

## BIFACIAL TOPCON MONOCRYSTALLINE 132TNB12

- ◆ TT715-132TNB12 715 Wp
- ◆ TT695-132TNB12 695 Wp
- ◆ TT710-132TNB12 710 Wp
- ◆ TT690-132TNB12 690 Wp
- ◆ TT705-132TNB12 705 Wp
- ◆ TT685-132TNB12 685 Wp
- ◆ TT700-132TNB12 700 Wp
- ◆ TT680-132TNB12 680 Wp



### High Conversion Efficiency

High panel efficiency to guarantee high power output



### Self-Cleaning And Anti-Reflection Glass

Coating glass for self-cleaning reduces surface dust



### Outstanding Low Irradiation Glass

Outstanding panel performance even in weak light conditions



### Excellent Durability

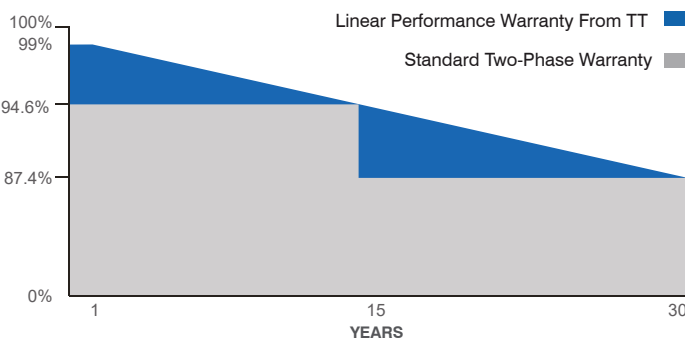
Wind load up to 2400 Pa, Snow load up to 5400 Pa



### 0~ +5W Positive Power Tolerance



### Easy Installation



- ✓ 30 Years Performance Warranty
- ✓ 15 Years Product Warranty

## Half-Cut



IEC 61215, IEC 61730-1, IEC 61730-2  
ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

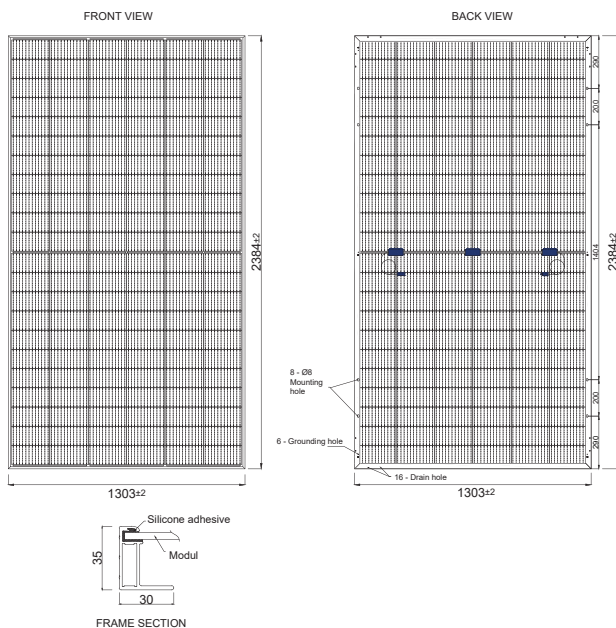


Model Type	TT680 132TNB12	TT685 132TNB12	TT690 132TNB12	TT695 132TNB12	TT700 132TNB12	TT705 132TNB12	TT710 132TNB12	TT715 132TNB12
Peak Power (Pmax)	680 Wp	685 Wp	690 Wp	695 Wp	700 Wp	705 Wp	710 Wp	715 Wp
Module Efficiency	21.89	22.05	22.21	22.37	22.53	22.70	22.86	23.02
Maximum Power Voltage (Vmp)	39.50	39.70	39.90	40.10	40.30	40.50	40.70	40.90
Maximum Power Current (Imp)	17.22	17.25	17.29	17.33	17.37	17.41	17.45	17.49
Open Circuit Voltage (Voc)	46.10	46.30	46.50	46.70	46.90	47.10	47.30	47.50
Short Circuit Current (Isc)	18.26	18.32	18.37	18.42	18.47	18.52	18.57	18.62
Power Tolerance	0~+5W							
Maximum System Voltage	1500V DC							
Operating Temperature	-40 ~ +85°C							
Fire Safety Class	Class II							
Maximum Series Fuse Rating	35A							

## MECHANICAL SPECIFICATIONS

Cell Dimensions(mm)	210x105
Cells per Module(pcs)	132 (6x22)
Weight(kg)	34.5
Panel Dimensions(mm)	2384x1303x35
Max. Wind/Snow Load(Pa)	2400/5400
Junction Box	IP68
Junction Box Cable Length(mm)	350-1600

## PHYSICAL CHARACTERISTICS



## REAR SIDE POWER GAIN

(715W Front Power Referenced)

Rear Power Gain	5%	10%	15%	20%	25%
Maximum Power (Pmax)	750.75	786.50	822.25	858.00	893.75
Short Circuit Current (Isc)	19.50	20.40	21.29	22.19	23.06
Open Circuit Voltage (Voc)	47.58	47.66	47.73	47.80	47.87
Maximum Power Current (Imp)	18.34	19.20	20.05	20.90	21.75
Maximum Power Voltage (Vmp)	40.94	40.99	41.03	41.06	41.09

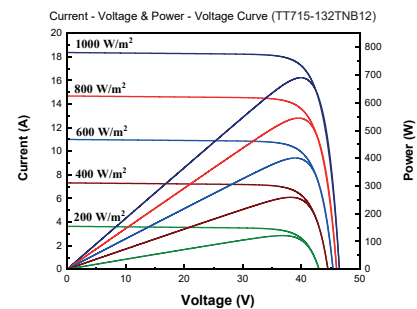
## TEMPERATURE CHARACTERISTICS

Temp. Coeff. of (Isc)	0.040%/°C
Temp. Coeff. of (Voc)	-0.260%/°C
Temp. Coeff. of (Pmax)	-0.320%/°C

## PACKING CONFIGURATION

Container	40' GP
Pieces per Pallet	31
Pieces per Container	527
Pallet Per Container	17

## ELECTRICAL CHARACTERISTICS



\* The specifications are obtained under the standard test conditions: 1000W/m2 solar irradiance, 1.5 Air Mass and cell temperature of 25°C. Measurement uncertainty for all panels is 6%. The actual transactions will be subject to the contracts. These parameters are for reference only and it is not a part of the contracts. The technical specifications in this document may vary. For more information, refer to the "Installation Manual".

\* For roof, facades and installations on similar surfaces, solar panels should be mounted over a fire-resistant covering suitable for this application, with adequate ventilation between the back of the solar panels and the mounting surface. Improper installations are hazardous and may spark a fire. Solar panels must not be mounted on structures and roofs which are made of not fire-resistant materials such as plastic layer, transparent plastic, PVC or similar materials without any fire-protection layer. Usage and installation not in accordance with the guidelines as outlined in the installation manual will terminate the warranty. Please refer to the installation manual and the warranty documents for further details.

\* TommaTech® GmbH reserves the right to change the specification of products without prior notice.

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