TALESUN

TAEKMO

TBC (Tunnel Back Contact)

TKM9D72B

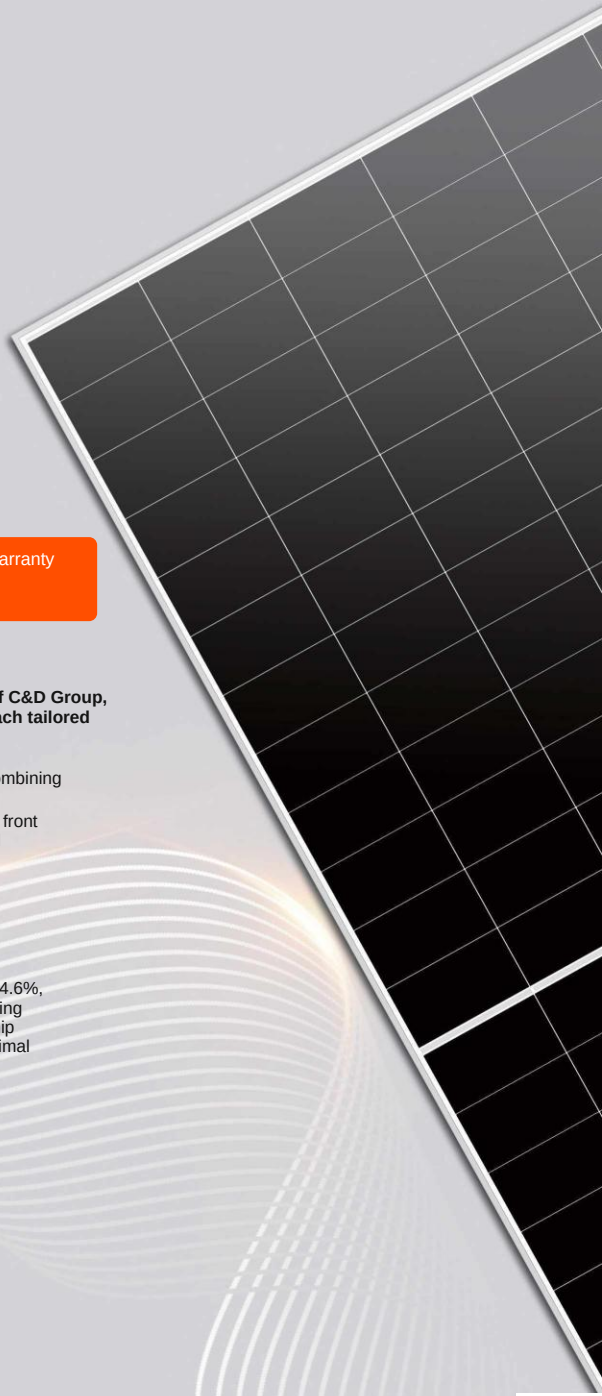
630–665 W

Bifacial, Double Glass

- Optimized Partial-Shading Performance
- Industry-Leading Energy Yield
- Microcrack Resistance
- Higher Power Output
- Enhanced Aesthetics
- Excellent LID and PID Resistance

15 15-Year Warranty on Materials and Workmanship

30 30-Year Warranty on Power Output



TAEKMO is an international sub-brand of Talesun Solar, part of C&D Group, combining the group's manufacturing expertise with an approach tailored to the needs of international markets.

TBC (Tunnel Back Contact) is an advanced solar cell technology combining the benefits of N-Type cells with Back Contact architecture.

Unlike conventional solar panels, where busbars are located on the front of the cell and partially shade its surface, TBC technology places all electrical contacts on the rear of the cell.

Benefits of TBC technology:

- Fully exposed front surface for sunlight absorption;
- No busbar shading; reduced electrical losses;
- Higher solar energy conversion efficiency;
- Enhanced module aesthetics.

With TBC technology, this solar panel achieves efficiency of up to 24.6%, exceeding most standard TOPCon modules (22–23.5%) and matching world-class premium photovoltaic solutions. N-Type TBC is a flagship next-generation technology for maximum electricity generation, minimal losses and stable performance throughout the module's service life.

IEC 61215 / IEC 61730
ISO 9001:2015 Quality Management System
ISO 14001:2015 Environmental Management System
ISO 45001:2018 Occupational Health and Safety Management System

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630–665 W

665 W	24.62%	≥80%
Power Output	Efficiency	At the End of Year 25

Warranty and Construction

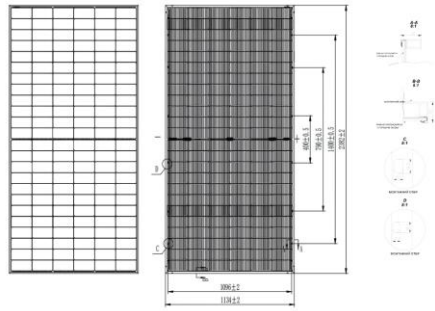
15 Years Warranty on Materials and Workmanship

30 Years Power Output Warranty

70%±5%

Bifaciality Factor

Pmax Measurement Uncertainty: ±3%



Electrical Characteristics

STC: AM1.5 1000W/m² 25°C

Pmax[W]	630	635	640	645	650	655	660	665
Voc[V]	53.60	53.70	53.80	53.90	54.00	54.10	54.20	54.30
Isc[A]	14.82	14.88	14.94	15.00	15.06	15.12	15.18	15.24
Vmp[V]	44.90	45.00	45.10	45.20	45.30	45.40	45.50	45.60
Imp[A]	14.05	14.12	14.20	14.27	14.35	14.43	14.51	14.59
Module Efficiency	**23.32%**	**23.51%**	**23.69%**	**23.88%**	**24.06%**	**24.25%**	**24.43%**	**24.62%**

Electrical Characteristics

NMOT: AM1.5 800W/m² 20°C

Pmax[W]	477	481	485	489	493	496	500	504
Voc[V]	50.84	50.95	51.04	51.14	51.23	51.33	51.42	51.51
Isc[A]	11.97	12.02	12.07	12.12	12.17	12.22	12.27	12.32
Vmp[V]	42.59	42.69	42.79	42.88	42.98	43.07	43.17	43.27
Imp[A]	11.23	11.29	11.35	11.41	11.48	11.54	11.60	11.66

Technical Specifications

Cell Type	N-Type TBC
Front Glass	2.0 mm Heat-Strengthened Glass with Coating
Rear Glass	2.0 mm Heat-Strengthened Glass
Frame	Anodized Aluminium Alloy Frame
Cable	4 mm² (IEC) / 12 AWG (UL) 350 mm (+), 250 mm (-), or Custom Length
Number of Cells	144(6*24)
Junction Box	IP68, 3 Bypass Diodes
Connector	MC4-Compatible / Original MC4
Weight	32.3 kg ±3%
Dimensions	2382 × 1134 × 30 mm
Packaging	36 pcs/Pallet / 144 pcs/20' GP / 720 pcs/40' HC

Temperature Characteristics (STC)

Temperature Coefficient of Isc	+ 0.05%/°C
Temperature Coefficient of Voc	- 0.22%/°C
Temperature Coefficient of Pmax	- 0.26%/°C

Installation Parameters

Operating Temperature	-40°C - +85°C
Maximum Series Fuse Rating	30A
Protection Class	Class II
Voc and Isc Tolerance	±3%
Maximum System Voltage	DC1500V
Maximum Static Load	Front: 5400 Pa Rear: 2400 Pa
Hail Test	25 mm Diameter Hail at a Speed of 23 m/s
Fire Rating	IEC Class C