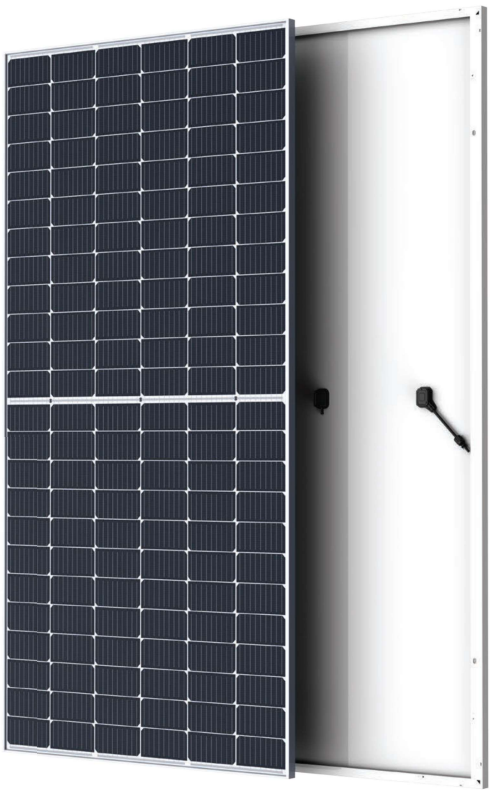
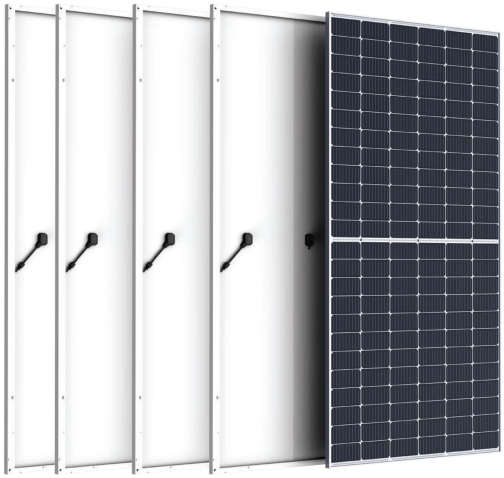
SOLAR PANELS

TRINASolar is one of the world's leading PV module brand in solar energy industry.
TRINAsolar solar panels are reliable, efficiency product producing high module power output.

TRINAsolar solar panels improve it performance according to indusrtry requirements of installers, developers, distributors & other partners.





TRINA - China Trinasolar

Ordering Information

Order No	Model No	Product	Watt	Type
298 100	TSM-DE17M(II)	Solar Panel	455	Mono crystalline
-	TSM-DE19	Solar Panel	550	Mono crystalline

Technical Specifications

TRINA - 455W

144 LAYOUT MONOCRYSTALLINE MODULE
435-455W POWER OUTPUT RANGE
20.8% MAXIMUM EFFICIENCY
0~+5W POSITIVE POWER TOLERANCE

High power

•Up to 455W front power and 20.8% module efficiency with half-cut and MBB (Multi Busbar) technology bringing more BOS savings

•Lower resistance of half-cut and good reflection effect of MBB ensure high power

High reliability

• Ensured PID resistance through cell process and module material control

• Resistant to salt, acid and ammonia

•Mechanical performance: Up to 5400 Pa positive load and 2400 Pa negative load

High energy generation

• Excellent IAM and low light performance validated by 3rd party cell process and module material optimization

• Lower temp coefficient (-0.36%) and NMOT bring more energy leading to lower LCOE

•Better anti-shading performance and lower operating temperature

Temperature Ratings

NMOT(Nominal Module Operating Temperature)	41ºC (±3ºC)
Temperature Coefficient of Pmax	'- 0.36% /ºC
Temperature Coefficient of Voc	'- 0.26% /ºC
Temperature Coefficient of Isc	'0.04% /ºC

Maximum Ratings

Operational Temperature	'-40~+85ºC
Maximum System Voltage	'1500V DC (IEC)
Max Series Fuse Rating	20A

TRINA - 550W

560W	0~+5W	21.2%
MAXIMUM POWER OUTPUT	POSITIVE POWER TOLERANCE	MAXIMUM EFFICIENCY

High customer value

•Lower LCOE (Levelized Cost Of Energy), reduced BOS (Balance of System) cost, shorter payback time

•Lowest guaranteed first year and annual degradation;

•Designed for compatibility with existing mainstream system components

•Higher return on Investment

High power up to 555W

•Up to 21.2% module efficiency with high density interconnect technologization;

• 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

• 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 certifications

• The unique design provides optimized energy production under inter-row shading conditions

• Lower temperature coefficient (-0.34%) and operating temperature

TEMPERATURE RATINGS

NOCT(Nominal Operating Cell Temperature)	43°C (±2°C)
Temperature Coefficient of Pmax	'=- 0.34%/°C
Temperature Coefficient of Voc	'- 0.25%/°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	30A

ELECTRICAL DATA (STC)

	TRINA - 455W	TRINA - 550W
Peak Power Watts-Pmax (Wp)*	455	550
Power Tolerance-Pmax (W)		' 0 ~ +5
Maximum Power Voltage-Vmpp (V)	41.2	31.6
Maximum Power Current-Impp (A)	11.06	17.40
Open Circuit Voltage-Voc (V)	49.8	37.9
Short Circuit Current-Isc (A)	11.61	18.52
Module Efficiency η m (%)	20.8	21.0

STC: Irradiance 1000W/mS, Cell Temperature 25°C, Air Mass AM1.5.

*Measuring tolerance: ±3%.

	TRINA - 455W ELECTRICAL DATA (NMOT)	TRINA - 550W ELECTRICAL DATA (NOCT)
Maximum Power-PMAX (Wp)	344	417
Maximum Power Voltage-VMPP (V)	38.9	29.3
Maximum Power Current-IMPP (A)	8.86	14.19
Open Circuit Voltage-VOC (V)	47.0	35.7
Short Circuit Current-ISC (A)	9.35	14.92

NMOT: Irradiance at 800W/mS, Ambient Temperature 20°C, Wind Speed 1m/s

MECHANICAL DATA

	TRINA - 455W	TRINA - 550W
Solar Cells	Monocrystalline	Monocrystalline
Cell Orientation	144 cells (6 × 24)	110 cells
Module Dimensions	2102 ×1040× 35 mm (82.76 × 40.94 × 1.38 inches)	2384×1096×35 mm (93.86×43.15×1.38 inches)
Weight	24.0 kg (52.9lb)	28.6 kg (63.1 lb)
Glass	3.2 mm (0.13 inches), High Transmission, AR Coated Heat Strengthened Glass	3.2 mm (0.13 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant Material	EVA	EVA/POE
Backsheet	White	White
Frame	35 mm (1.38 inches) Anodized Aluminium Alloy	35 mm (1.38 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm²(0.006 inches²), Portrait: N 280mm/P 280mm (11.02/11.02inches) Landscape: N 1400 mm / P 1400 mm (55.12/55.12 inches)	Photovoltaic Technology Cable 4.0mm2 (0.006 Inches^2) Portrait: 350/280 mm (13.78/11.02 Inches) Length can be customized Landscape 1400/1400mm (55.1/55.1 Inches)
Connector	MC4 EVO2 / TS4*	MC4 EVO2 / TS4*