Vertex

BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

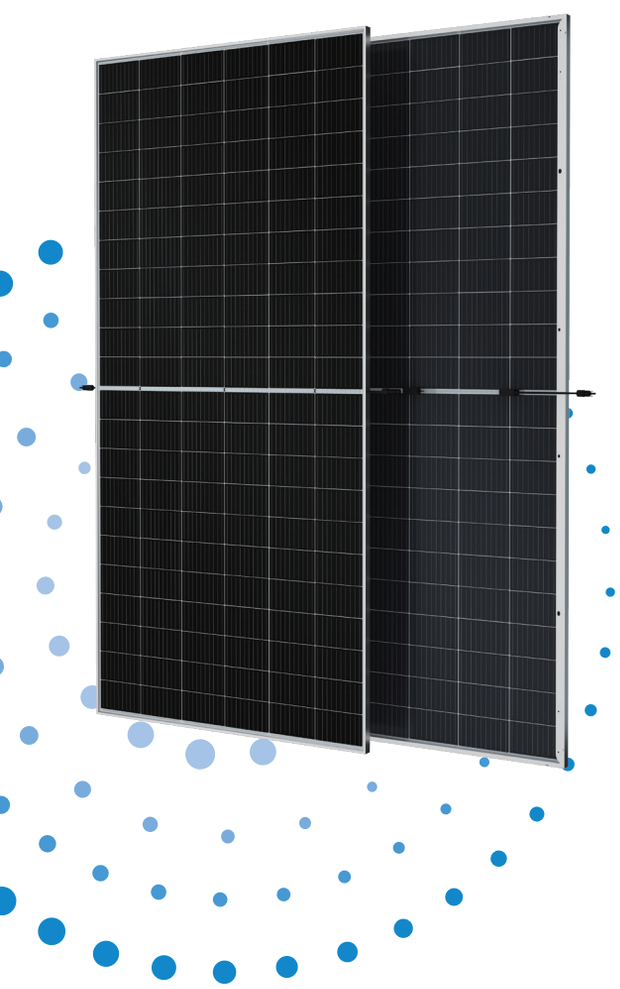
PRODUCT: TSM-DEG19RC.20

PRODUCT RANGE: 560-580W

580W
MAXIMUM POWER OUTPUT

0~+5W
POSITIVE POWER TOLERANCE

21.5%
MAXIMUM EFFICIENCY



High customer value

- Lower LCOE (Levelized Cost Of Energy), reduced BOS (Balance of System) cost, shorter payback time
- Lower first year and annual degradation
- Designed for compatibility with existing mainstream system components
- Higher return on Investment

High power up to 580W

- Up to 21.5% module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection

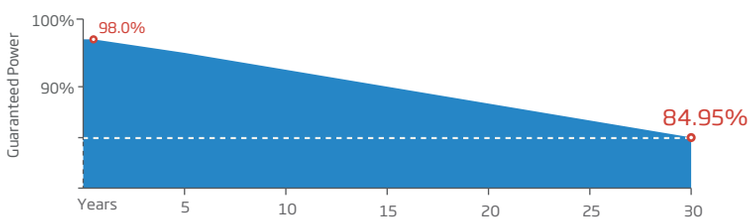
High reliability

- Minimized micro-cracks with innovative non-destructive cutting technology
- Ensured PID resistance through cell process and module material control
- Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity areas
- Mechanical performance up to 5400 Pa positive load and 2400 Pa negative load

High energy yield

- Excellent IAM (Incident Angle Modifier) and low irradiation performance, validated by 3rd party certifications
- The unique design provides optimized energy production under inter-row shading conditions
- Lower temperature coefficient (-0.34%) and operating temperature
- Up to 25% additional power gain from back side depending on albedo

Trina Solar's Vertex Bifacial Dual Glass Performance Warranty



Comprehensive Products and System Certificates

IEC61215/IEC61730/IEC61701/IEC62716
ISO 9001: Quality Management System
ISO 14001: Environmental Management System
ISO14064: Greenhouse Gases Emissions Verification
ISO45001: Occupational Health and Safety Management System

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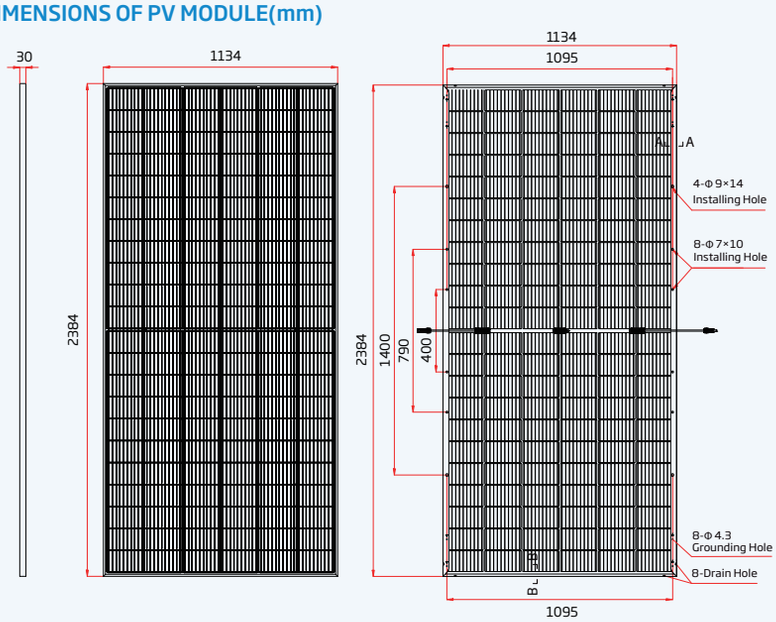
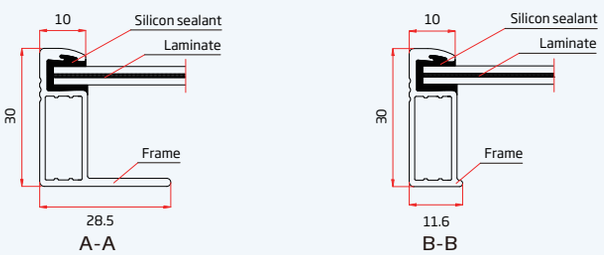
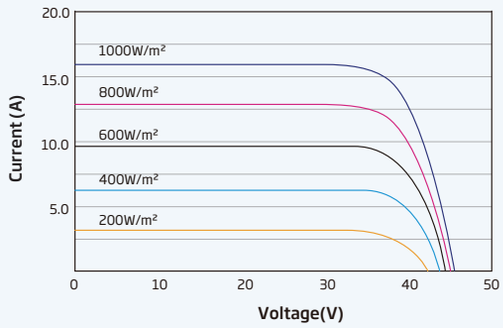
DIMENSIONS OF PV MODULE(mm)

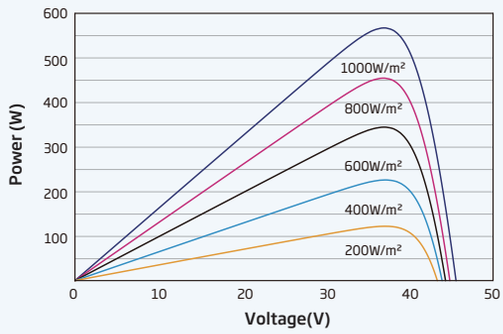




I-V CURVES OF PV MODULE(570 W)



P-V CURVES OF PV MODULE(570 W)



ELECTRICAL DATA (STC)

Peak Power Watts-PMAX (Wp)*	560	565	570	575	580
Power Tolerance-PMAX (W)			0 ~ +5		
Maximum Power Voltage-VMPP (V)	37.9	38.2	38.4	38.7	38.9
Maximum Power Current-IMPP (A)	14.76	14.80	14.84	14.87	14.91
Open Circuit Voltage-VOC (V)	45.2	45.5	45.7	46.0	46.2
Short Circuit Current-ISC (A)	15.86	15.90	15.93	15.97	16.01
Module Efficiency η m (%)	20.7	20.9	21.1	21.3	21.5

STC: Irrdiance 1000W/m2, Cell Temperature 25°C, Air Mass AM1.5. *Measuring tolerance: ±3%.

Electrical characteristics with different power bin (reference to 10% Irradiance ratio)

Total Equivalent power -PMAX (Wp)	599	605	610	615	620
Maximum Power Voltage-VMPP (V)	37.9	38.2	38.4	38.7	38.9
Maximum Power Current-IMPP (A)	15.81	15.83	15.88	15.90	15.94
Open Circuit Voltage-VOC (V)	45.2	45.5	45.7	46.0	46.2
Short Circuit Current-ISC (A)	16.97	17.01	17.05	17.09	17.13
Irradiance ratio (rear/front)			10%		

Power Bifaciality:70±5%.

ELECTRICAL DATA (NOCT)

Maximum Power-PMAX (Wp)	424	428	431	436	439
Maximum Power Voltage-VMPP (V)	34.9	35.2	35.4	35.7	35.8
Maximum Power Current-IMPP (A)	12.12	12.15	12.18	12.22	12.25
Open Circuit Voltage-VOC (V)	42.6	42.8	43.0	43.3	43.5
Short Circuit Current-ISC (A)	12.78	12.81	12.84	12.87	12.90

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

MECHANICAL DATA

Solar Cells	Monocrystalline
No. of cells	132 cells
Module Dimensions	2384×1134×30 mm (93.86×44.65×1.18 inches)
Weight	33.7 kg (74.3 lb)
Front Glass	2.0 mm (0.08 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	EVA/POE
Back Glass	2.0 mm (0.08 inches), Heat Strengthened Glass (White Grid Glass)
Frame	30mm(1.18 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm² (0.006 inches²) Portrait: 350/280 mm(13.78/11.02 inches) Length can be customized
Connector	MC4 EVO2 / TS4 Plus/ TS4*

*Please refer to regional datasheet for specified connector.

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43°C (±2°C)
Temperature Coefficient of PMAX	- 0.34%/°C
Temperature Coefficient of VOC	- 0.25%/°C
Temperature Coefficient of ISC	0.04%/°C

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC)
Max Series Fuse Rating	35A

WARRANTY

12 year Product Workmanship Warranty

30 year Power Warranty

2% first year degradation

0.45% Annual Power Attenuation

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

Modules per box: 36 pieces

Modules per 40' container: 720 pieces

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CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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