



N-type i-TOPCon

BACKSHEET MONOCRYSTALLINE MODULE

TSM-NE19R 600-630W

630_W / MAXIMUM POWER OUTPUT

23.3% / MAXIMUM EFFICIENCY



High customer value

- Standardized module size with flagship module power, 30W higher compared with conventional technology
- Low Voltage design with higher string power, effectively reducing BOS (Balance of System) and LCOE (Levelized Cost of Energy) by 1%~5%
- Suitable for all scenario, especially C&I, residential, and ground applications
- Higher container space utilization effectively reduces the freight cost
- Excellent compatibility with existing mainstream system components



High power up to 630W

- Up to 23.3% module efficiency, on 210 innovation platform
- Patented i-TOPCon technology with continuous efficiency improvement, including contact resistance reduction, rear reflection enhancement and edge quality repairment



High reliability

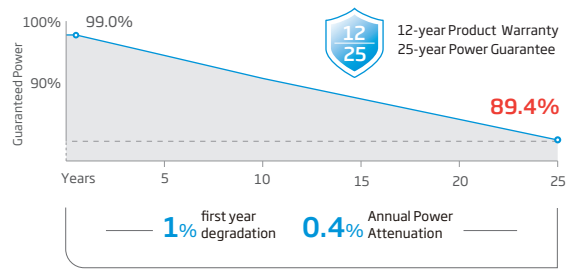
- Minimized micro-cracks with innovative non-destructive cutting technology and high-density packaging
- Reduced risks of hot-spot with half-cut technology
- Certified high resistance against salt, ammonia, sand, PID, LID, LeTID
- Sustainable in harsh environments and extreme weather conditions



High energy yield

- Excellent low irradiation performance, validated by 3rd party
- Lower temperature coefficient (-0.29%/°C)

Performance Warranty



* Please refer to product warranty for details

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



ELECTRICAL DATA (STC)

Peak Power Watts- $P_{MAX}(Wp)^*$	600	605	610	615	620	625	630
Power Selection (W)**	0 ~ +5						
Maximum Power Voltage- $V_{MPP}(V)$	40.3	40.5	40.8	41.1	41.4	41.6	42.0
Maximum Power Current- $I_{MPP}(A)$	14.91	14.94	14.96	14.98	14.99	15.00	15.01
Open Circuit Voltage- $V_{oc}(V)$	48.4	48.7	49.0	49.3	49.6	49.8	50.3
Short Circuit Current- $I_{sc}(A)$	15.80	15.83	15.86	15.89	15.91	15.93	15.94
Module Efficiency $\eta_m(\%)$	22.2	22.4	22.6	22.8	23.0	23.1	23.3

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- $P_{MAX}(Wp)$	459	462	466	470	474	477	482
Maximum Power Voltage- $V_{MPP}(V)$	37.9	38.1	38.3	38.6	38.8	39.0	39.4
Maximum Power Current- $I_{MPP}(A)$	12.11	12.13	12.16	12.19	12.20	12.21	12.23
Open Circuit Voltage- $V_{oc}(V)$	46.0	46.2	46.5	46.8	47.1	47.3	47.6
Short Circuit Current- $I_{sc}(A)$	12.73	12.75	12.78	12.80	12.82	12.84	12.85

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

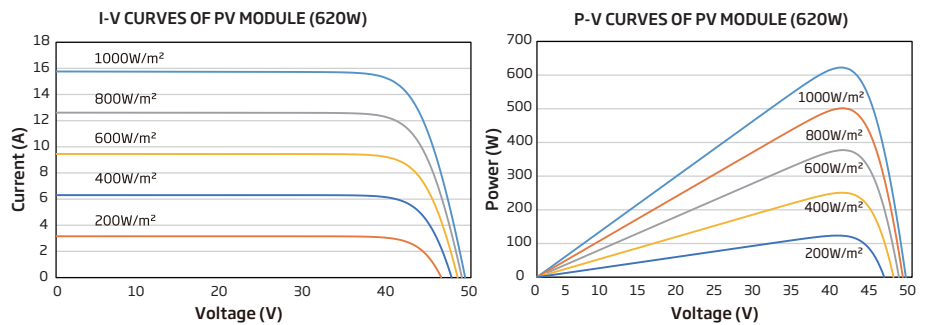
TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43°C (±2°C)
Temperature Coefficient of P_{MAX}	-0.29% /°C
Temperature Coefficient of V_{oc}	-0.24% /°C
Temperature Coefficient of I_{sc}	0.04% /°C

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

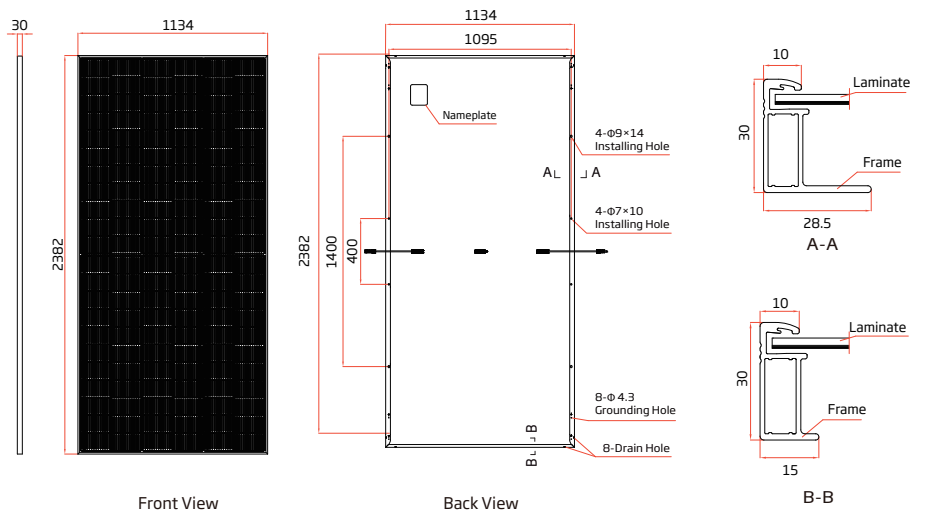
MAXIMUM RATINGS

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

CURVES OF PV MODULE

MECHANICAL DATA

Solar Cells	N-type i-TOPCon Monocrystalline
No. of cells	132 cells
Module Dimensions	2382×1134×30 mm (93.78×44.65×1.18 inches)
Weight	27.9 kg (61.51 lb)
Front Glass	3.2mm (0.13inches), AR Coating Tempered Glass
Backsheet	White
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 EV02 / TS4 Plus / TS4*
Packaging	Modules per box: 36 pieces Modules per 40' container: 720 pieces

*Please refer to regional datasheet for specified connector.



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