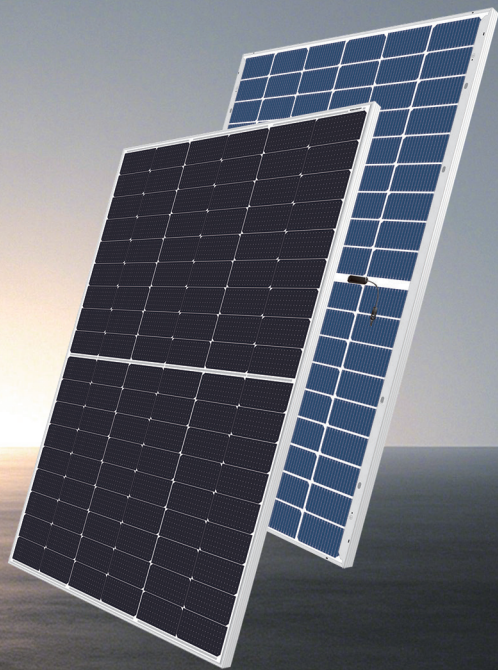


TaiHe 2.0 182

HTM430~450DMH5-54NT

TOPCon Bifacial high efficiency PV module



23.04%

Conversion Efficiency

Product Features



High Power Output

N-type multi-busbar (MBB) half-cell technology improves energy density and delivers higher output power. With high bifaciality, up to 25% additional power gain is achievable from the rear side.



High Reliability

Passed TUV-certified salt mist and ammonia corrosion tests, as well as 2400 Pa wind load and 5400 Pa snow load tests, ensuring superior reliability.



Better Low Light Performance

Outperforms conventional modules under low irradiance conditions such as cloudy, hazy, or overcast weather.



Low Power Degradation

First-year degradation < 1.0%, with a linear degradation of 0.40% per year over 30 years (years 2–30).



Low Temperature Coefficient

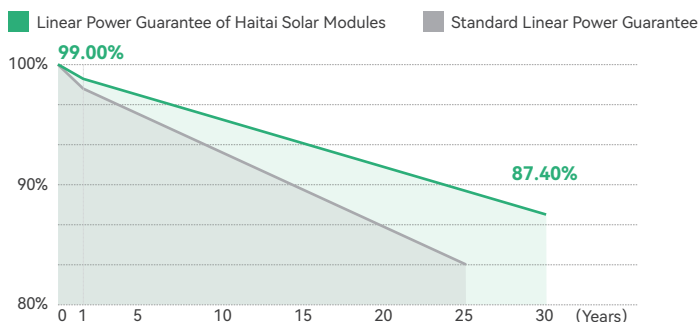
Passivated contact cell technology enables higher power generation under actual operating conditions.



Better Anti-LID

N-type cells are free from Boron-Oxygen (B-O) complex-induced LID, further enhancing the module's long-term energy yield.

Linear Performance Warranty



Product warranty



Linear power warranty



Linear attenuation of 0.40% per year within 30 years

Certifications

ISO 9001:2015 Quality Management System

ISO 14001:2015 Environmental Management System

ISO 45001:2018 Occupational Health and Safety Management System

IEC 62941:2019 PV Module Manufacturer Quality System

IEC 61215:2021 Crystalline Silicon Terrestrial Photovoltaic (PV) Modules—Design Qualification and Type Approval

IEC 61730:2023 PV Module Safety qualification

Electrical Data (STC)

Maximum Power (Pmax/W)	430	435	440	445	450
Open-Circuit Voltage (Voc/V)	39.00	39.15	39.30	39.45	39.60
Short-Circuit Current (Isc/A)	13.78	13.89	13.99	14.10	14.20
Voltage at Pmax (Vmp/V)	32.79	32.94	33.09	33.24	33.39
Current at Pmax (Imp/A)	13.12	13.21	13.30	13.39	13.48
Module Efficiency (%)	22.02	22.28	22.53	22.79	23.04
Operating Temperature	-40° C~+85° C				
Maximum System Voltage	1000/1500V				
STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25°C , AM1.5					

Electrical Data (NMOT)

Maximum Power (Pmax/W)	324	328	332	336	340
Open-Circuit Voltage (Voc/V)	37.05	37.20	37.35	37.50	37.65
Short-Circuit Current (Isc/A)	11.29	11.38	11.48	11.57	11.66
Voltage at Pmax (Vmp/V)	30.49	30.64	30.79	30.94	31.09
Current at Pmax (Imp/A)	10.64	10.72	10.79	10.87	11.00
NMOT (Nominal Moudule Operating Temperature): Irradiance 800W/m², Ambient Temperature 20°C , AM1.5, Wind Speed 1m/s					

Bifacial Power Generation Parameters (Backside Gains)

5%	Maximum Power (Pmax/W)	452	457	462	467	473
	Module Efficiency (%)	23.12	23.39	23.66	23.93	24.20
15%	Maximum Power (Pmax/W)	495	500	506	512	518
	Module Efficiency (%)	25.32	25.62	25.91	26.21	26.50
25%	Maximum Power (Pmax/W)	538	544	550	556	563
	Module Efficiency (%)	27.53	27.85	28.17	28.49	28.81

Mechanical Data

Cell Type	182×91mm Monocrystalline Silicon
Cell Configuration	108(6×18)
Module Dimensions	1722×1134×30mm
Module Weight	24kg
Front Glass	2.0mm high transmittance, reinforced glass
Rear Glass	2.0mm part of the structure is grid-like white ceramic glass
Frame	Anodized aluminum alloy
Junction Box	Protection class IP68
Cable	4.0mm² positive pole: 200 mm negative pole: 250 mm wire length can be customized

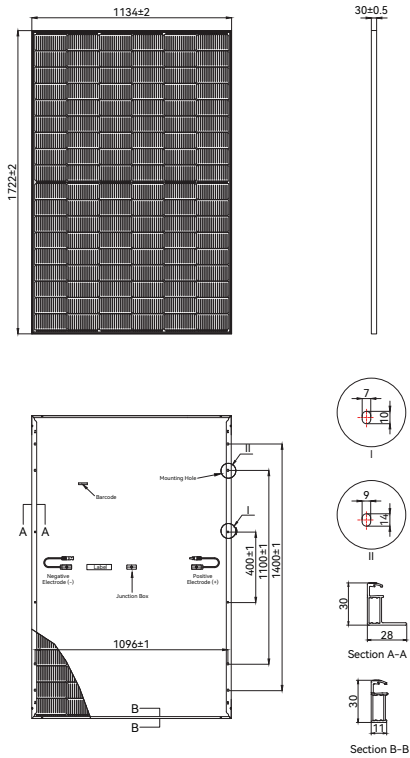
Temperature Coefficients

Temperature Coefficient (Pm)	-0.290%/°C
Temperature Coefficient (Voc)	-0.250%/°C
Temperature Coefficient (Isc)	0.045%/°C
NMOT (Nominal Module Operating Temperature)	41±3°C

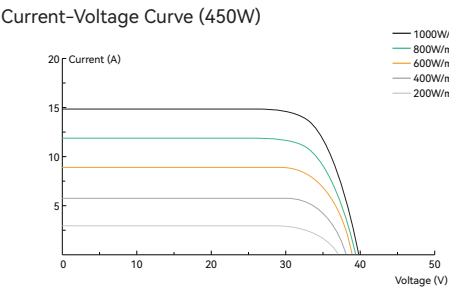
Packaging

Transportation method	Number of modules per cabinet	Number of modules per pallet
40HQ container	936 pcs	36 pcs + 36 pcs

Module Dimensions (mm)



I-V Curves



Power-Voltage Curve (450W)

