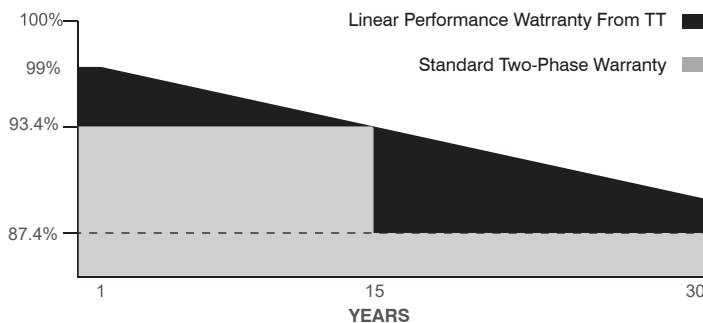
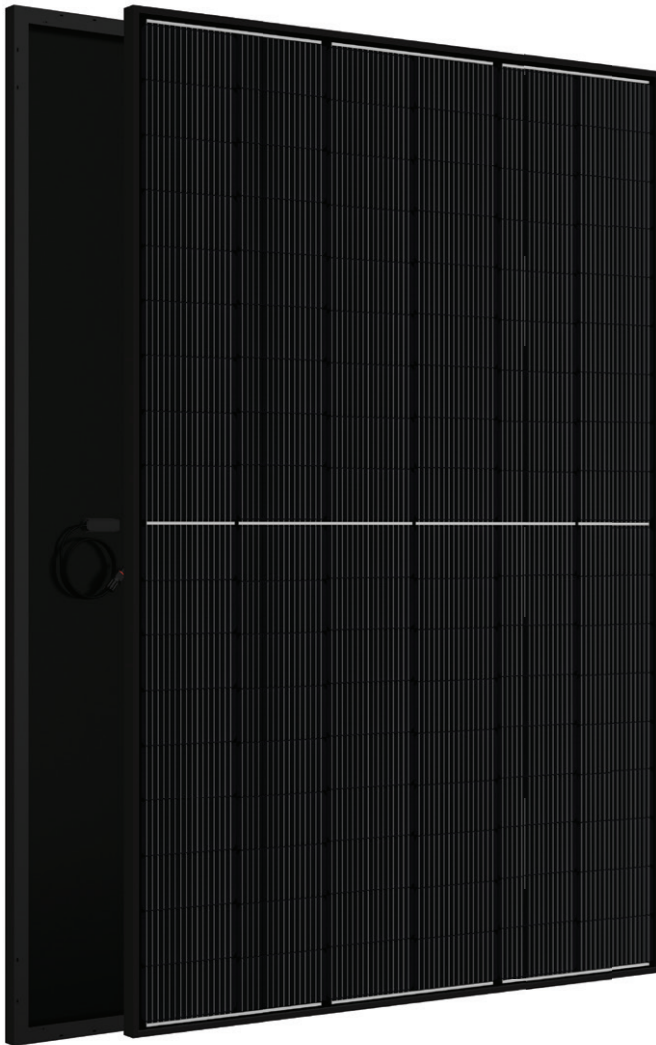


**TOPCON  
MONOCRYSTALLINE  
108TNFB10**

108<sub>cell</sub>



**30 Years Performance Warranty**

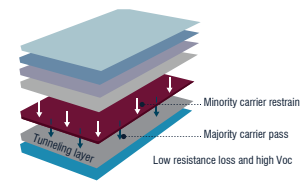


**15 Years Product Warranty**

**TOMMATECH**  
GmbH  
GERMAN-based company ●●●



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



### 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

### 0~+5W Positive Power Tolerance



### 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



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[mail@tommatech.de](mailto:mail@tommatech.de)

# DARK SERIES

## 108TNFB10

**Peak Power (P<sub>max</sub>)**  
**Module Efficiency**  
**Maximum Power Voltage (V<sub>mp</sub>)**  
**Maximum Power Current (I<sub>mp</sub>)**  
**Open Circuit Voltage (V<sub>oc</sub>)**  
**Short Circuit Current (I<sub>sc</sub>)**  
**Power Tolerance**  
**Maximum System Voltage**  
**Operating Temperature**  
**Protection Class**  
**Maximum Series Fuse Rating**

### 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)**

TT415 108TNFB10	TT420 108TNFB10	TT425 108TNFB10	TT430 108TNFB10	TT435 108TNFB10	TT440 108TNFB10	TT445 108TNFB10	TT450 108TNFB10
415 Wp	420 Wp	425 Wp	430 Wp	435 Wp	440 Wp	445 Wp	450 Wp
21.25	21.51	21.76	22.02	22.28	22.53	22.79	23.04
31.74	31.94	32.14	32.34	32.54	32.74	32.94	33.14
13.08	13.15	13.23	13.30	13.37	13.44	13.51	13.58
37.71	37.91	38.11	38.31	38.51	38.71	38.91	39.11
13.88	13.95	14.03	14.10	14.17	14.24	14.31	14.38
0~+5W							
1500V DC							
-40 ~ +85°C							
Class II							
25A							
182,2x91,8							
108 (6x18)							
21.45							
1722x1134x30							
2400/5400							
IP68							
350-1600							

### TEMPERATURE CHARACTERISTICS

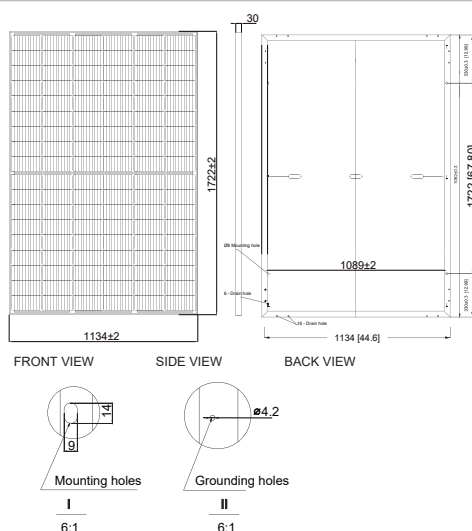
Temp. Coeff. of (I <sub>sc</sub> )	0.040%/°C
Temp. Coeff. of (V <sub>oc</sub> )	-0.260%/°C
Temp. Coeff. of (P <sub>max</sub> )	-0.30%/°C

### PACKING CONFIGURATION

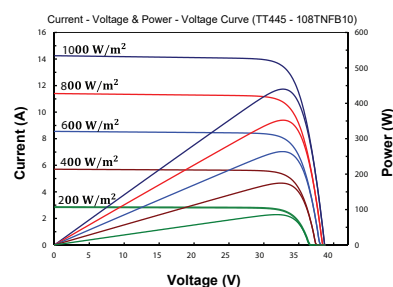
Container 40' HC

Pieces per Pallet	35
Pieces per Container	910
Pallets per Container	26

### PHYSICAL CHARACTERISTICS



### 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.