

Vertex

BACKSHEET MONOCRYSTALLINE MODULE

PRODUCT: TSM-DE19R
POWER RANGE: 565-585 W

585 W

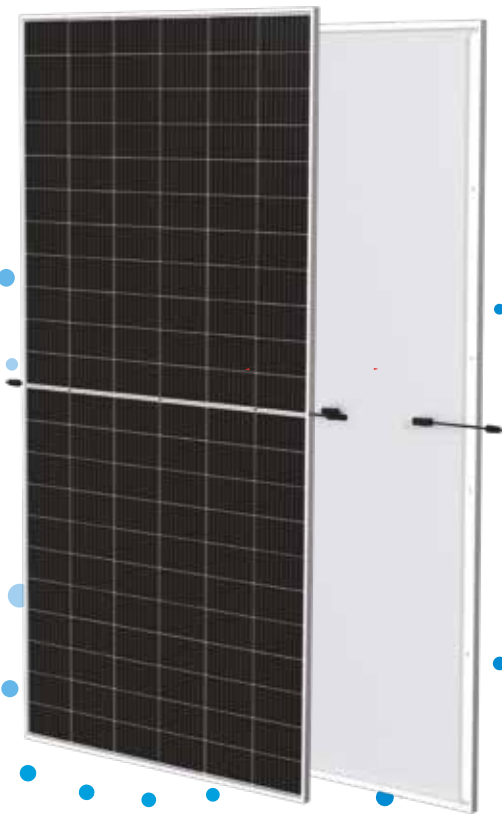
MAXIMUM POWER OUTPUT

0/+5 W

POSITIVE POWER TOLERANCE

21.7%

MAXIMUM EFFICIENCY



High power & efficiency

- Generates up to 585 W, 21.7 % module efficiency with high density interconnect technology
- Maximum energy harvest from rooftops



Easy design & installation on C&I rooftops

- Designed for high compatibility with mainstream inverters
- Mainstream rooftop mounting methods approved



Optimized system cost

- Lower cost of structure, cable and electrical equipment
- Reduced installation time and labor costs
- Shorter payback time



High reliability

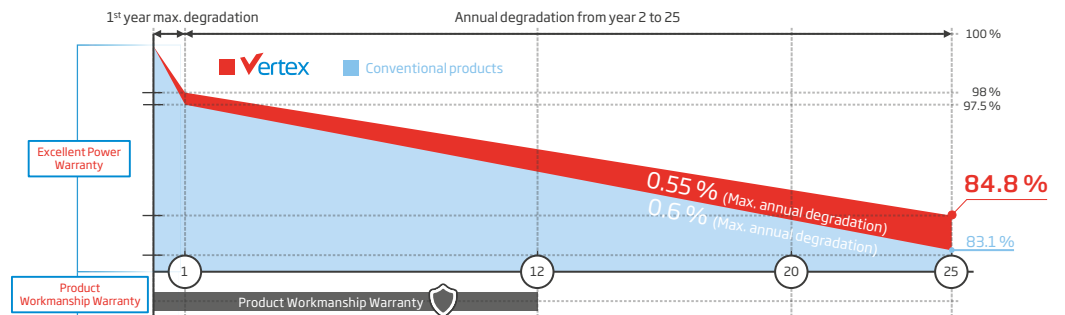
- Assembly in fully automated and state-of-the-art factories
- Beyond industry-standard hail test passed: 35 mm hail size
- Mechanical performance tested up to 5400 Pa positive load and 2400 Pa negative load

Vertex Warranty

2 %
1st year max. degradation

0.55 %
Max. annual degradation from year 2 to 25

12 Years
Product Workmanship Warranty



Comprehensive Product and System Certificates



IEC61215/IEC61730/IEC61701/IEC62716

ISO 9001: Quality Management System

ISO 14001: Environmental Management System

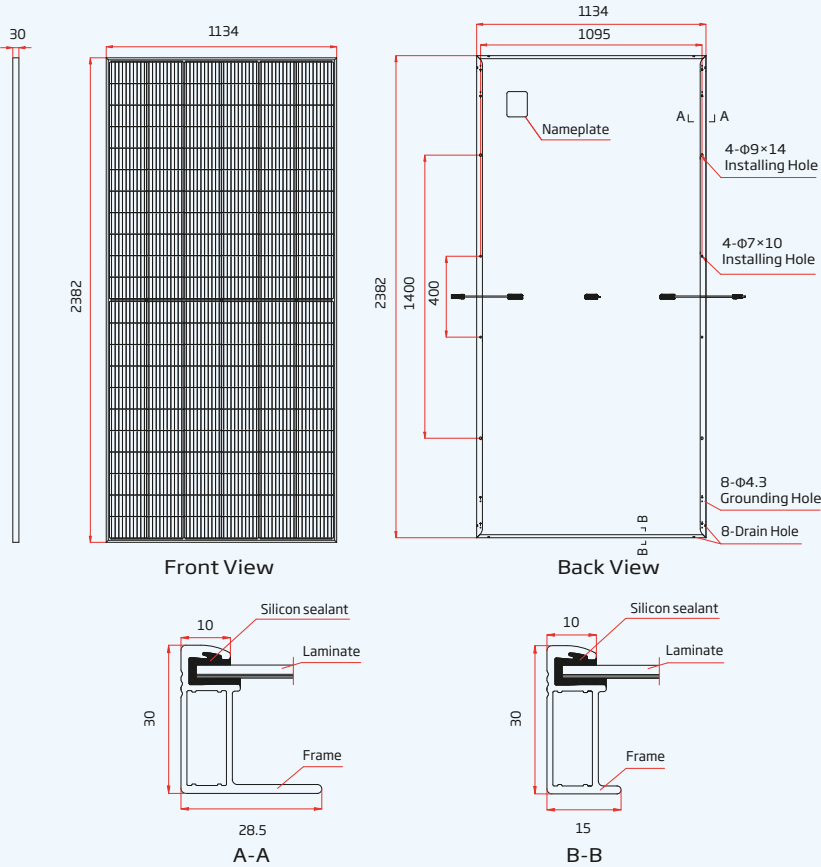
ISO14064: Greenhouse Gases Emissions Verification

ISO45001: Occupational Health and Safety Management System

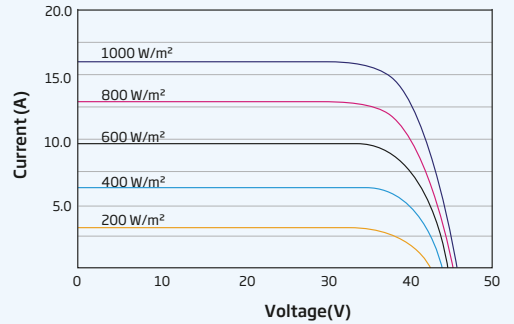


Trinasolar

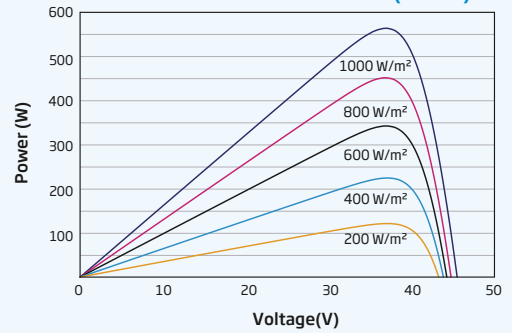
DIMENSIONS OF PV MODULE (mm)



I-V CURVES OF PV MODULE (575 W)



P-V CURVES OF PV MODULE (575 W)



ELECTRICAL DATA (STC)

	TSM-565 DE19R	TSM-570 DE19R	TSM-575 DE19R	TSM-580 DE19R	TSM-585 DE19R
Peak Power Watts-P _{MAX} (Wp)*	565	570	575	580	585
Power Tolerance-P _{MAX} (W)	0/+5	0/+5	0/+5	0/+5	0/+5
Maximum Power Voltage-V _{MPP} (V)	38.3	38.5	38.8	39.0	39.3
Maximum Power Current-I _{MPP} (A)	14.76	14.79	14.83	14.86	14.90
Open Circuit Voltage-V _{OC} (V)	45.6	45.8	46.1	46.3	46.6
Short Circuit Current-I _{SC} (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 1000 W/m², Cell Temperature 25 °C, Air Mass AM1.5. *Measuring tolerance: ±3%.

ELECTRICAL DATA (NOCT)

	TSM-565 DE19R	TSM-570 DE19R	TSM-575 DE19R	TSM-580 DE19R	TSM-585 DE19R
Maximum Power-P _{MAX} (Wp)	428	431	435	439	443
Maximum Power Voltage-V _{MPP} (V)	35.3	35.5	35.8	35.9	36.2
Maximum Power Current-I _{MPP} (A)	12.10	12.13	12.17	12.20	12.24
Open Circuit Voltage-V _{OC} (V)	42.9	43.1	43.4	43.6	43.9
Short Circuit Current-I _{SC} (A)	12.74	12.77	12.81	12.84	12.88

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

MECHANICAL DATA

Solar Cells	Monocrystalline
No. of cells	132 cells
Module Dimensions	2382 x 1134 x 30 mm
Weight	28.6 kg
Glass	3.2 mm, High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	EVA/POE
Backsheet	White
Frame	30 mm Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0 mm ² , Landscape: 1400/1400 mm Portrait: 280/350 mm*
Connector	TS4 Plus / TS4 / MC4 EV02 *

*Special order only.

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43 °C (±2 K)
Temperature Coefficient of P _{MAX}	-0.34%/K
Temperature Coefficient of V _{OC}	-0.25%/K
Temperature Coefficient of I _{SC}	0.04%/K

MAXIMUM RATINGS

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

WARRANTY

12 Year product workmanship warranty
25 Year power warranty
2% First year degradation
0.55% Annual power degradation

(Please refer to the applicable limited warranty for details)

PACKAGING CONFIGURATION

Modules per box: 36 pieces
Modules per 40' container: 720 pieces