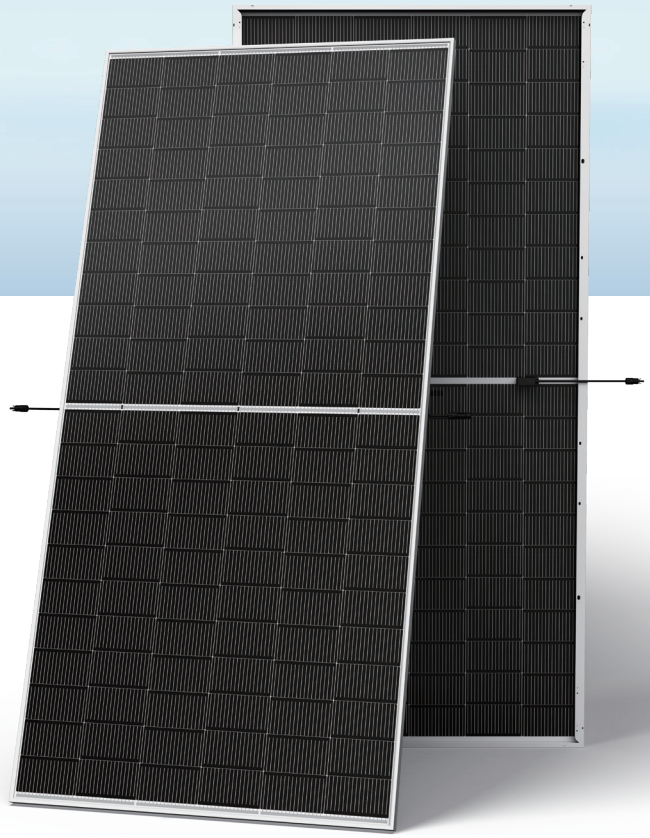
Preliminary

Vertex N

i-TOPCon

TSM-NEG19RC.20
Anti-glare Series

610-635W



Key Features

- 47% lower glare intensity than regular modules , critical for aviation safety
- 200% wider glare-free zones , protecting drivers' visibility
- Superior green energy output, enabling your eco-friendly travel

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) by 1%~5%
- Excellent compatibility with existing mainstream system components

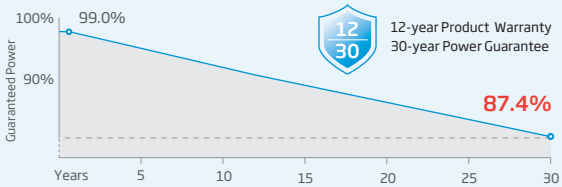
High power up to 635W

- Up to 23.5% module efficiency, on 210 innovation platform
- Patented i-TOPCon technology with continuous efficiency upgrade, 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

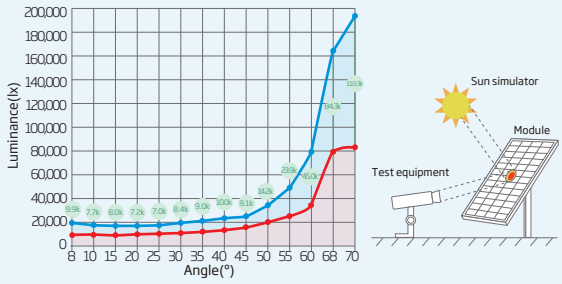
Performance Warranty



* Please refer to product warranty for details

Luminance of Anti-glare module

Illumination(lux)	Module	Angle(°)	Luminance(cd/m²)
100000	Anti-glare module	≤50	≤20000



Version number: TSM_EN_2025_PA1

Trinasolar

Vertex N

N-type i-TOPCon BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

ELECTRICAL DATA STC & NOCT & BNPI)

Testing Condition	STC	NOCT	BNPI	STC	NOCT	BNPI	STC	NOCT	BNPI	STC	NOCT	BNPI	STC	NOCT	BNPI	STC	NOCT	BNPI
Peak Power Watts-PMAX(Wp)*	610	465	676	615	469	681	620	473	687	625	477	692	630	481	698	635	487	704
Power Selection (W)**	0 ~ +5																	
Maximum Power Voltage-VMPP (V)	39.79	37.60	39.79	39.97	37.80	39.97	40.24	37.90	40.24	40.46	38.10	40.46	40.68	38.30	40.68	40.84	38.60	40.84
Maximum Power Current-IMPP (A)	15.33	12.38	17.00	15.39	12.43	17.05	15.41	12.47	17.07	15.45	12.52	17.12	15.49	12.57	17.16	15.55	12.60	17.23
Open Circuit Voltage-VOC (V)	48.09	45.70	48.09	48.29	45.90	48.29	48.50	46.10	48.50	48.70	46.30	48.70	48.90	46.50	48.90	49.10	46.60	49.10
Short Circuit Current-ISC (A)	16.14	13.00	17.88	16.20	13.05	17.95	16.26	13.10	18.02	16.32	13.15	18.08	16.38	13.20	18.15	16.44	13.25	18.22
Module Efficiency η m (%)	22.6			22.8			23.0			23.1			23.3			23.5		

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: ±3%. **Power selection up to: +3%.

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%
Peak Power Watts-PMAX(Wp)	641	671	646	677	651	682	656	688	662	693	667	699
Maximum Power Voltage-VMPP (V)	39.79	39.79	39.97	39.97	40.24	40.24	40.46	40.46	40.68	40.68	40.84	40.84
Maximum Power Current-IMPP (A)	16.10	16.86	16.16	16.93	16.18	16.95	16.22	17.00	16.26	17.04	17.26	18.08
Open Circuit Voltage-VOC (V)	48.09	48.09	48.29	48.29	48.50	48.50	48.70	48.70	48.90	48.90	49.10	49.10
Short Circuit Current-ISC (A)	16.95	17.75	17.01	17.82	17.07	17.89	17.14	17.95	17.20	18.02	16.33	17.11

Power Bifaciality:80±5%.

TEMPERATURE RATINGS

NOCT(Nominal Operating Cell Temperature)	43℃ (±2℃)
Temperature Coefficient of PMAX	- 0.29% /℃
Temperature Coefficient of VOC	- 0.24% /℃
Temperature Coefficient of ISC	0.04% /℃

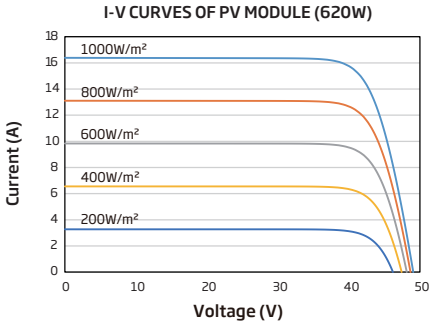
Due to different testing methods, the actual performances might differ from the declared specifications.

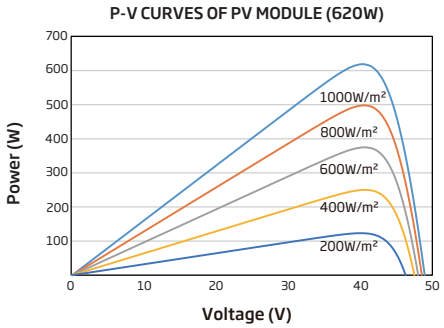
APPLICATION CONDITIONS

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

CURVES OF PV MODULE

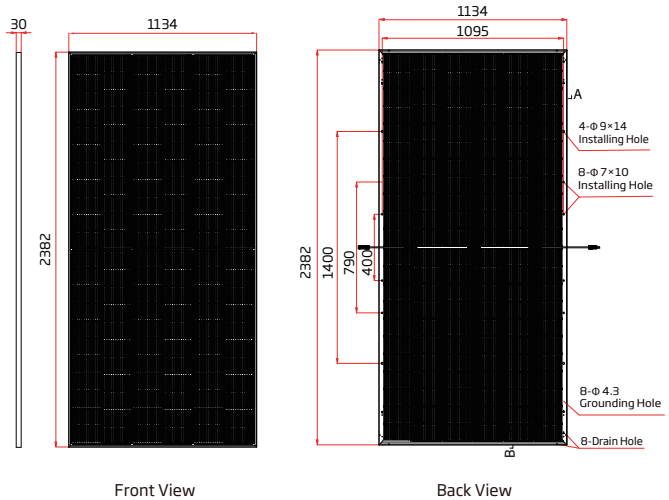
Preliminary





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	33.0 kg (72.8 lb)
Front Glass	2.0 mm (0.08 inches), Anti-glare 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: 200/320 mm(7.87/12.60 inches) Length can be customized
Connector	MC4 EVO2
Packaging	Modules per box: 36 pieces Modules per 40' container: 720 pieces



Version number: TSM_EN_2025_PA1

www.trinasolar.com

Trinasolar