BIFACIAL TOPCON MONOCRYSTALLINE 96TNB12R

TOMMATECH GmbH

GERMAN-based company

- TT460-96TNB12R 460 Wp
- TT455-96TNB12R 455 Wp
- TT450-96TNB12R 450 Wp
- TT445-96TNB12R 445 Wp
- TT440-96TNB12R 440 Wp
- TT435-96TNB12R 435 Wp
- TT430-96TNB12R 430 Wp
- TT425-96TNB12R 425 Wp

15 -YEARS- Product Warranty

30 -YEARS- Performance Warranty

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

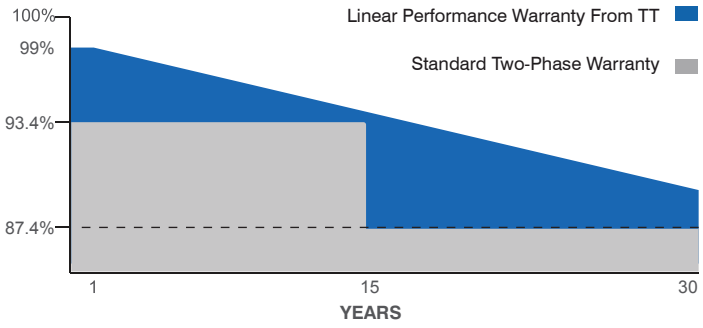
Excellent Durability

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

0~+5W Positive Power Tolerance

Easy Installation

Dual-Sided Power Generation



HalfCut DOUBLE GLASS

ISO SOMPO CE

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

30 Years Performance Warranty

15 Years Product Warranty

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Half-Cut

TOMMATECH GmbH
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Model Type	TT425 96TNB12R	TT430 96TNB12R	TT435 96TNB12R	TT440 96TNB12R	TT445 96TNB12R	TT450 96TNB12R	TT455 96TNB12R	TT460 96TNB12R
Peak Power (P_{max})	425 Wp	430 Wp	435 Wp	440 Wp	445 Wp	450 Wp	455 Wp	460 Wp
Module Efficiency	21.27	21.52	21.77	22.02	22.27	22.52	22.77	23.02
Maximum Power Voltage (V_{mp})	28.82	29.02	29.22	29.42	29.62	29.82	30.02	30.22
Maximum Power Current (I_{mp})	14.75	14.82	14.89	14.96	15.03	15.10	15.16	15.23
Open Circuit Voltage (V_{oc})	34.33	34.53	34.73	34.93	35.13	35.33	35.53	35.73
Short Circuit Current (I_{sc})	15.70	15.77	15.84	15.91	15.98	16.05	16.12	16.19
Power Tolerance	0~+5W							
Maximum System Voltage	1500V DC							
Operating Temperature	-40 ~ +85°C							
Protection Class	Class II							
Maximum Series Fuse Rating	25A							

MECHANICAL SPECIFICATIONS

Cell Dimensions (mm)	182.3x105
Cells per Module (pcs)	96 (6x16)
Weight (kg)	23,9
Panel Dimensions (mm)	1762x1134x30
Max. Wind/Snow Load (Pa)	2400/5400
Junction Box	IP68
Junction Box Cable Length (mm)	300-1300
Glass Thickness (mm)	2.0 - 2.0

TEMPERATURE CHARACTERISTICS

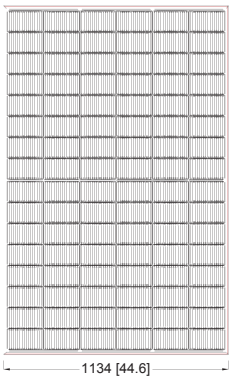
Temp. Coeff. of (I_{sc})	0.041%/°C
Temp. Coeff. of (V_{oc})	-0.250%/°C
Temp. Coeff. of (P_{max})	-0.290%/°C

PACKING CONFIGURATION

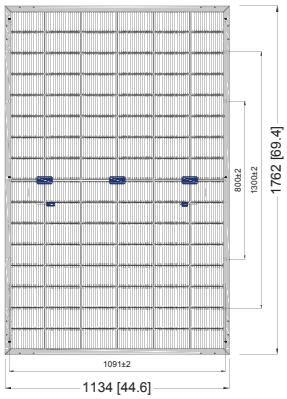
Container	40' HC
Pieces per Pallet	36
Pieces per Container	936
Pallet Per Container	26

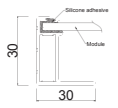
PHYSICAL CHARACTERISTICS

FRONT VIEW



BACK VIEW





FRAME SECTION

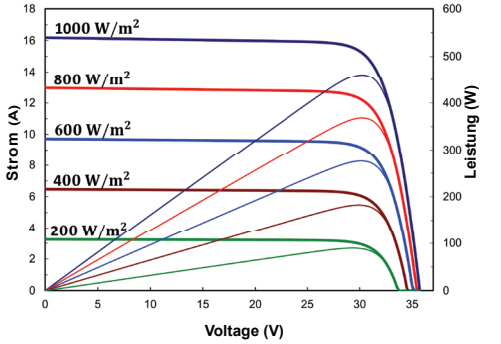
REARSIDE POWER GAIN

(10% rear side power gain)

Rear Power Gain	425	430	435	440	445	450	455	460
Maximum Power (Pmax)	467.50	473.00	478.50	484.00	489.50	495.00	500.50	506.00
Short Circuit Current (Isc)	17.27	17.35	17.42	17.50	17.58	17.66	17.73	17.80
Open Circuit Voltage (Voc)	34.33	34.53	34.73	34.93	35.13	35.33	35.53	35.73
Maximum Power Current (Imp)	16.23	16.30	16.38	16.46	16.53	16.61	16.68	16.75
Maximum Power Voltage (Vmp)	28.82	29.02	29.22	29.42	29.62	29.82	30.02	30.22

ELECTRICAL CHARACTERISTICS

Current - Voltage & Power - Voltage Curve (TT455-96TNB12R)



* 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.