

**TOPCON MONOCRYSTALLINE • 108TNFB10**

**Half Cut**

**Multi-BB**

**BLACK 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**

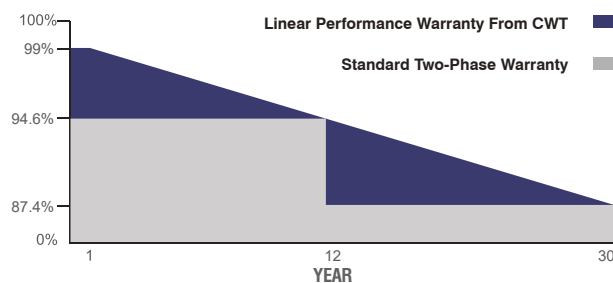
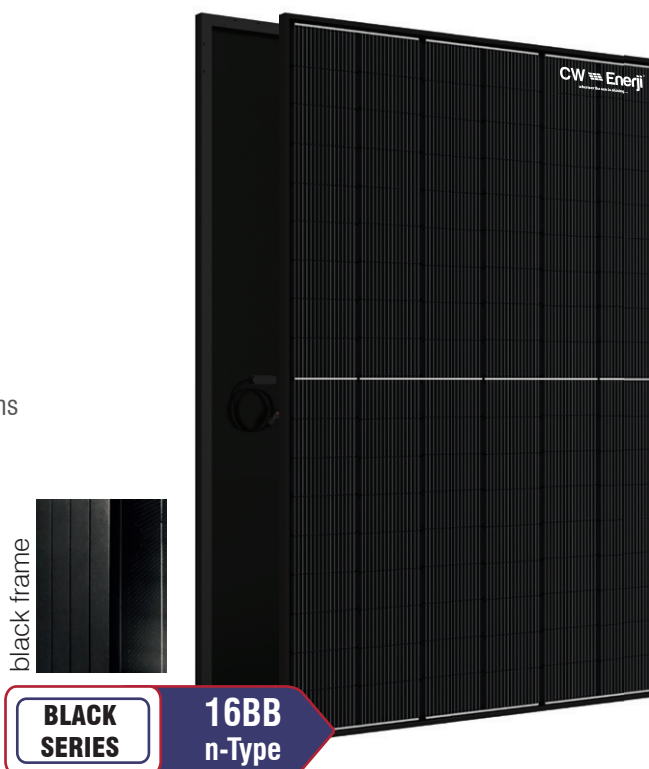
Wind load up to 2400 Pa, Snow load up to 5400 Pa



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



**Easy Installation**



**CWT450-108TNFB10 450 Wp**

**CWT445-108TNFB10 445 Wp**

**CWT440-108TNFB10 440 Wp**

**CWT435-108TNFB10 435 Wp**



**30 Years Performance Warranty**



**12 Years Product Warranty**



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

## ELECTRICAL CHARACTERISTICS

Model Type	CWT435 108TNFB10	CWT440 108TNFB10	CWT445 108TNFB10	CWT450 108TNFB10
Peak Power ( $P_{max}$ )	435 Wp	440 Wp	445 Wp	450 Wp
Module Efficiency (%)	22.28	22.53	22.79	23.04
Maximum Power Voltage ( $V_{mp}$ )	32.54	32.74	32.94	33.14
Maximum Power Current ( $I_{mp}$ )	13.37	13.44	13.51	13.58
Open Circuit Voltage ( $V_{oc}$ )	38.51	38.71	38.91	39.11
Short Circuit Current ( $I_{sc}$ )	14.17	14.24	14.31	14.38
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/inch)	182 x 91 / 7.16x 3.58
Cells per Module(pcs)	108 (6x18)
Weight(kg/lbs)	21.45 / 47.29
Panel Dimensions(mm/inch)	1722x1134x30 / 67.80x44.64x1.18
Max. Wind/Snow Load(Pa)/(lb/ft <sup>2</sup> )	(2400 / 5400) / (50 / 212)
Junction Box	IP68
Junction Box Cable Length(mm/inch)	350-1600 / 13.78-63.00
Frame Color	Black

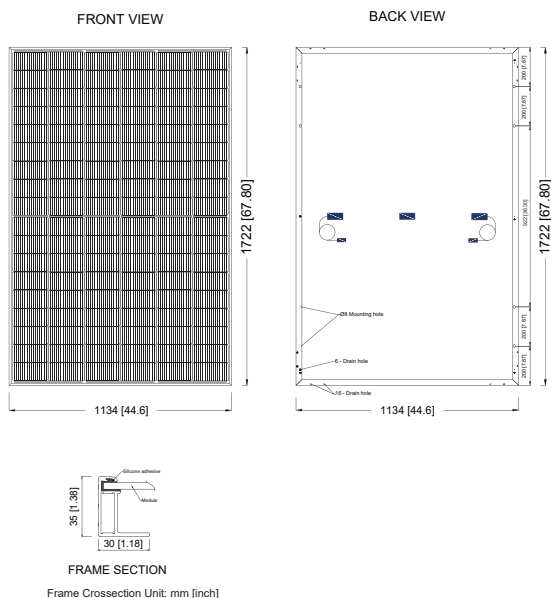
## TEMPERATURE CHARACTERISTICS

Temp. Coeff. of ( $I_{sc}$ )	0.040%/°C
Temp. Coeff. of ( $V_{oc}$ )	-0.260%/°C
Temp. Coeff. of ( $P_{max}$ )	-0.30%/°C

## PACKING CONFIGURATION

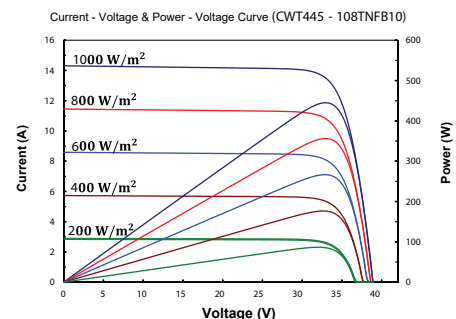
Container	40' GP
Pieces per Pallet	35
Pieces Per Container	910
Pallet Per Container	26

## PHYSICAL CHARACTERISTICS



Frame Cross-section Unit: mm [inch]

## ELECTRICAL CHARACTERISTICS



\* The specifications are obtained under the standard test conditions: 1000W/m<sup>2</sup> solar irradiance, 1.5 Air Mass and cell temperature of 25°C. Measurement uncertainty for all panels is 3%. 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.

\* CW Enerji reserves the right to change the specification of products without prior notice.