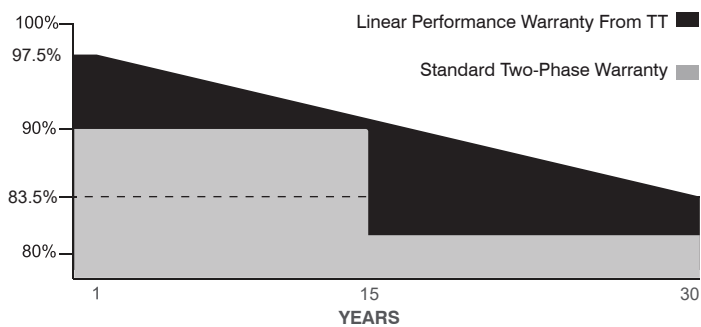
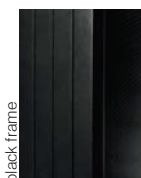


**PERC MONOCRYSTALLINE  
132PM12**

132<sub>cell</sub>



**Half-Cut**  
Multi-BB  
**DARK SERIES**



✓ 30 Years Performance Warranty    ✓ 15 Years Product 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.



**Easy Installation**



IEC 61215, IEC 61730-1, IEC 61730-2  
IEC 62804 PID (POTENTIAL INDUCED DEGRADATION)  
IEC 61701 SALT MIST CORROSION  
IEC 62716 AMMONIA CORROSION  
ISO 9001:2015, ISO 14001:2015, ISO 45001:2018



# DARK SERIES

## 132PM12

**Peak Power (Pmax)**  
**Module Efficiency**  
**Maximum Power Voltage (Vmp)**  
**Maximum Power Current (Imp)**  
**Open Circuit Voltage (Voc)**  
**Short Circuit Current (Isc)**  
**Power Tolerance**  
**Maximum System Voltage**  
**Operating Temperature**  
**Protection Class**  
**Maximum Series Fuse Rating**

TT650 132PM12	TT655 132PM12	TT660 132PM12	TT665 132PM12	TT670 132PM12	TT675 132PM12
650 Wp	655Wp	660Wp	665Wp	670Wp	675Wp
20.92	21.09	21.25	21.41	21.57	21.73
37.50	37.70	37.90	38.10	38.30	38.50
17.34	17.38	17.42	17.46	17.50	17.54
45.20	45.40	45.60	45.80	46.00	46.20
18.35	18.39	18.44	18.48	18.51	18.56
0~+5W					
1500V DC					
-40 ~ +85°C					
Class II					
30A					
210x105					
132 (6x22)					
34.5					
2384x1303x35					
2400/5400					
IP68					
350-1600					

### MECHANICAL SPECIFICATION

**Cell Dimensions (mm)**  
**Cells per Module (pcs)**  
**Weight (kg)**  
**Panel Dimensions (mm)**  
**Max. Wind/Snow Load (Pa)**  
**Junction Box**  
**Junction Box Cable Length (mm)**

### TEMPERATURE CHARACTERISTICS

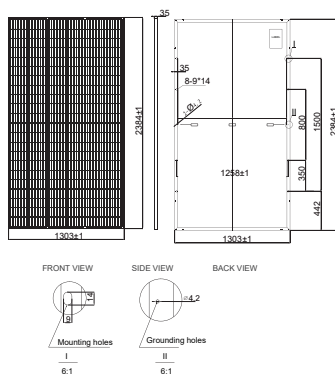
Temp. Coeff. of (Isc)	0.040%/°C
Temp. Coeff. of (Voc)	-0.260%/°C
Temp. Coeff. of (Pmax)	-0.340%/°C

### PACKING CONFIGURATION

Container 40' GP

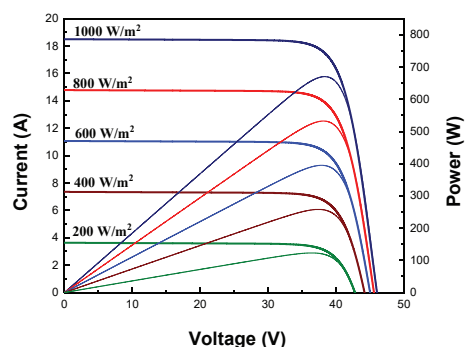
Pieces per Pallet	31
Pieces per Container	527
Pallets per Container	17

### PHYSICAL CHARACTERISTICS



### ELECTRICAL CHARACTERISTICS

Current - Voltage & Power - Voltage Curve (TT670-132PM12)



\* 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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