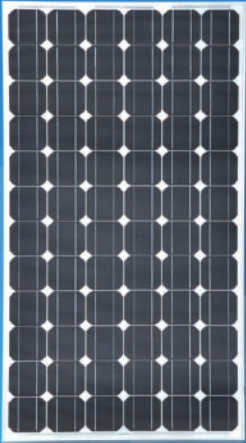


TRINA TSM-DC01, 165W to 185W

TYPICAL ELECTRICAL CHARACTERISTICS

Type	TSM-DC01	165	170	175	180	185
Max-Power	Pm(W)	165	170	175	180	185
Power Tolerance	(%)	±3	±3	±3	±3	±3
Max-Power Voltage	Vm(V)	35.6	35.8	36.2	36.8	37.5
Max-Power Current	Im(A)	4.65	4.76	4.85	4.90	4.95
Open-Circuit Voltage	Voc(V)	43.2	43.6	43.9	44.2	44.5
Short-Circuit Current	Isc(A)	5.20	5.25	5.30	5.35	5.40
Max-System Voltage	(VDC)	1000				
Cell Efficiency	η_c (%)	15.4	15.9	16.4	16.8	17.3
Module Efficiency	η_m (%)	12.9	13.3	13.7	14.1	14.5
Number, type and arrangement of cells		72 pcs. Mono-Crystalline Silicon (6x12)				
Cell Size		125 mm x 125 mm				
No. of Bypass Diodes	(pcs.)	3				
Max. Series Fuse	(A)	9				
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				



Suitable for On Grid and Off Grid Systems

STRENGTHS

- Tolerance ± 3%
- High Efficiency Cells
- 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



MECHANICAL CHARACTERISTICS

Cable Type, Diameter and Length		Ø= 4 mm ² L= 1000 mm TÜV certified
Type of Connector		MC3 or MC4, Compatible Type III or IV
Dimension A*B*C		1581x809x40 (mm)
Weight		15.6 Kg
No. of Draining Holes In Frame		12
Glass, Type and Thickness		High Transmission, Low Iron, Tempered Glass 3.2 mm

PACKAGING CONFIGURATION

Packing Configuration		23 pcs./box
Quantity/Pallet		1 box / pallet
Loading Capacity		276 pcs/20ft or 644 pcs/40ft

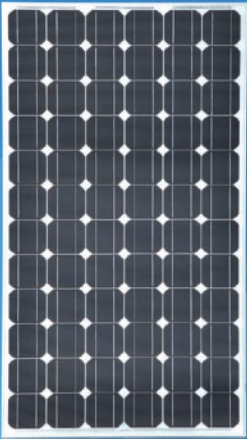
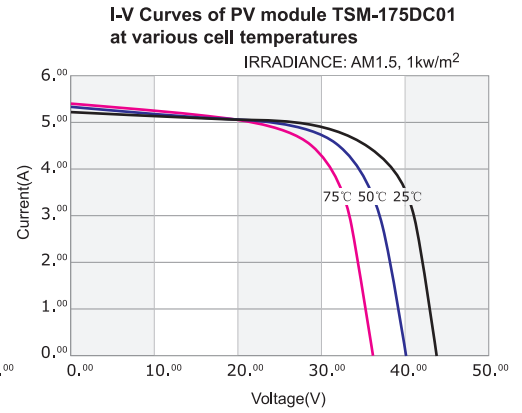
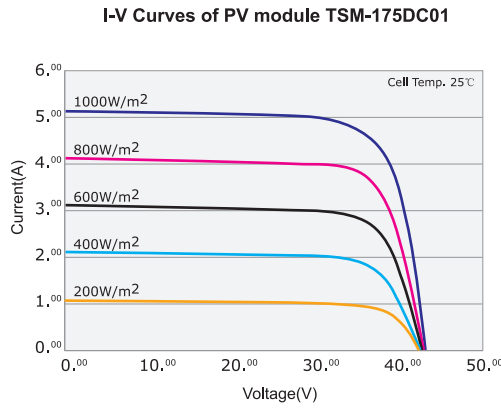
ABSOLUTE RATINGS

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)

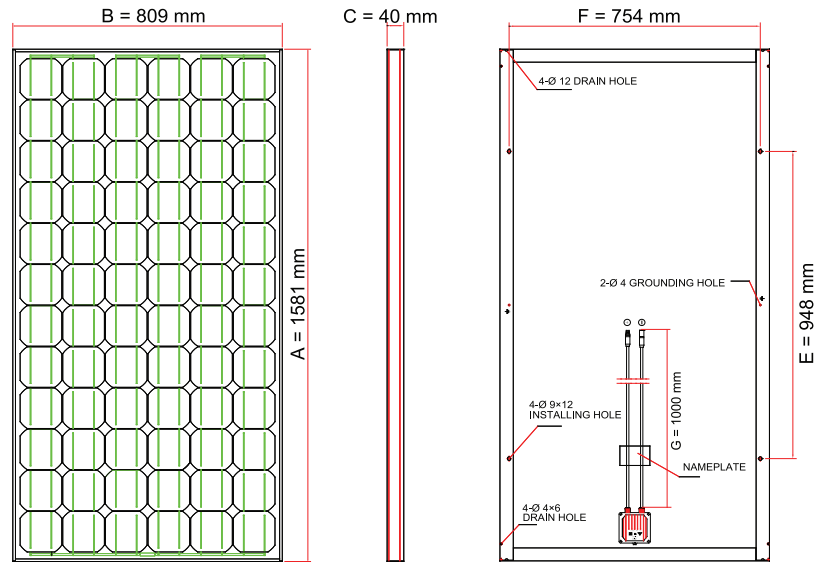
TRINA TSM-DC01, 165W to 185W

I-V CURVES



Suitable for On Grid and Off Grid Systems

DIMENSIONS



Dimensions A*B*C	1581*809*40 (mm)
Installation Hole E*F	948*754 (mm)
Cable Length G	1000 mm

*The company is not responsible for potential typing errors.

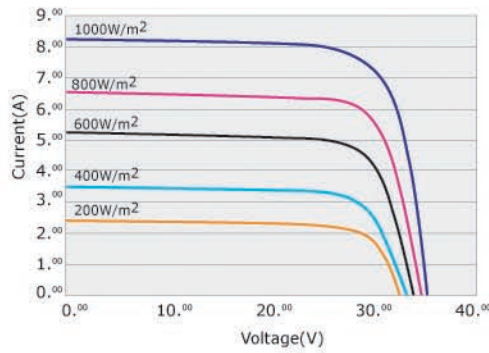


TRINA TSM-DC05, 200W to 240W

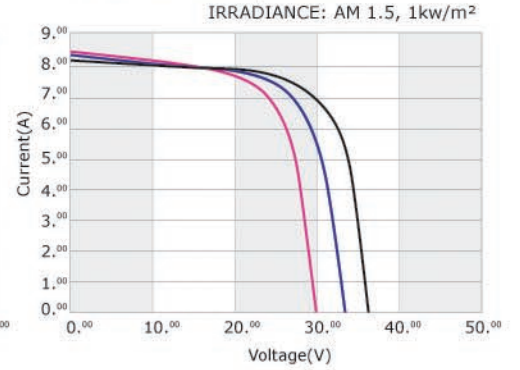
Solar Photovoltaic Module

I-V Curves

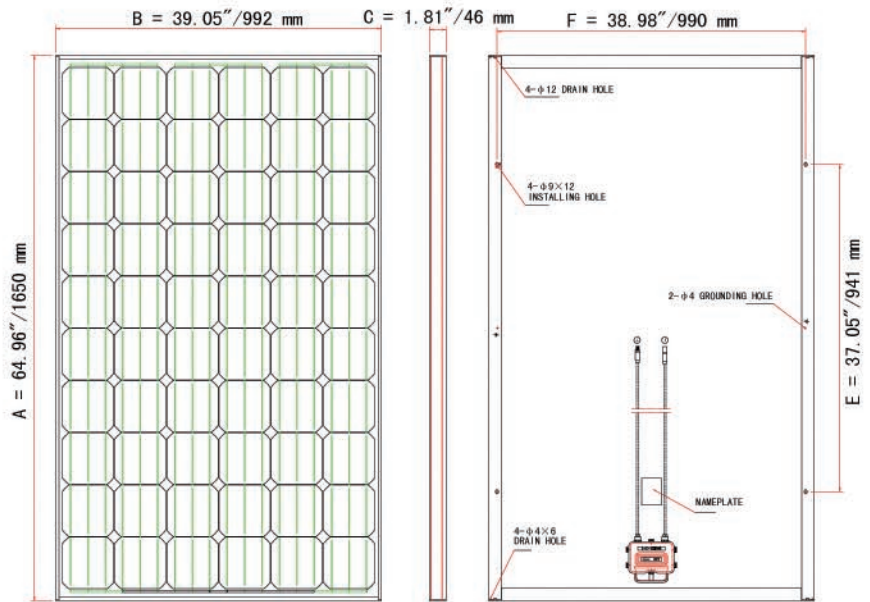
I-V Curves of PV module TSM-230-DC05



I-V Temperature I-V Curves of TSM-230-DC05 at various cell temperatures



Dimensions



Dimensions A*B*C

64.96"(1650mm)*39.05"(992mm)*1.81"(46mm)

Installation Hole E*F

37.05"(941mm)*38.98"(990mm)

Cable Length G

39.37"(1000mm)

*The company is not responsible for potential typing errors.



TRINA TSM-DC05, 200W to 240W

Solar Photovoltaic Module

TYPICAL ELECTRICAL CHARACTERISTICS

Type	TSM	200-DC05	210-DC05	220-DC05	230-DC05	240-DC05
Max-Power	Pm(W)	200	210	220	230	240
Power Tolerance	(%)	±3	±3	±3	±3	±3
Max-Power Voltage	Vm(V)	28.7	29.2	29.8	30.0	30.6
Max-Power Current	Im(A)	6.97	7.19	7.39	7.66	7.84
Open-Circuit Voltage	Voc(V)	36.0	36.4	36.8	37.0	37.5
Short-Circuit Current	Isc(A)	7.75	7.86	8.00	8.18	8.38
Max-System Voltage	(VDC)	1000				
Cell Efficiency	η_c (%)	14.1	14.8	15.5	16.2	16.9
Module Efficiency	η_m (%)	12.2	12.8	13.4	14.1	14.7
Number, type and arrangement of cells		60 pcs. Mono-Crystalline Silicon (6x10)				
Cell Size		6"(156mm) X 6"(156mm)				
No. of Bypass Diodes	(pcs.)	6				
Max. Series Fuse	(A)	11				
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				

STRENGTHS

- Tolerance ± 3%
- 3 Bus Bar Configuration
- Plug & Play Connectors
- High Transmission, Low Iron Tempered Glass

WARRANTY

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

CERTIFICATIONS



High Efficiency Monocrystalline Solar Modules

MECHANICAL CHARACTERISTICS

Cable type, Diameter and Length		0.0062 ^{m2} (4mm ²), TÜV certified, 39.37"(1000mm)
Type of Connector		Compatible Type III and Type IV
Dimension A*B*C		64.96"*39.05"*1.81"
Weight		43lb / 19.5Kg
No. of Draining Holes In Frame		8
Glass, Type and Thickness		High Transmis., Low Iron, Tempered Glass 0.12"(3.2mm).

PACKAGING CONFIGURATION

Packing Configuration		2 pcs./box or 20 pcs./box
Quantity/Pallet		36 pcs/pallet or 20 pcs/pallet
Loading Capacity		504 pcs/40ft or 520 pcs/40ft(H)

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)