

**BIFACIAL TOPCON  
MONOCRYSTALLINE 120TNB12R**

- ◆ TT595-120TNB12R 595 Wp
- ◆ TT580-120TNB12R 580 Wp
- ◆ TT590-120TNB12R 590 Wp
- ◆ TT575-120TNB12R 575 Wp
- ◆ TT585-120TNB12R 585 Wp
- ◆ TT570-120TNB12R 570 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



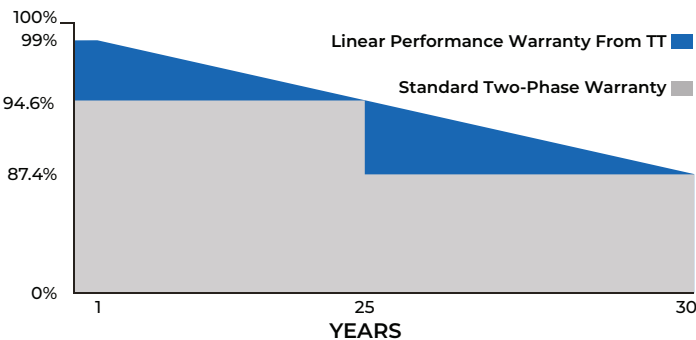
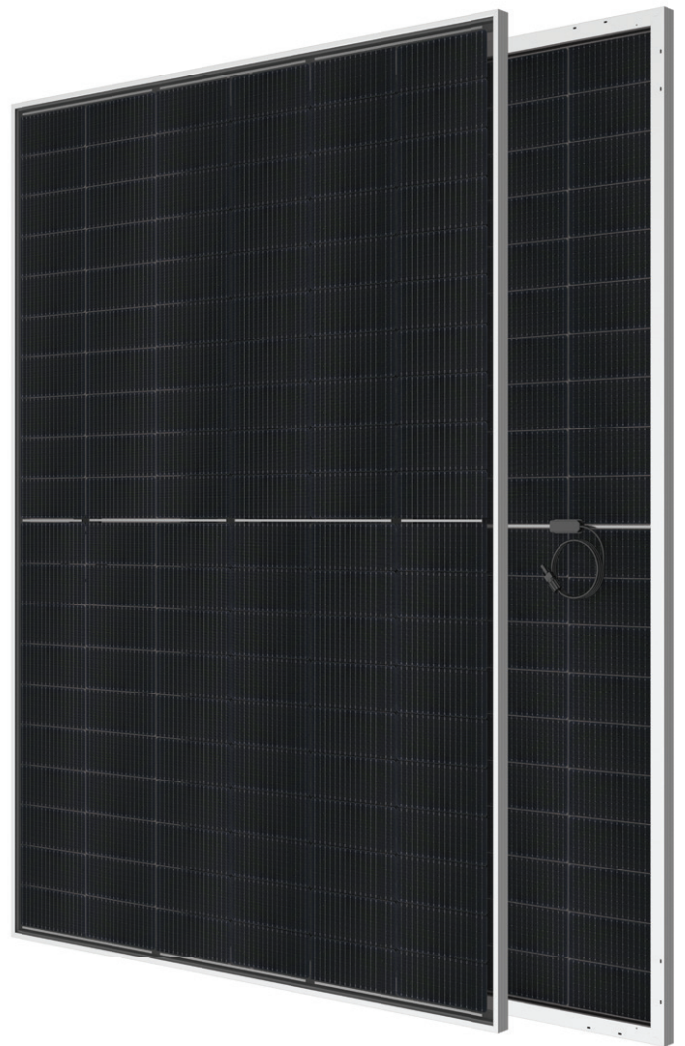
**0~+5W Positive Power Tolerance**



**Easy Installation**



**Twice EVA Laminated Double Glass**



- ✓ 30 Years Performance Warranty
- ✓ 25 Years Product Warranty

**Half-Cut**

DOUBLE GLASS



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

Model Type	TT570 120TNB12R	TT575 120TNB12R	TT580 120TNB12R	TT585 120TNB12R	TT590 120TNB12R	TT595 120TNB12R
Peak Power ( $P_{max}$ )	570Wp	575Wp	580Wp	585Wp	590Wp	595Wp
Module Efficiency	23.14	23.35	23.55	23.75	23.95	24.16
Maximum Power Voltage ( $V_{mp}$ )	37.61	37.81	38.01	38.21	38.41	38.61
Maximum Power Current ( $I_{mp}$ )	15.16	15.21	15.26	15.32	15.37	15.42
Open Circuit Voltage ( $V_{oc}$ )	44.50	44.70	44.90	45.10	45.30	45.50
Short Circuit Current ( $I_{sc}$ )	16.06	16.12	16.18	16.24	16.30	16.36
Power Tolerance	0~+5W					
Maximum System Voltage	1500V DC					
Operating Temperature	-40 ~ +85°C					
Protection Class	UL Type 29					
Maximum Series Fuse Rating	25A					

## MECHANICAL SPECIFICATIONS

Cell Dimensions (mm/inch)	182x105 / 7.17x4.14
Cells per Module (pcs)	120 (6x20)
Weight (kg/lbs)	31.30 / 69.00
Panel Dimensions (mm/inch)	2172x1134x30 / 85.51x44.65x1.20
Max. Wind/Snow Load (Pa)	2400/5400
Junction Box	IP68
Junction Box Cable Length (mm/inch)	300-1600 / 11.81-63.00
Glass Thickness (mm/inch)	2.0 - 2.0 / 0.08 - 0.08

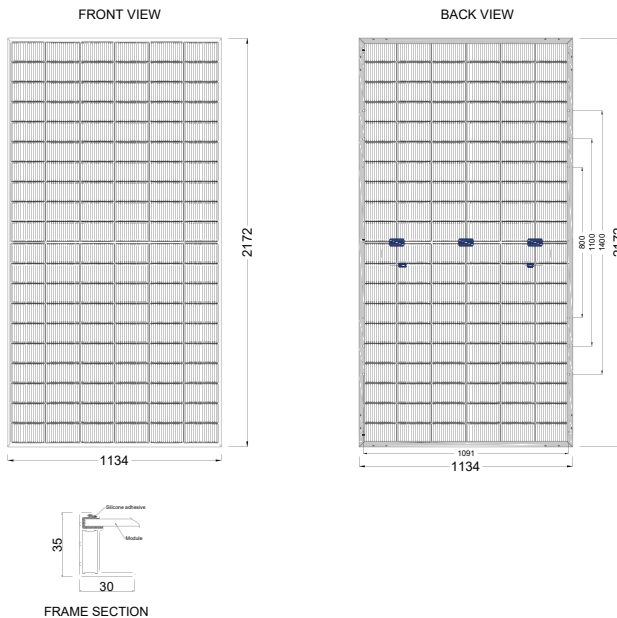
## TEMPERATURE CHARACTERISTICS

Temp. Coeff. of ( $I_{sc}$ )	0.041%/°C
Temp. Coeff. of ( $V_{oc}$ )	-0.25%/°C
Temp. Coeff. of ( $P_{max}$ )	-0.29%/°C

## PACKING CONFIGURATION

Container	40' HC
Pieces per Pallet	31
Pieces per Container	620
Pallet Per Container	20

## PHYSICAL CHARACTERISTICS

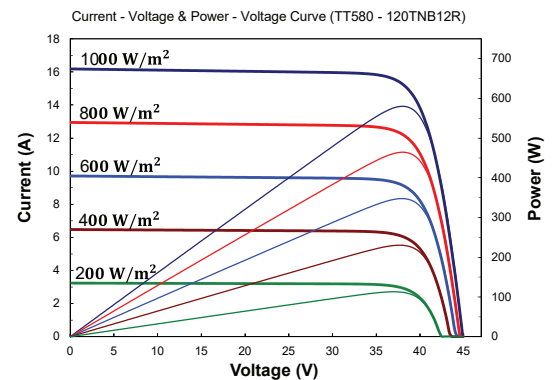


## REAR SIDE POWER GAIN

(10% rear side power gain)

Rear Power Gain	570	575	580	585	590	595
Maximum Power ( $P_{max}$ )	627.00	632.50	638.00	643.50	649.00	654.50
Short Circuit Current ( $I_{sc}$ )	17.67	17.73	17.80	17.86	17.93	18.00
Open Circuit Voltage ( $V_{oc}$ )	44.50	44.70	44.90	45.10	45.30	45.50
Maximum Power Current ( $I_{mp}$ )	16.68	16.73	16.79	16.85	16.91	16.96
Maximum Power Voltage ( $V_{mp}$ )	37.61	37.81	38.01	38.21	38.41	38.61

## 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.