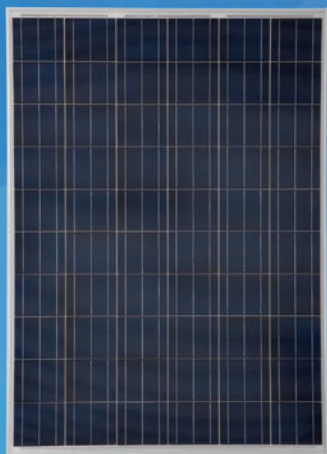




## TRINA TSM-PA05, 220W to 240W

### TYPICAL ELECTRICAL CHARACTERISTICS

Type	TSM-PA05	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	ηc (%)	15.1	15.8	16.4
Module Efficiency	ηm (%)	13.4	14.1	14.7
Number, type and arrangement of cells		60 pcs. Multi-Crystalline Silicon (6x10)		
Cell Size		6" x 6"   156mm X 156mm		
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		



High Efficiency  
Multicrystalline 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 2<sup>nd</sup>)

#### WARRANTY

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

#### CERTIFICATIONS



### MECHANICAL CHARACTERISTICS

Cable type, Diameter and Length		3.31mm <sup>2</sup> (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"

### PACKAGING CONFIGURATION

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

### ABSOLUTE RATINGS

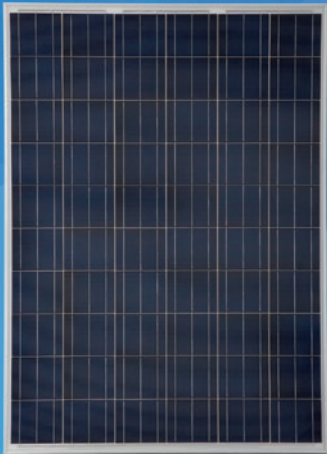
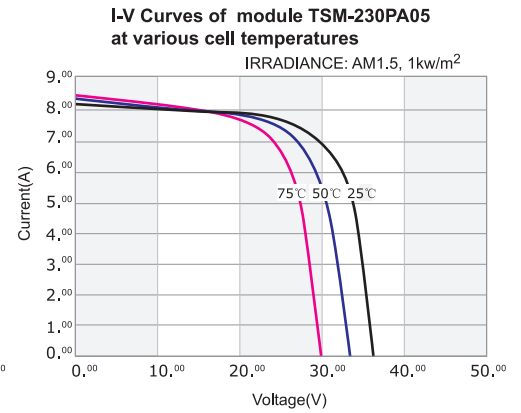
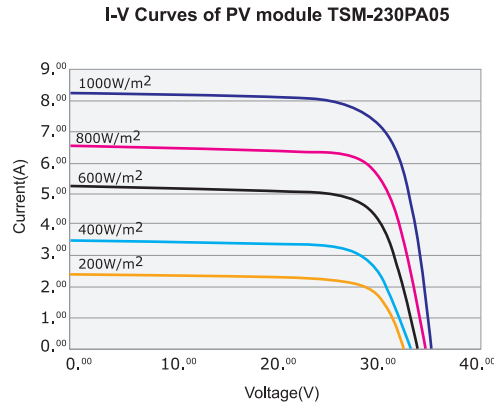
Dielectric Insulation Voltage	(VDC)	3000 max.
Operating Temperature	(°C)	-40~+85
Storage Temperature	(°C)	-40~+85

\*STC Conditions(1000W/m<sup>2</sup>; 1.5 AM and 25°C Cell temperature)



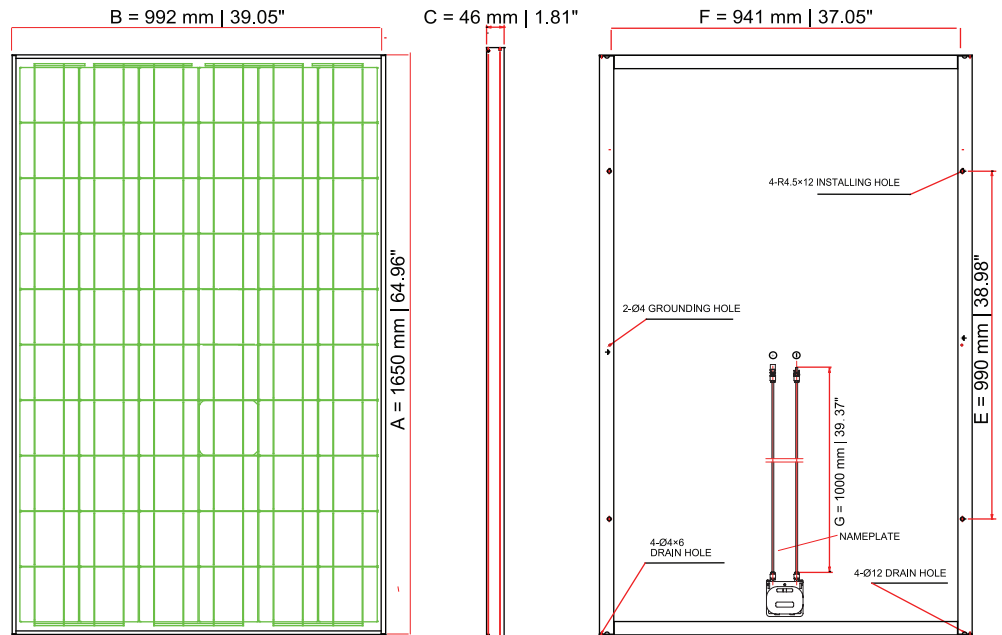
# TRINA TSM-PA05, 220W to 240W

## I-V CURVES



High Efficiency  
Multicrystalline Solar Modules

## DIMENSIONS



Dimensions A*B*C	1650*992*46 (mm)   64.96*39.05*1.81 (in.)
Installation Hole E*F	941*990 (mm)   37.05*38.98 (in.)
Cable Length G	1000 (mm)   39.37 (in.)

\*The company is not responsible for potential typing errors.