



P-type PERC

BACKSHEET MONOCRYSTALLINE MODULE

TSM-DE19R 565-585W

585W / MAXIMUM POWER OUTPUT

21.7% / 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 585W

- Up to 21.7% module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection



High reliability

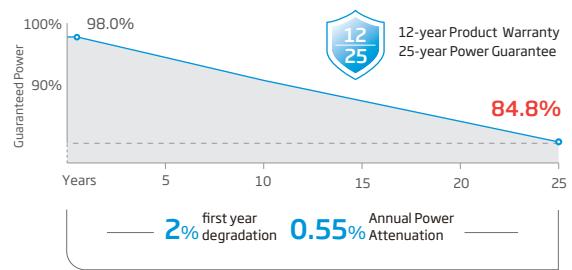
- Minimized micro-cracks with innovative non-destructive cutting technology
- Ensured PID resistance through cell process and module material control
- Mechanical performance up to 5400 Pa positive load and 2400 Pa negative load



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

Performance Warranty



* Please refer to product warranty for details

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



ELECTRICAL DATA (STC)

Peak Power Watts-PMAX(Wp)*	565	570	575	580	585
Power Selection (W)**			0 ~ +5		
Maximum Power Voltage-VMPP (V)	38.3	38.5	38.8	39.0	39.3
Maximum Power Current-IMPP (A)	14.76	14.79	14.83	14.86	14.90
Open Circuit Voltage-Voc (V)	45.6	45.8	46.1	46.3	46.6
Short Circuit Current-Isc (A)	15.81	15.85	15.90	15.94	15.99
Module Efficiency η m (%)	20.9	21.1	21.3	21.5	21.7

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

ELECTRICAL DATA (NOCT)

Peak Power Watts-PMAX(Wp)	428	431	435	439	443
Maximum Power Voltage-VMPP (V)	35.3	35.5	35.8	35.9	36.2
Maximum Power Current-IMPP (A)	12.10	12.13	12.17	12.20	12.24
Open Circuit Voltage-Voc (V)	42.9	43.1	43.4	43.6	43.9
Short Circuit Current-Isc (A)	12.74	12.77	12.81	12.84	12.88

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

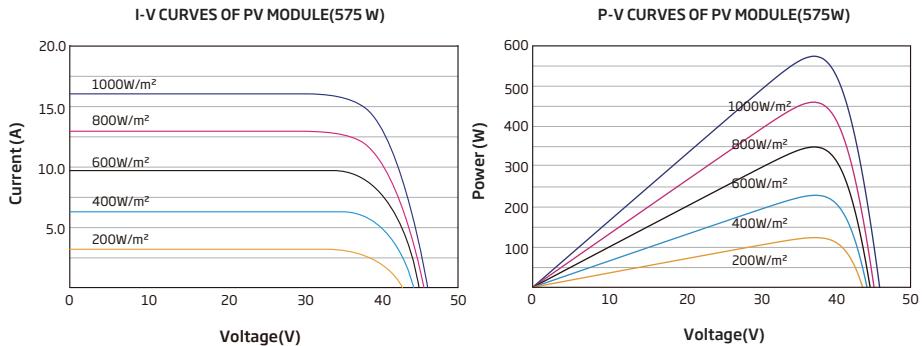
TEMPERATURE RATINGS

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
Due to different testing methods, the actual performances might differ from the declared specifications.	

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC)
Max Series Fuse Rating	30A

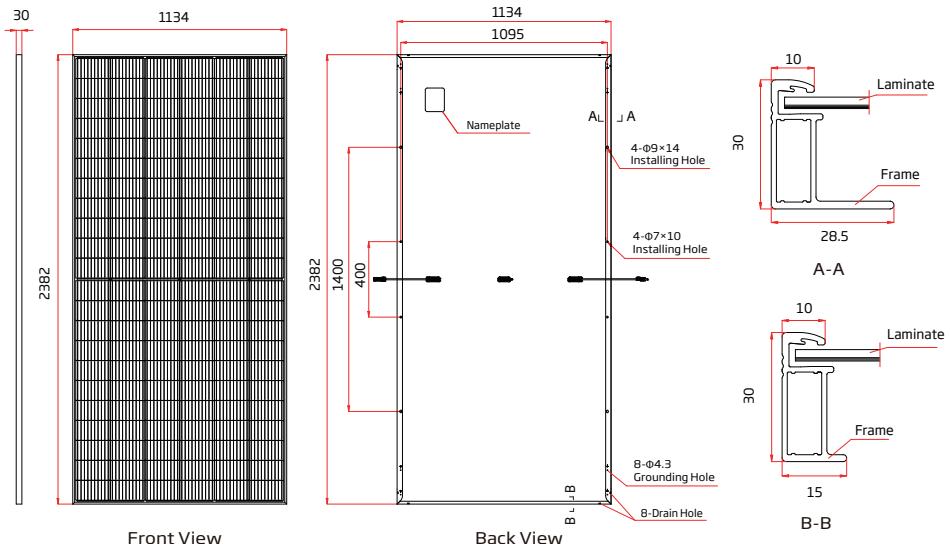
CURVES OF PV MODULE



MECHANICAL DATA

Solar Cells	Monocrystalline
No. of cells	132 cells
Module Dimensions	2382×1134×30 mm (93.78×44.65×1.18 inches)
Weight	28.1 kg (61.9 lb)
Front Glass	3.2mm (0.12inches), AR Coating Tempered Glass
Backsheet	White
Frame	30mm(1.18inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm ² (0.06 inches ²) Portrait: 350/280 mm(13.78/11.02 inches) Length can be customized
Connector	MC4 EVO2 / TS4 Plus / TS4*
Packaging	Modules per box: 36 pieces Modules per 40' container: 720pieces

*Please refer to regional datasheet for specified connector.



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

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