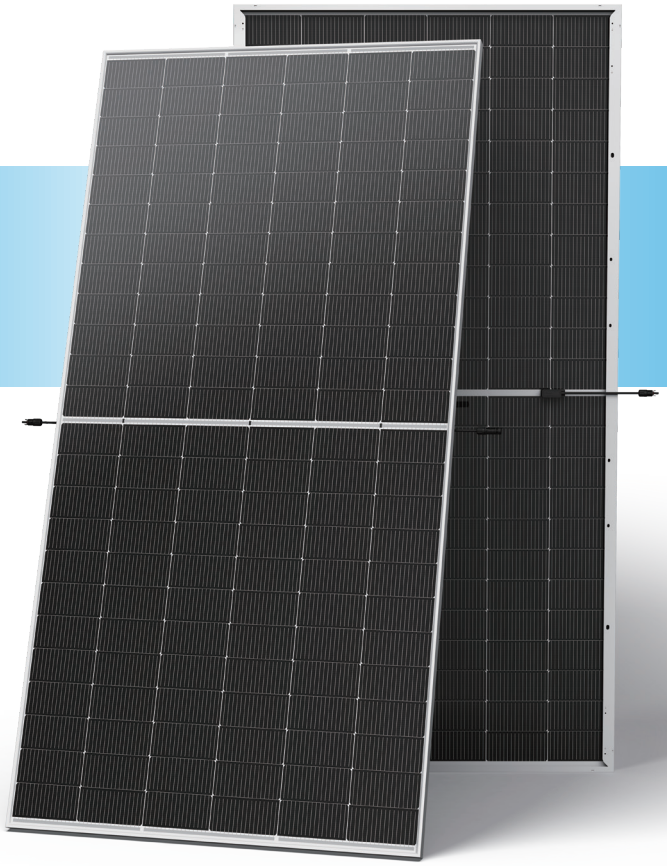
THE

DUOMAX N

N-type i-TOPCon

Bifacial Dual Glass Monocrystalline Module

TSM-NEG18C.20 **580-605W**



605W / MAXIMUM POWER OUTPUT

23.4% / MAXIMUM EFFICIENCY

High power up to 605W

- Up to 23.4% module efficiency with high density interconnect technology
- SMBB (Super multi-busbar) technology for better light trapping effect, lower series resistance and improved current collection

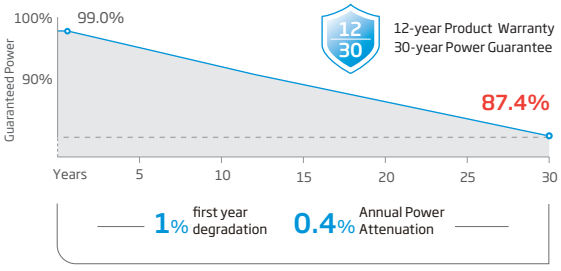
High reliability

- Minimized micro-cracks with innovative non-destructive cutting technology
- Ensured PID resistance through cell process and module material control
- Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity areas
- Mechanical performance up to 5400 Pa positive load and 2400 Pa negative load

High energy yield

- Excellent IAM (Incident Angle Modifier) and low irradiation performance, validated by 3rd party
- The unique design provides optimized energy production under inter-row shading conditions
- Lower temperature coefficient (-0.29%/°C) and operating temperature
- Up to 25% additional power gain from back side depending on albedo

Performance Warranty



* Please refer to product warranty for details

Comprehensive Products and System Certificates

IEC61215/IEC61730/IEC61701/IEC62716
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_EN_2025_A

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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)*	580	444	643	585	447	648	590	450	654	595	454	659	600	459	665	605	462	670
Power Selection (W)**	0 ~ +5																	
Maximum Power Voltage-VMPP (V)	44.2	41.6	44.2	44.4	41.8	44.4	44.6	42.0	44.6	44.8	42.2	44.8	45.0	42.3	45.0	45.2	42.4	45.2
Maximum Power Current-IMPP (A)	13.13	10.67	14.54	13.18	10.69	14.60	13.23	10.71	14.66	13.29	10.76	14.72	13.34	10.85	14.78	13.39	10.90	14.83
Open Circuit Voltage-VOC (V)	52.2	49.7	52.2	52.4	49.9	52.4	52.6	50.2	52.6	52.8	50.4	52.8	53.3	50.5	53.3	53.4	50.6	53.4
Short Circuit Current-ISC (A)	13.77	11.27	15.26	13.82	11.33	15.31	13.87	11.35	15.37	13.94	11.41	15.45	14.20	11.46	15.73	14.26	11.50	15.80
Module Efficiency η m (%)	22.5			22.6			22.8			23.0			23.2			23.4		

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)	609	638	614	644	620	649	625	655	630	660	635	666
Maximum Power Voltage-VMPP (V)	44.2	44.2	44.4	44.4	44.6	44.6	44.8	44.8	45.0	45.0	45.2	45.2
Maximum Power Current-IMPP (A)	13.79	14.44	13.84	14.50	13.89	14.55	13.95	14.62	14.01	14.67	14.06	14.73
Open Circuit Voltage-VOC (V)	52.2	52.2	52.4	52.4	52.6	52.6	52.8	52.8	53.3	53.3	53.4	53.4
Short Circuit Current-ISC (A)	14.46	15.15	14.51	15.20	14.56	15.26	14.64	15.33	14.91	15.62	14.97	15.69

Power Bifaciality:80±5%.

TEMPERATURE RATINGS

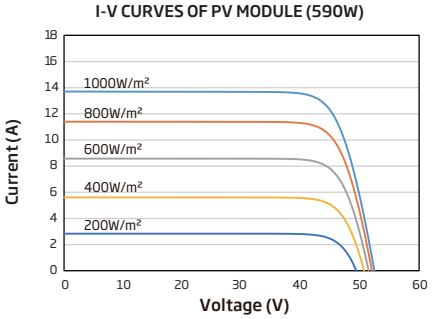
NOCT(Nominal Operating Cell Temperature)	43℃ (±2℃)
Temperature Coefficient of PMAX	- 0.29% /℃
Temperature Coefficient of VOC	- 0.24% /℃
Temperature Coefficient of ISC	0.04% /℃

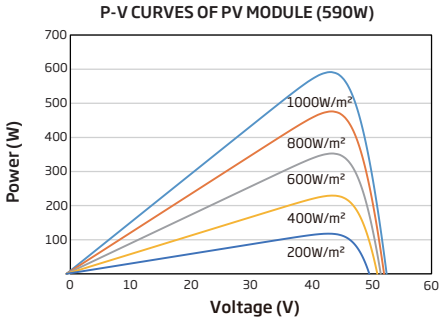
Due to different testing methods, the actual performances might differ from the declared specifications.

APPLICATION CONDITIONS

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

CURVES OF PV MODULE

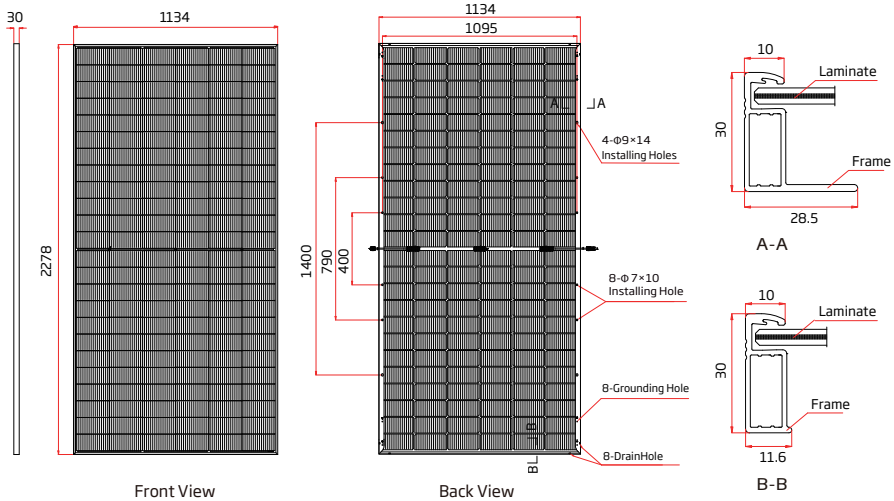




MECHANICAL DATA

Solar Cells	N-type i-TOPCon Monocrystalline
No. of cells	144 cells
Module Dimensions	2278×1134×30 mm (89.69×44.65×1.18 inches)
Weight	31.9kg (70.3 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 (White Coating)
Frame	30mm(1.18 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*
PACKAGING CONFIGURATION	Modules per box: 36 pieces Modules per 40' container: 720pieces

*Please refer to regional datasheet for specified connector.



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