

N-type i-TOPCon bifacial dual glass

Monocrystalline module

PRODUCT: TSM-NEG21C.20

POWER RANGE: 695-720W

720W

MAXIMUM POWER OUTPUT

0~+5W

POSITIVE POWER TOLERANCE

23.2%

MAXIMUM EFFICIENCY



High customer value

- Standardized module size with flagship module power, 35W 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 2%~6%
- Higher container space utilization effectively reduces the freight cost
- Certified Low-Carbon Footprint
- The Star of LCOE



High power up to 720W

- Up to 23.2% module efficiency, on 210 innovation platform
- Patented i-TOPCon technology with continous efficiency improvement, including contact resistance reduction, rear reflection enhancement and edge quality repairment



High reliability

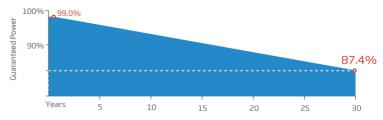
- Minimized micro-cracks with innovative non-destructive cutting technology and high-density packaging
- Reduced risks of hot-spot with half-cut technology
- Certified high resistance against salt, ammonia, sand, PID, LID, LeTID
- Sustainable in harsh environments and extreme weather conditions



High energy yield

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

Trina Solar's Vertex Bifacial Dual Glass Performance Warranty



Comprehensive Products and System Certificates





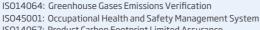






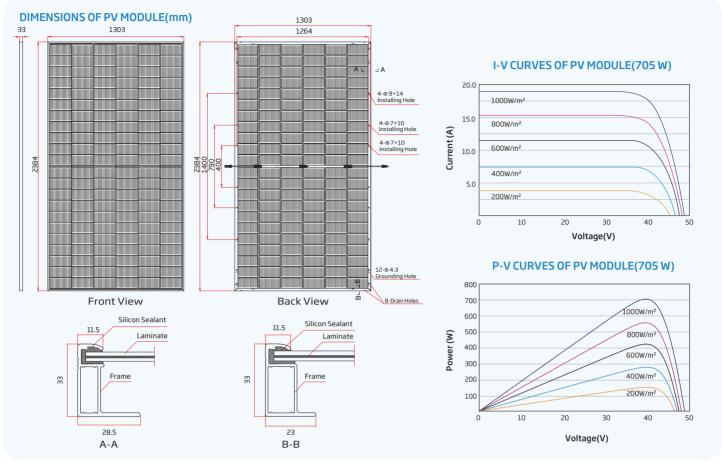


ISO14067: Product Carbon Footprint Limited Assurance









MECHANICAL DATA

Solar Cells	N-type i-TOPCon Monocrystalline
No. of cells	132 cells
Module Dimensions	2384×1303×33 mm (93.86×51.30×1.30 inches)
Weight	38.3 kg (84.4 lb)
Front Glass	2.0 mm (0.08 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	POE/EVA
Back Glass	2.0 mm (0.08 inches), Heat Strengthened Glass (White Grid Glass)

Frame	33mm(1.30 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm² (0.006 inches²) Portrait: 350/280 mm(13.78/11.02 inches) Length can be customized
Connector	MC4 EVO2 / TS4 Plus / TS4*

^{*}Please refer to regional datasheet for specified connector

ELECTRICAL DATA (STC & NOCT)

Testing Condition	STC NOCT					
Peak Power Watts-PMAX (Wp)*	695 531	700 534	705 540	710 543	715 547	720 551
Power Tolerance-PMAX (W)			0	~ +5		
Maximum Power Voltage-VMPP (V)	40.3 37.9	40.5 38.0	40.7 38.3	40.9 38.5	41.1 38.7	41.3 38.8
Maximum Power Current-IMPP (A)	17.25 14.00	17.29 14.04	17.33 14.08	17.36 14.12	17.40 14.14	17.44 14.19
Open Circuit Voltage-Voc (V)	48.3 45.9	48.6 46.1	48.8 46.3	49.0 46.5	49.2 46.7	49.4 46.9
Short Circuit Current-Isc (A)	18.28 14.72	18.32 14.76	18.36 14.80	18.40 14.83	18.44 14.86	18.49 14.90
Module Efficiency η m (%)	22.4	22.5	22.7	22.9	23.0	23.2

STC: Irrdiance 1000W/m2, Cell Temperature 25°C, Air Mass AM1.5. NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s. *Measuring tolerance: ±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%
Total Equivalent power -PMAX (Wp)	730	765	735	770	740	776	746	781	751	787	756	792
Maximum Power Voltage-VMPP (V)	40.3	40.3	40.5	40.5	40.7	40.7	40.9	40.9	41.1	41.1	41.3	41.3
Maximum Power Current-Impp (A)	18.11	18.98	18.15	19.02	18.20	19.06	18.23	19.10	18.27	19.14	18.31	19.18
Open Circuit Voltage-Voc (V)	48.3	48.3	48.6	48.6	48.8	48.8	49.0	49.0	49.2	49.2	49.4	49.4
Short Circuit Current-Isc (A)	19.19	20.11	19.24	20.15	19.28	20.20	19.32	20.24	19.36	20.28	19.41	20.34
Power Bifariality:80+5%.												

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

MAXIMUM RATINGS

Operational Temperature	-40~+85° C
Maximum System Voltage	1500V DC (IEC)
	1500V DC (UL)
Max Series Fuse Rating	35A

WARRANTY

PACKAGING CONFIGURATION

Modules per box: 33 pieces Modules per 40' container: 594 pieces

