CW Energy U.S.A

USA Technical Datasheet CW Enerji

30 YEARS PERFORMANCE WARRANTY

HIGH-EFFICIENCY SOLAR PANELS 108TNB10

Half Cut

Multi-BB

BLACK ON BLACK

Reliability Tested & Verified
Performance Durability

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

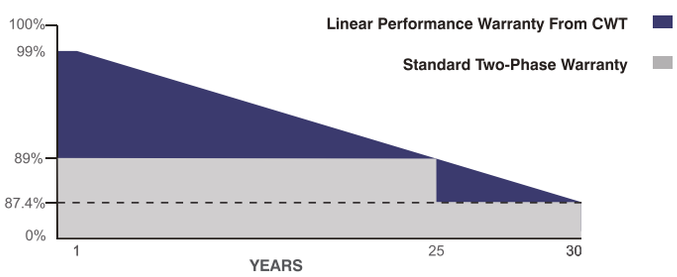
Outstanding Low Irradiation Glass
Outstanding panel performance even in weak light conditions

0～+5W Positive Power Tolerance

Easy Installation

DNV BANKABILITY
CW Enerji Module Bankability Technical Assessment





30 Years Performance Warranty

25 Years Product Warranty

CWT450-108TNB10 450 Wp

CWT445-108TNB10 445 Wp

ISO PV CYCLE CE CEC ETL Intertek

IEC 61215, IEC 61730-1, IEC 61730-2, IEC 63209-1
ISO 9001:2015, ISO 14001:2015, ISO 45001:2018
UL 61730-1, UL 61730-2

HIGH-EFFICIENCY SOLAR PANELS 108TNB10 Half Cut

ELECTRICAL CHARACTERISTICS

Model Type	CWT445 108TNB10	CWT450 108TNB10
Peak Power (P_{max})	445 Wp	450 Wp
Module Efficiency (%)	22,79	23,04
Maximum Power Voltage (V_{mp})	32,94	33,14
Maximum Power Current (I_{mp})	13,51	13,58
Open Circuit Voltage (V_{oc})	39,11	39,31
Short Circuit Current (I_{sc})	14,31	14,38
Power Tolerance	0~+5W	
Maximum System Voltage	1500V DC	
Operating Temperature	-40 ~ +85°C	
Protection Class	Class II	
Fire Class	UL type 29 / IEC Class C	
Maximum Series Fuse Rating	30A	

MECHANICAL SPECIFICATIONS

Cell Dimensions(mm/inch)	182,2 x 91,8 / 7.17x3.61
Cells per Module(pcs)	108 (6x18)
Weight(kg/lbs)	21.45 / 47.29
Panel Dimensions(mm/inch)	1722x1134x30 / 67.80x44.65x1.18
Max. Wind/Snow Load(Pa)/(lb/ft²)	(2400 / 5400) / (50 / 112.8)
Junction Box	IP68
Connector	Original Staubli MC4-EVO2
Junction Box Cable Length(mm/inch)	350-1600 / 13.78-63.00
Frame Color	Black

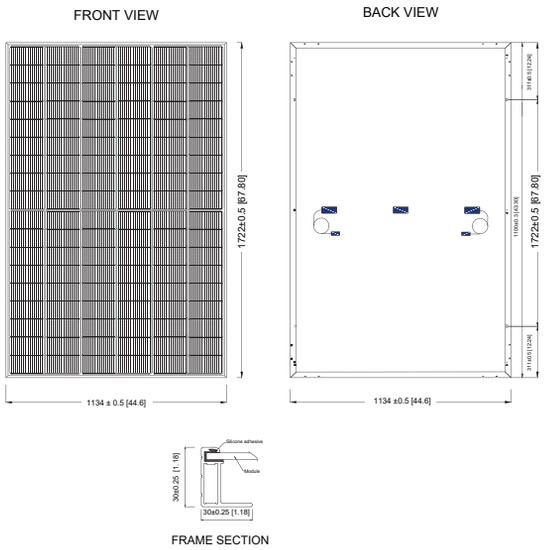
TEMPERATURE CHARACTERISTICS

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	875
Pallet Per Container	25

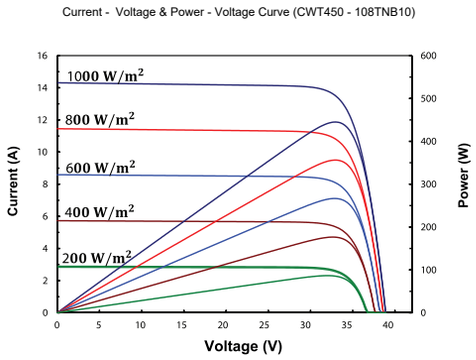
PHYSICAL CHARACTERISTICS



FRAME SECTION

Frame Crossection Unit: mm [inch]

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 ±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-resist-ant 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.

CW Energy USA