



BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

PRODUCT: TSM-DEG19C.20

PRODUCT RANGE: 535-555W

555W

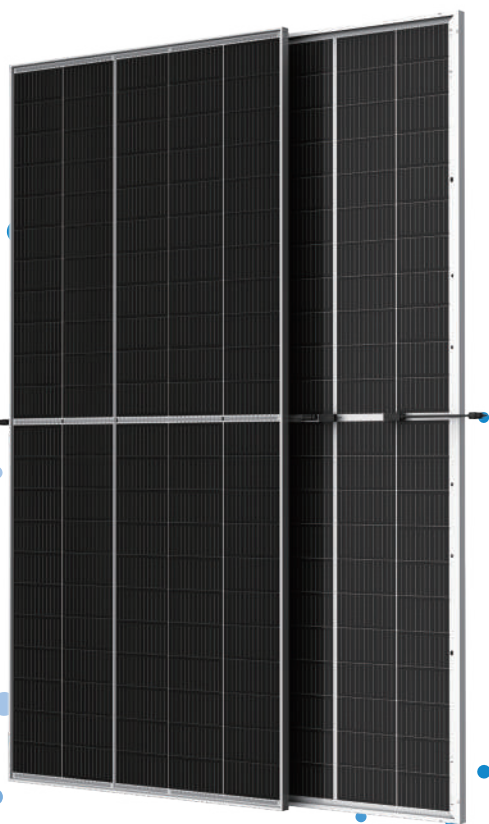
MAXIMUM POWER OUTPUT

0~+5W

POSITIVE POWER TOLERANCE

21.2%

MAXIMUM EFFICIENCY



High customer value

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



High power up to 555W

- Up to 21.2% module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection



High reliability

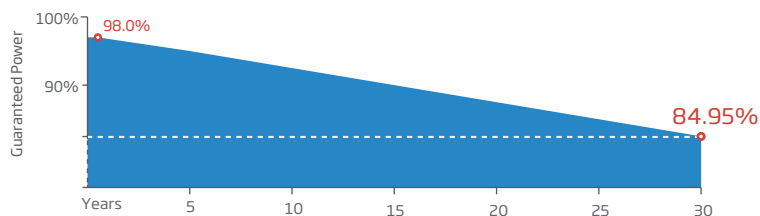
- Minimized micro-cracks with innovative non-destructive cutting technology
- Ensured PID resistance through cell process and module material control
- Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity areas
- Mechanical performance up to 5400 Pa positive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



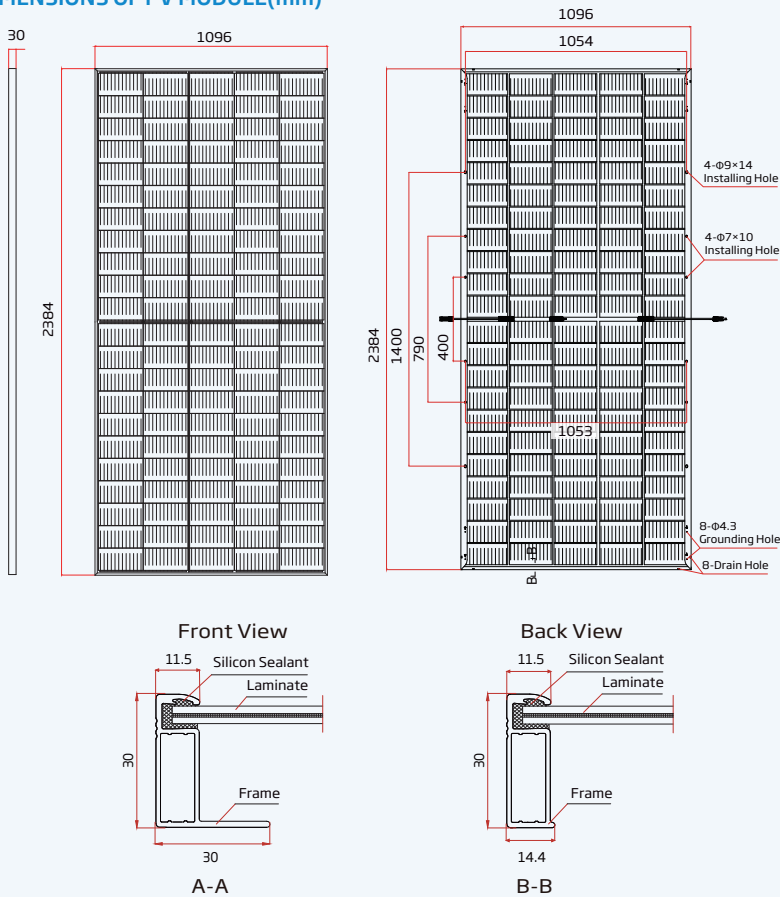
Comprehensive Products and System Certificates



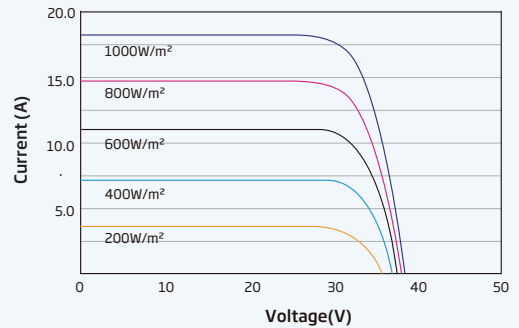
IEC61215/IEC61730/IEC61701/IEC62716/UL61730
 ISO 9001: Quality Management System
 ISO 14001: Environmental Management System
 ISO14064: Greenhouse Gases Emissions Verification
 ISO45001: Occupational Health and Safety Management System



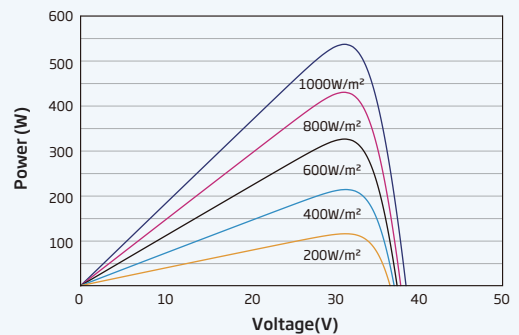
DIMENSIONS OF PV MODULE(mm)



I-V CURVES OF PV MODULE(540 W)



P-V CURVES OF PV MODULE(540 W)



ELECTRICAL DATA (STC)

| | 535 | 540 | 545 | 550 | 555 |
|---------------------------------------|-------|-------|--------|-------|-------|
| Peak Power Watts - P_{MAX} (Wp)* | 535 | 540 | 545 | 550 | 555 |
| Power Tolerance - P_{MAX} (W) | | | 0 ~ +5 | | |
| Maximum Power Voltage - V_{MPP} (V) | 31.2 | 31.4 | 31.6 | 31.8 | 32.0 |
| Maximum Power Current - I_{MPP} (A) | 17.16 | 17.21 | 17.24 | 17.29 | 17.35 |
| Open Circuit Voltage - V_{OC} (V) | 37.5 | 37.7 | 37.9 | 38.1 | 38.3 |
| Short Circuit Current - I_{SC} (A) | 18.24 | 18.30 | 18.35 | 18.39 | 18.43 |
| Module Efficiency η_m (%) | 20.5 | 20.7 | 20.9 | 21.0 | 21.2 |

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

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

| | 573 | 578 | 583 | 589 | 594 |
|---|-------|-------|-------|-------|-------|
| Total Equivalent power - P_{MAX} (Wp) | 573 | 578 | 583 | 589 | 594 |
| Maximum Power Voltage - V_{MPP} (V) | 31.2 | 31.4 | 31.6 | 31.8 | 32.0 |
| Maximum Power Current - I_{MPP} (A) | 18.36 | 18.41 | 18.45 | 18.50 | 18.56 |
| Open Circuit Voltage - V_{OC} (V) | 37.5 | 37.7 | 37.9 | 38.1 | 38.3 |
| Short Circuit Current - I_{SC} (A) | 19.52 | 19.58 | 19.63 | 19.68 | 19.72 |
| Irradiance ratio (rear/front) | | | 10% | | |

Power Bifaciality: 70±5%.

ELECTRICAL DATA (NOCT)

| | 405 | 409 | 413 | 416 | 420 |
|---------------------------------------|-------|-------|-------|-------|-------|
| Maximum Power - P_{MAX} (Wp) | 405 | 409 | 413 | 416 | 420 |
| Maximum Power Voltage - V_{MPP} (V) | 29.0 | 29.2 | 29.4 | 29.5 | 29.7 |
| Maximum Power Current - I_{MPP} (A) | 13.97 | 14.02 | 14.08 | 14.10 | 14.14 |
| Open Circuit Voltage - V_{OC} (V) | 35.3 | 35.5 | 35.7 | 35.9 | 36.1 |
| Short Circuit Current - I_{SC} (A) | 14.70 | 14.75 | 14.79 | 14.82 | 14.85 |

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

MECHANICAL DATA

| | |
|----------------------|--|
| Solar Cells | Monocrystalline |
| No. of cells | 110 cells |
| Module Dimensions | 2384×1096×30 mm (93.86×43.15×1.18 inches) |
| Weight | 32.3 kg (71.2 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 4.0mm ² (0.006 inches ²), Portrait: 350/280 mm(13.78/11.02 inches) Length can be customized |
| Connector | MC4 EVO2 / TS4* |

*Please refer to regional datasheet for specified connector.

TEMPERATURE RATINGS

| | |
|---|-------------|
| NOCT (Nominal Operating Cell Temperature) | 43°C (±2°C) |
| Temperature Coefficient of P_{MAX} | -0.34%/°C |
| Temperature Coefficient of V_{OC} | -0.25%/°C |
| Temperature Coefficient of I_{SC} | 0.04%/°C |

MAXIMUM RATINGS

| | |
|-------------------------|---------------------------------|
| Operational Temperature | -40~+85°C |
| Maximum System Voltage | 1500V DC (IEC) 1500V DC (UL) |
| 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