

# BIFACIAL BIPV PERC MONOCRYSTALLINE 80-64-48PMKB12

**TOMMATECH**  
GmbH  
GERMAN-based company

- ◆ TT400-80PMKB12-250
- ◆ TT240-48PMKB12-175
- ◆ TT320-64PMKB12-200
- ◆ TT240-48PMKB12-150



## 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



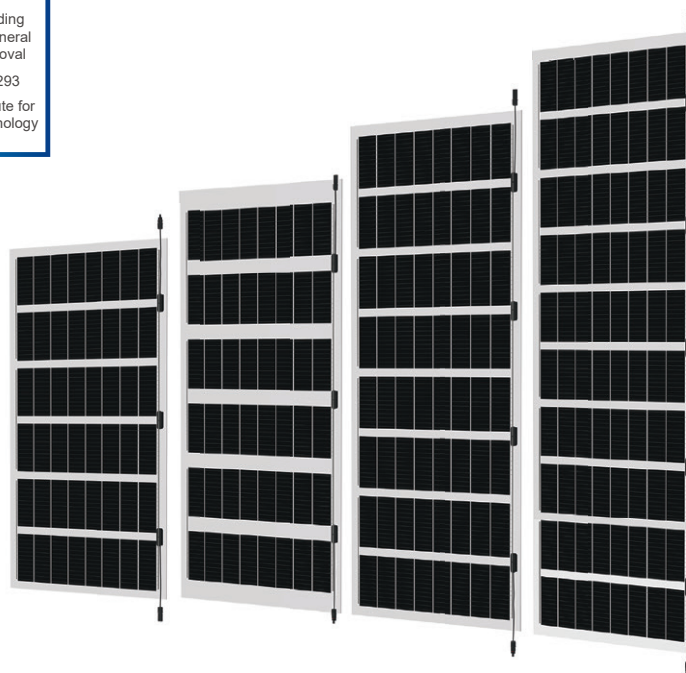
## Twice EVA Laminated Double Glass



## According to guideline DIN 18008. For vertical and overhead glazing (DIBt Z-70.3-293 Approval).

Deutsches Institut für Bautechnik  
**DIBt**

General Building Approval / General Design Approval  
Nr. Z-70.3-293  
German Institute for Building Technology



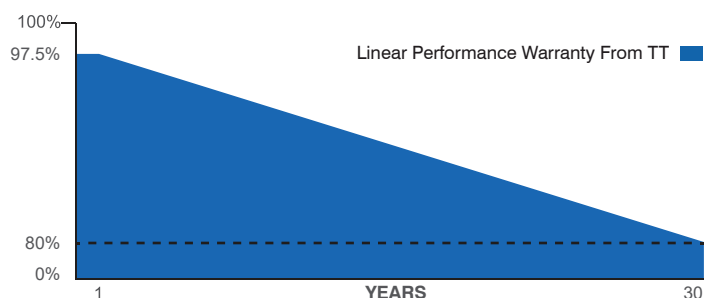
TT240Wp

TT240Wp

TT320Wp

TT400Wp

TommaTech's Building Integrated Solar Modules (BIPV) are designed with the latest generation of high efficiency cells, providing a smart and environmentally friendly energy solution that is also aesthetically pleasing. Designed in 4 main sizes, the solar modules are preferred in many areas such as restaurants, cafes, homes, offices, workplaces, hotels, pools, conservatories and terraces of houses. The system is equipped with aluminum infrastructure and provides both thermal insulation and tightness. The system, which can be designed as an off-grid, grid-tied or hybrid solar energy system, is also a real eye-catcher.



30 Years Performance Warranty



30 Years Product Warranty



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



**SOMPO**  
INSURANCE

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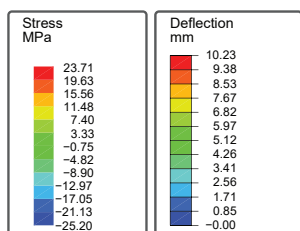
Model Type	48PMKB12-150	48PMKB12-175	64PMKB12-200	80PMKB12-250
Peak Power (Pmax)	240 Wp	240 Wp	320 Wp	400 Wp
Module Efficiency	16.33	14	16.33	16.33
Maximum Power Voltage (Vmp)	27.70	27.70	36.93	46.16
Maximum Power Current (Imp)	8.67	8.67	8.67	8.67
Open Circuit Voltage (Voc)	32.50	32.50	43.33	54.16
Short Circuit Current (Isc)	9.11	9.11	9.11	9.11
Cell Dimensions(mm)	48(6x8)	48(6x8)	64(8x8)	80(10x8)
Cells per Module	210x105	210x105	210x105	210x105
Panel Dimensions (mm)	1500x980x7.6	1750x980x7.6	2000x980x7.6	2500x980x7.6
Weight (kg)	29.13	33.66	38.44	48.10
Transparent Area (%)	27	38	27	27
Front / Back Glass Thickness (mm)	3.2 / 4.0			
Power Tolerance	0~+5W			
Maximum System Voltage	1500V DC			
Nominal Operating Cell Temp.	-40 ~ +85°C			
Protection Class	Class II			
Maximum Series Fuse Rating	20A			
Max. Wind/Snow Load (Pa)	2400 / 2400			
Junction Box	IP68			
Junction Box Cable Length(cm)	120			

## TEMPERATURE CHARACTERISTICS

Temp. Coeff. of Isc	0.041%/°C
Temp. Coeff. of Voc	-0.280%/°C
Temp. Coeff. of Pmax	-0.360%/°C

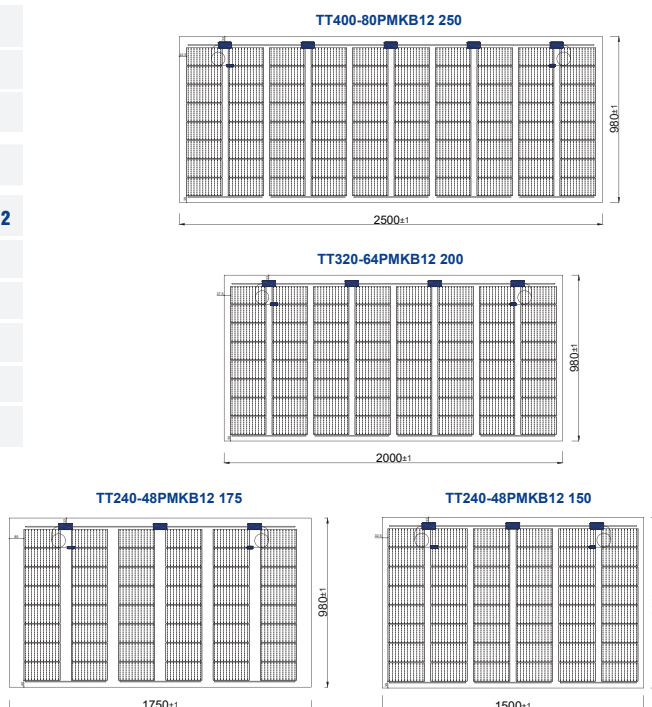
## PACKING CONFIGURATION

Module Model	48PMKB12	48PMKB12	64PMKB12	80PMKB12
Container	40' GP	40' GP	40' GP	40' GP
Pieces per Pallet	15	15	15	15
Pieces per Container	480	420	360	300
Pallet per Container	32	28	24	20
Weight of Pallet (kg)	470	530	615	730



\*Simulation Results Under 2400Pa Pressure

## PHYSICAL 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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