOCT- Nominal Operating Cell Temperature	(°C)	47±2		

MECHANICAL CHARACTERISTICS

Cable Type, Diameter and Length		3.31 mm ² (12AWG), UL Certified
Type of Connector		Tyco
Dimension A*B*C		1650*992*46 (mm) 64.96*39.05*1.81 (in.)
Weight		19.5 Kg 43 lb
No. of Draining Holes In Frame		8
Glass, Type and Thickness		High Transmission, Low Iron, Tempered Glass 3.2 mm 0.12" in.

PACKAGING CONFIGURATION

Packing Configuration		20 pcs./ box
Quantity/Pallet		1 box / pallet
Loading Capacity		520 pcs/40ft or 120 pcs/10ft

ABSOLUTE RATINGS

Dielectric Insulation Voltage	(VDC)	3000 max.
Operating Temperature	(°C)	-40~+85
Storage Temperature	(°C)	-40~+85

*STC Conditions(1000W/m²; 1.5 AM and 25°C Cell temperature)



High Efficiency
Monocrystalline Solar Modules

STRENGTHS

- Tolerance ± 3%
- 3 Bus Bar Configuration
- Plug & Play Connectors
- High Transmission, Low Iron Tempered Glass
- Can bear loads up to 5400 Pascals (IEC 61215 2nd)

WARRANTY

Manufacturing: 5 years
Power production: 90% : 10 years
80% : 25 years

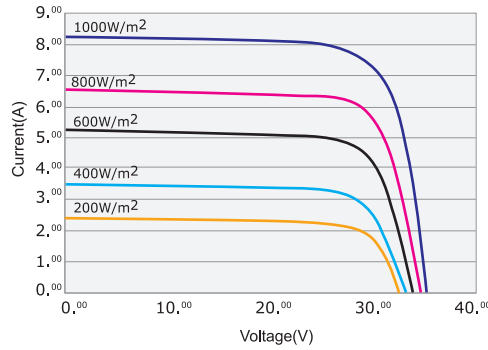
CERTIFICATIONS



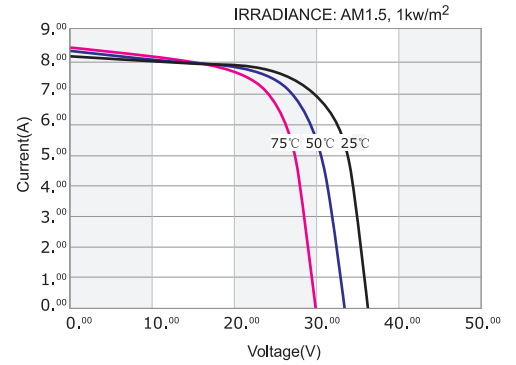
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I-V CURVES

I-V Curves of PV module TSM-230DA05

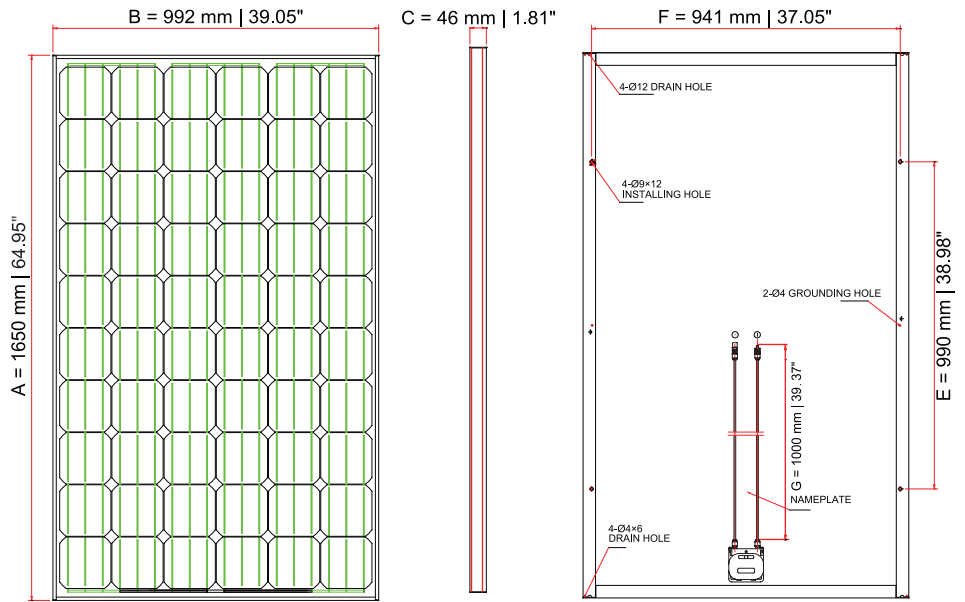


I-V Curves of PV module TSM-230DA05 at various cell temperatures



High Efficiency Monocrystalline Solar Modules

DIMENSIONS



Dimensions A*B*C	1650*992*46 (mm) 64.95*39.05*1.81 (in.)
Installation Hole E*F	990*941 (mm) 38.98*37.05 (in.)
Cable Length G	1000 (mm) 39.37 (in.)

*The company is not responsible for potential typing errors.