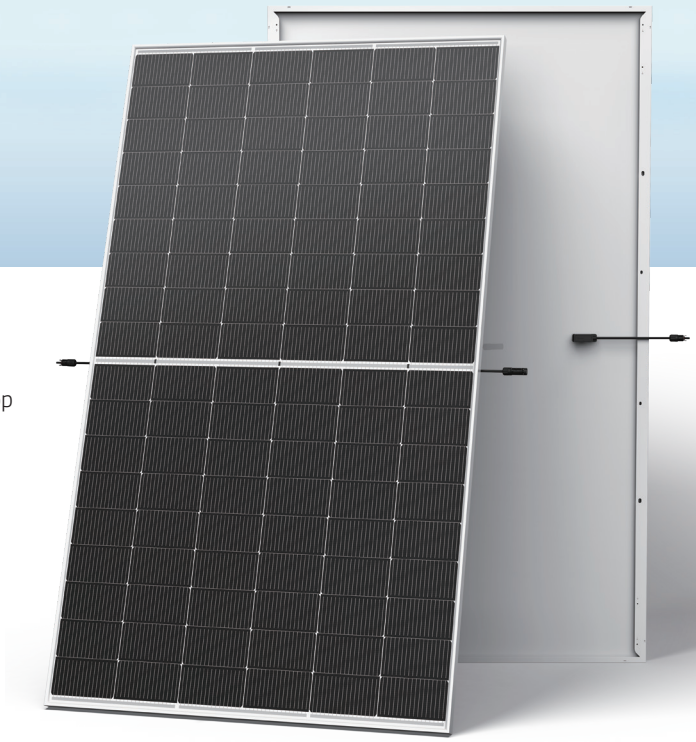
Vertex S+

— i-TOPCon Ultra —

TSM-xxxNEL18R **495-520W**



Key Features

- 7.1kg/㎡ light design to lose 35% weight, fitting for low-bearing rooftop
- Low attenuation, easy maintenance. No compromise on power yield
- Same way of construction and installation. No specialization
- High efficiency with golden size, flexible in various scenarios

High Customer Value

- Suitable for residential and C&I rooftop with less bearing capacity
- Perfect size and low weight for handling and installation
- Compatible with mainstream inverters and diverse mounting systems

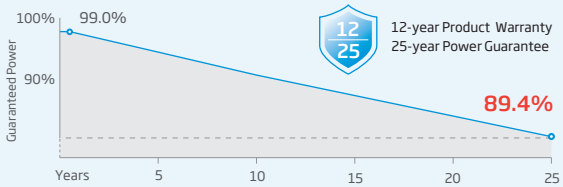
High reliability with lightweight design

- Mechanical test load up to 3600 Pa front side and 2400 Pa back side
- Less prone to micro-cracks，excellent mechanical performance
- Fire Safety Class rating C, Safety Class II
- Up to 12 years product warranty and 25 years power warranty

High power up to 520W

- Up to 23.4% module efficiency, on 210 innovative platform
- Patented i-TOPCon technology with continuous efficiency improvement, including contact resistance reduction, rear reflection enhancement and edge quality repairment
- Excellent low irradiation performance, validated by 3rd party
- Lower temperature efficient (-0.29%/°C) and lower working temperature

Performance Warranty



* Please refer to product warranty for details

Comprehensive Products and System Certificates

IEC61215/IEC61730

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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Version number: TSM_AUS_EN_2026_A
Country of Origin: China

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Vertex S+

N-type i-TOPCon Ultra BACKSHEET MONOCRYSTALLINE MODULE

ELECTRICAL DATA (STC) TSM-xxxNEL18R (xxx=495-520)

Peak Power Watts-PMAX(Wp)*	495	500	505	510	515	520
Power Selection (W)			0 ~ +5			
Maximum Power Voltage-VMPP (V)	33.10	33.30	33.50	33.70	33.90	34.10
Maximum Power Current-IMPP (A)	14.97	15.03	15.09	15.14	15.20	15.25
Open Circuit Voltage-VOC (V)	39.80	40.10	40.30	40.60	40.90	41.20
Short Circuit Current-ISC (A)	15.83	15.86	15.89	15.93	15.96	15.99
Module Efficiency η m (%)	22.3	22.5	22.7	22.9	23.2	23.4

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5. *Measuring tolerance: Pmax±3%, Voc±3% and Isc ±4%

ELECTRICAL DATA (NOCT)

Peak Power Watts-PMAX(Wp)	378	382	386	390	394	396
Maximum Power Voltage-VMPP (V)	31.30	31.50	31.80	31.90	32.20	32.30
Maximum Power Current-IMPP (A)	12.08	12.11	12.15	12.21	12.23	12.26
Open Circuit Voltage-VOC (V)	37.70	38.00	38.30	38.50	38.80	39.00
Short Circuit Current-ISC (A)	12.76	12.78	12.81	12.84	12.86	12.89

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	- 0.29% /°C
Temperature Coefficient of VOC	- 0.24% /°C
Temperature Coefficient of ISC	0.04% /°C

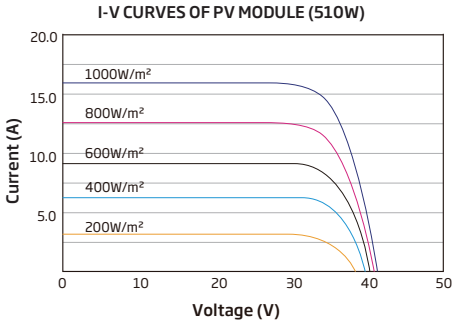
Due to different testing methods, the actual performances might differ from the declared specifications.

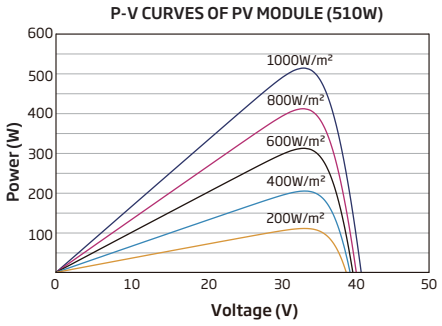
APPLICATION CONDITIONS

Operating Temperature*	-40~+70°C
Maximum System Voltage	1500V DC (IEC)
Max Series Fuse Rating	30A

*PV module 98th percentile operating temperature : 70°C

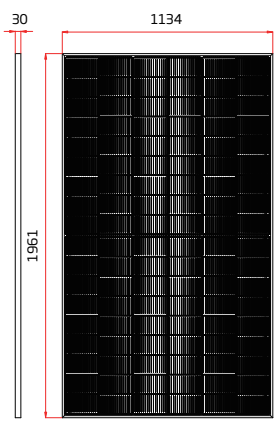
CURVES OF PV MODULE (Cell Temperature (25±2)°C)



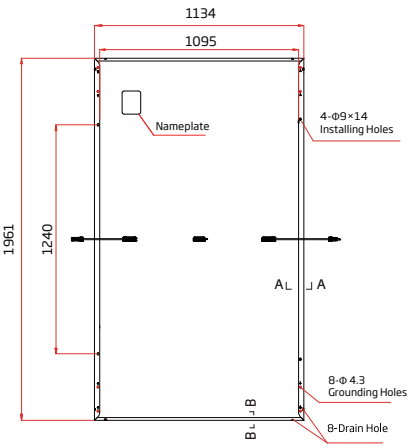


MECHANICAL DATA

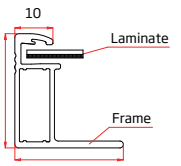
Solar Cells	N-type i-TOPCon Monocrystalline
No. of cells	108 cells
Module Dimensions	1961×1134×30 mm (77.20×44.65×1.18 inches)
Weight	15.8±3% kg
Front Glass	1.6mm (0.06inches), AR Coating Heat Strengthened Glass
Backsheet	White
Frame	30mm(1.18 inches) Anodized Aluminium Alloy, Silver
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0/6.0mm2 (0.006/0.009 inches2) Length: 1300/1300 mm(51.1/51.1 inches) Length can be customized
Connector	Trinasolar, TS4-cd Stäubli Electrical Connectors AG PV-KST4-EVO2/xy_UR; PV-KBT4-EVO2/xy_UR
Packaging	Modules per box: 36 pieces Modules per 40' container: 864 pieces



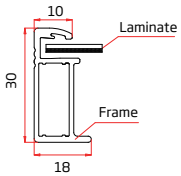
Front View



Back View



A-A



B-B

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