Vertex N G3

N-type i-TOPCon Ultra

BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

TSM-xxxNEG19RC.20Q **640-670W**

670W MAXIMUM POWER OUTPUT

24.8% MAXIMUM EFFICIENCY

High customer value

- Best partner of 1P tracker, with highest utilization of tracker length
- Low voltage design with higher string power, effectively reducing BOS (Balance of System) and LCOE (Levelized Cost of Energy)
- Excellent compatibility with existing mainstream system components

High power up to 670W

- Up to 24.8% module efficiency , on 210 innovation platform
- Patented i-TOPCon Ultra technology with continuous efficiency upgrade, including contact resistance reduction, rear reflection enhancement

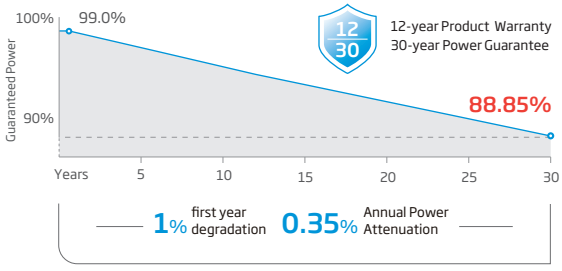
High reliability

- Minimized micro-cracks with innovative non-destructive cutting technology and high-density packaging
- Reduced risks of hot-spot and micro-cracks with multi-cut technology and cell clearance buffering
- Fire Class C , Safety Class II
- Mechanical performance up to 5400 Pa static test load, Front and 2400 Pa static test load, Back

High energy yield, power bifaciality 85±5%

- Excellent low irradiation performance, validated by 3rd party
- Lower temperature coefficient (-0.26%/°C)
- Higher bifaciality, with up to 10%~20% additional power gain from back side depending on albedo
- Reliable dual-glass structure with 30-year power guarantee
- Lower annual attenuation guarantees a higher power generation within lifecycle

Performance Warranty



*Please refer to product warranty for details
(Power degradation values above apply to frontside, refer to product warranty for power degradation for backside and other 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

Version number: TSM_AUS_EN_2026_A
Country of Origin: China

Trinasolar

Vertex N G3

N-type i-TOPCon Ultra BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

ELECTRICAL DATA (STC & NOCT & BNPI) TSM-xxxNEG19RC.20Q(xxx=640-670)

Testing Condition	STC	NOCT	BNPI	aBSI	STC	NOCT	BNPI	aBSI	STC	NOCT	BNPI	aBSI	STC	NOCT	BNPI	aBSI	STC	NOCT	BNPI	aBSI	STC	NOCT	BNPI	aBSI	STC	NOCT	BNPI	aBSI
Peak Power Watts-PMAX(Wp)*	640	492	713		645	495	719		650	499	725		655	503	730		660	507	736		665	511	741		670	515	747	
Power Selection														0 ~ +5														
Maximum Power Voltage-VMPP (V)	41.04	39.30	41.04		41.22	39.50	41.22		41.43	39.70	41.43		41.59	39.90	41.59		41.74	40.10	41.74		41.88	40.30	41.88		42.04	40.60	42.04	
Maximum Power Current-IMPP (A)	15.60	12.50	17.39		15.65	12.53	17.45		15.69	12.57	17.49		15.75	12.60	17.56		15.82	12.64	17.64		15.88	12.67	17.70		15.94	12.70	17.77	
Open Circuit Voltage-VOC (V)	49.56	47.20	49.56		49.78	47.40	49.78		50.00	47.70	50.00		50.25	47.90	50.25		50.45	48.10	50.45		50.70	48.30	50.70		50.95	48.60	50.95	
Short Circuit Current-ISC (A)	16.34	13.17	18.22	20.51	16.38	13.20	18.26	20.56	16.43	13.24	18.32	20.62	16.47	13.27	18.36	20.67	16.53	13.32	18.43	20.75	16.56	13.35	18.46	20.78	16.60	13.38	18.50	20.83
Module Efficiency η m (%)	23.7				23.9				24.1				24.2				24.4				24.6				24.8			

STC: Irradiance 1000W/m2, Cell Temperature 25°C, Air Mass AM1.5. NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s. BNPI: Irradiance: front 1000W/m², rear 135W/m²,Temperature25°C, Air Mass AM1.5
*Measuring tolerance: Pmax±3%, Voc±3% and Isc ±5%

Electrical characteristics with different power bin (reference to 5% & 10% backside power gain)

Backside Power Gain	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%
Peak Power Watts-PMAX(Wp)	672	704	677	710	683	715	688	721	693	726	698	732	704	737
Maximum Power Voltage-VMPP (V)	41.04	41.04	41.22	41.22	41.43	41.43	41.59	41.59	41.74	41.74	41.88	41.88	42.04	42.04
Maximum Power Current-IMPP (A)	16.38	17.16	16.43	17.22	16.47	17.26	16.54	17.33	16.61	17.40	16.67	17.47	16.74	17.53
Open Circuit Voltage-VOC (V)	49.56	49.56	49.78	49.78	50.00	50.00	50.25	50.25	50.45	50.45	50.70	50.70	50.95	50.95
Short Circuit Current-ISC (A)	17.16	17.97	17.20	18.02	17.25	18.07	17.29	18.12	17.36	18.18	17.39	18.22	17.43	18.26

φPmax: 85%±5% ; φVoc: 100%±3% ; φIsc :85%±5%

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43℃ (±2℃)
Temperature Coefficient of PMAX	- 0.26% /℃
Temperature Coefficient of VOC	- 0.24% /℃
Temperature Coefficient of ISC	0.04% /℃

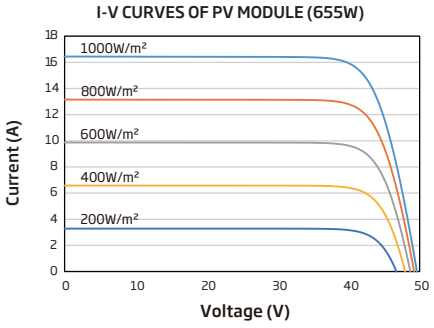
Due to different testing methods, the actual performances might differ from the declared specifications.

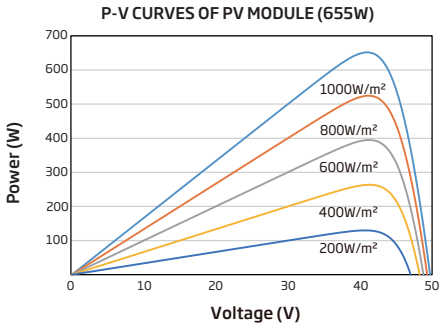
APPLICATION CONDITIONS

Operating Temperature*	-40~+70℃
Maximum System Voltage	1500V DC (IEC)
Max Series Fuse Rating	35A

*PV module 98th percentile operating temperature : 70℃

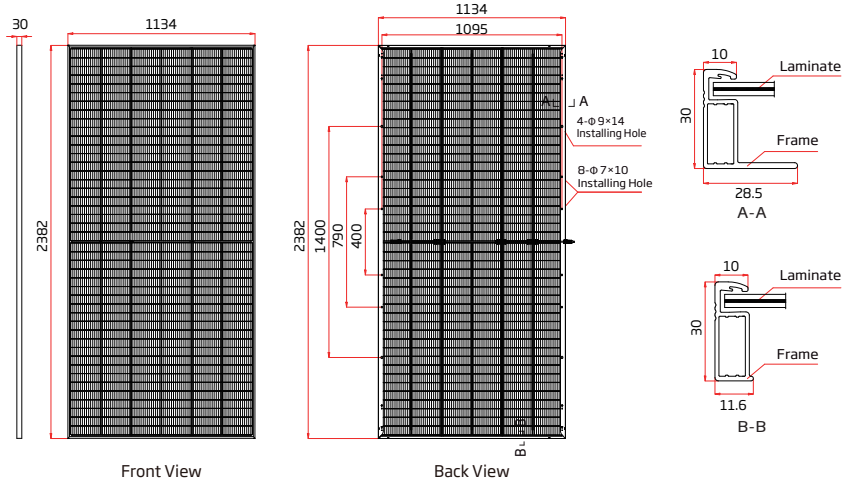
CURVES OF PV MODULE (Cell Temperature (25±2)°C)





MECHANICAL DATA

Solar Cells	N-type i-TOPCon Monocrystalline
No. of cells	264 cells
Module Dimensions	2382×1134×30 mm (93.78×44.65×1.18 inches)
Weight	33.0 kg (72.8 lb)
Front Glass	2.0 mm (0.08 inches), AR Coating Heat Strengthened Glass
Back Glass	2.0 mm (0.08 inches), Heat Strengthened Glass
Frame	30mm(1.18 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm² (0.006 inches²) Portrait: 200/510 mm(7.87/20.08 inches) Length can be customized
Connector	TS4-cd / Stäubli Electrical Connectors AG PV-KST4-EVO2/xy_UR; PV-KBT4-EVO2/xy_UR PV-KST4-EVO2A/xy; PV-KBT4-EVO2A/xy
Packaging	Modules per box: 36 pieces Modules per 40' container: 720 pieces



www.trinasolar.com

Version number: TSM_AUS_EN_2026_A
Country of Origin: China

Trinasolar