



# TN 182\*210 495-520W

High efficiency bifacial modules

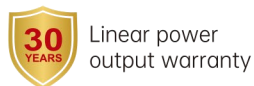
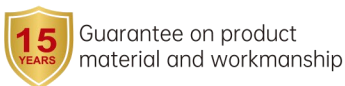
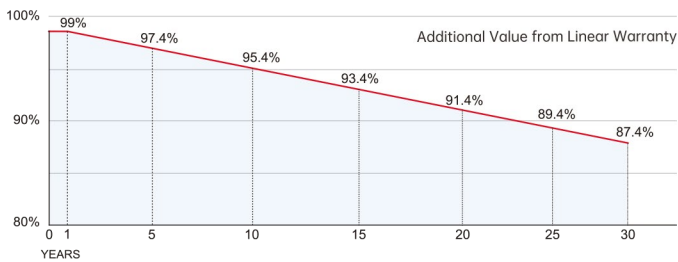
## • QUALITY SYSTEM

ISO9001 / ISO14001 / ISO45001

## • PRODUCT CERTIFICATION



## • WARRANTY



## • TOPCON MODULE ADVANTAGE

- Multi-Busbar technology
- capacity
- High module efficiency
- Excellent low-light
- Lower annual attenuation  
Longer warranty
- LCOE
- Reduce hot spot effect
- Higher bifaciality

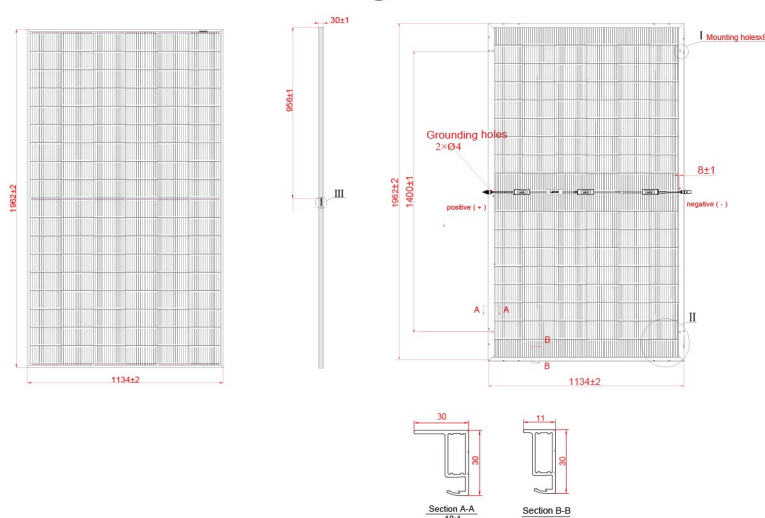




## Mechanical Specifications

External Dimension	1962 x 1134 x 30 mm
Weight	30.6 kg
Solar Cells	TOPCon 182 x 105mm (108 pcs)
Front / Back Glass	2.5/2.0mm AR coating semi-tempered glass, low iron
Frame	Anodized aluminium alloy
Junction Box	IP68, 3 diodes
Output Cables	4.0mm <sup>2</sup> , 250mm(+)/350mm(-) or Customized Length

## Technical drawing



## Packing Configuration

Container	20'GP	40'HQ
Pieces per Pallet	36	36
Pallets per Container	5	22
Pieces per Container	180	792

## Electrical Characteristics

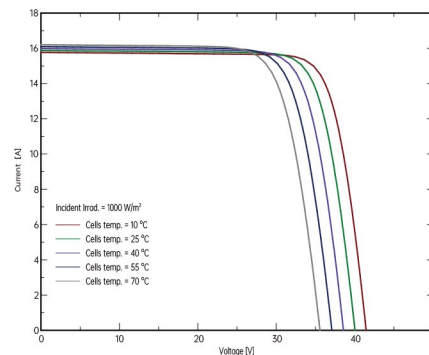
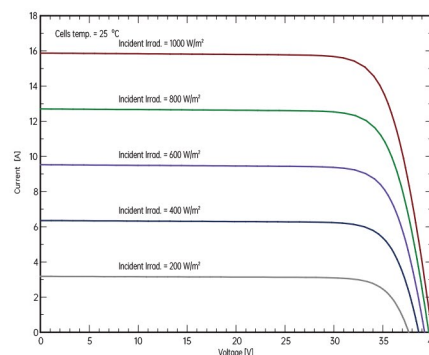
Module Type	495		500		505		510		515		520	
	Front STC	Front BNPI	Front STC	Front BNPI	Front STC	Front BNPI	Front STC	Front BNPI	Front STC	Front BNPI	Front STC	Front BNPI
Maximum Power -P <sub>mp</sub> (W)	495	548	500	554	505	560	510	565	515	571	520	576
Open Circuit Voltage -V <sub>oc</sub> (V)	39.83	39.91	40.03	40.11	40.23	40.31	40.43	40.51	40.63	40.71	40.83	40.91
Short Circuit Current -I <sub>sc</sub> (A)	15.83	17.54	15.88	17.60	15.93	17.65	15.98	17.71	16.03	17.76	16.08	17.82
Maximum Power Voltage -V <sub>mp</sub> (V)	33.11	33.19	33.31	33.39	33.51	33.59	33.71	33.79	33.91	33.99	34.11	34.19
Maximum Power Current -I <sub>mp</sub> (A)	14.96	16.52	15.02	16.59	15.07	16.66	15.13	16.72	15.19	16.79	15.25	16.85
Module Efficiency STC-η <sub>m</sub> (%)	22.25		22.47		22.70		22.92		23.15		23.37	
Power Tolerance (W)	(0, +4.99)											

STC: Irradiance 1000 W/m<sup>2</sup> module temperature 25°C AM=1.5 Power measurement tolerance: +/-3%; Voltage measurement tolerance: +/-3%; Current measurement tolerance: +/-4%  
 BNPI: front 1000 W/m<sup>2</sup> rear 135 W/m<sup>2</sup> Power measurement tolerance: +/-3%; Voltage measurement tolerance: +/-3%; Current measurement tolerance: +/-4%

## Rear Side Power Gain(500W)

Power Gain	10%	15%	20%	25%	30%
Maximum Power -P <sub>mp</sub> (W)	550	575	600	625	650
Open Circuit Voltage -V <sub>oc</sub> (V)	40.03	40.03	40.03	40.03	40.03
Short Circuit Current -I <sub>sc</sub> (A)	17.47	18.26	19.06	19.85	20.64
Maximum Power Voltage -V <sub>mp</sub> (V)	33.31	33.31	33.31	33.31	33.31
Maximum Power Current -I <sub>mp</sub> (A)	16.52	17.27	18.02	18.78	19.53

## I-V Curve



## Temperature Ratings

Pmax Temperature Coefficient	-0.29 %/°C
Voc Temperature Coefficient	-0.25 %/°C
Isc Temperature Coefficient	+0.046 %/°C

## Application Conditions

Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	30 A
Operating Temperature	-40~+85 °C
Nominal Operating Cell Temperature	45±2 °C
Bifaciality	80%±5%
Mechanical Load	Front side 5400 Pa / Back side 2400 Pa
Hail Test	HW4 40mm

