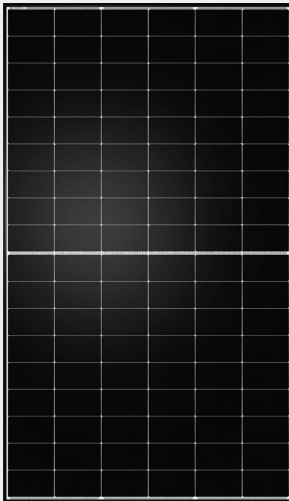


TNC

N-type Half-cell Bifacial Dual glass Black Frame and Transparent Module (54)

TWMNH-54HD



High light transmittance, suitable for carports and balcony scenarios



Compact size and lightweight, hassle-free operation and low maintenance

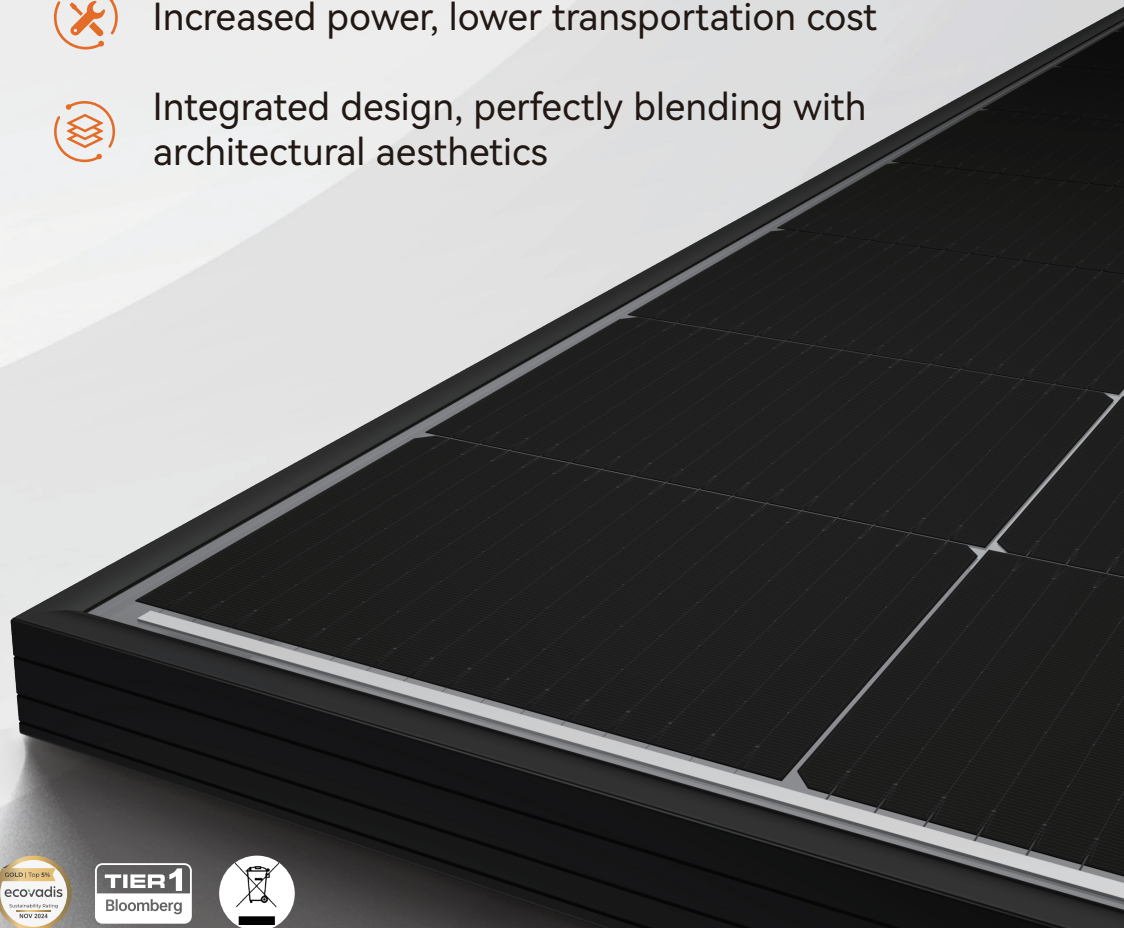
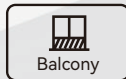


Increased power, lower transportation cost

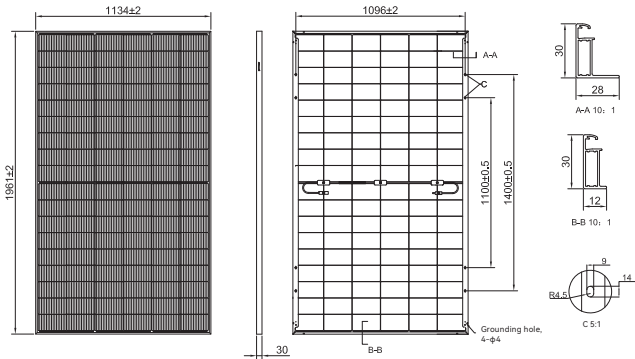


Integrated design, perfectly blending with architectural aesthetics

500-520W



Drawings (Unit: mm)



Mechanical Parameters

Cell Type	TNC
Cell Orientation	108[6×18]
Dimension	1961±2×1134±2×30mm
Weight	27.2kg
Front Glass	2.0mm AR coating semi tempered glass
Rear Glass	2.0mm semi tempered glass
Frame	Anodized aluminum alloy black frame
Junction Box	IP68, 3 diodes
Cable	4.0mm ²
Cable Length	±1,200 mm, length can be customized
Maximum Static Test Load	5,400 Pa (Positive) / 2,400 Pa (Negative)
Packaging (Per pallet)	36 pcs
Packaging	864 pcs per 40'HC

Electrical Characteristics (STC)

Module type: TWMNH-54HDXXX

Maximum Power: Pmax [W]	500	505	510	515	520
Open Circuit Voltage: Voc [V]	40.06	40.24	40.42	40.60	40.80
Short Circuit Current: Isc [A]	15.89	15.92	15.95	15.98	16.05
Voltage at Maximum Power: Vmp [V]	33.70	33.94	34.19	34.43	34.67
Current at Maximum Power: Imp [A]	14.84	14.88	14.92	14.96	15.00
Module Efficiency: η [%]	22.5	22.7	22.9	23.2	23.4

* STC: Irradiance 1000W/m², Cell temperature 25°C, AM=1.5, Power measurement tolerance: ±3%.
The above electrical parameters are for module grading only, not for individual modules.

Electrical Characteristics (BNPI)

Maximum Power: Pmax [W]	552.0	557.6	563.1	568.8	574.1
Open Circuit Voltage: Voc [V]	40.06	40.24	40.42	40.60	40.80
Short Circuit Current: Isc [A]	17.54	17.57	17.61	17.64	17.72
Voltage at Maximum Power: Vmp [V]	33.70	33.94	34.19	34.43	34.67
Current at Maximum Power: Imp [A]	16.38	16.43	16.47	16.52	16.56

* BNPI: Front side irradiance 1000W/m², Rear side irradiance 135W/m², Cell Temperature=25°C, AM=1.5, Power measurement tolerance: ±3%.
The above electrical parameters are for module grading only, not for individual modules.

Electrical characteristics with different rear side power gain

15% Maximum Power: Pmax[W]	575	580	586	592	598
Module Efficiency: η [%]	25.9	26.1	26.4	26.6	26.9

Temperature Rating

Temperature Coefficient of Pmax	-0.28%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	+0.046%/°C

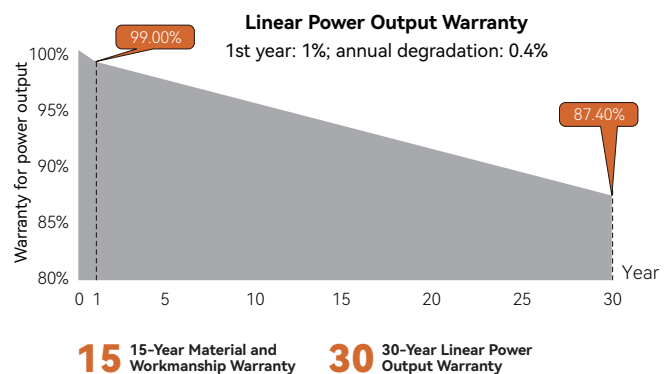
* Due to differences in test methods and equipment, actual measured values may deviate slightly from the above nominal values.

Operating Parameters

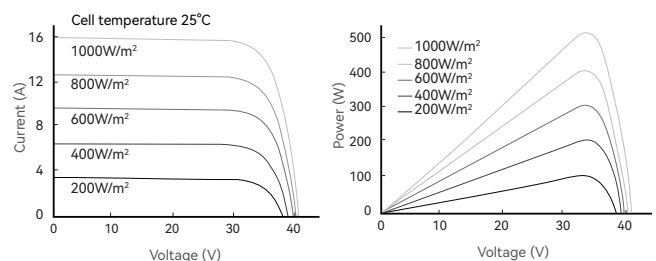
Operating Temperature*	[T ₉₈]≤70°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	30A
Power Output Tolerance	0~+3%
Bifaciality coefficient of Pmax	80±5%
Bifaciality coefficient of Voc	98±5%
Bifaciality coefficient of Isc	80±5%

*The module operating temperature can reach up to 85°C for short term.

Warranty



Curve



Certifications

Quality Management System and Product Certification

- ISO 9001: 2015 / Quality Management System
- ISO 14001: 2015 / Environmental Management System
- ISO 45001: 2018 / Occupational Health and Safety Management System
- ISO 50001: 2018 / Energy Management System
- IEC 62941: 2019 / Quality System for PV Module Manufacturing
- IEC 61215 (2021) / IEC 61730 (2023), IEC TS 62804,
- IEC 61701, IEC 62716, IEC 60068-2-68



Scan the code for more information