

Haitai TaiHe2.0 (182)

HTM420~440DMH5-54NT

TOPCon Bifacial high efficiency PV module

22.53%

Module Efficiency 22.53%

PRODUCT FEATURES



High Power Output

N-type MBB half cut technology, improve energy density, bring higher power output.
High Bifacial Factor, up to 25% extra power generation



High Durability

Passed TUV Salt & Ammonia corrosion test, and 2400Pa wind load, 5400Pa snow load test, higher reliability



Better Low Light Performance

Higher power generation compare with standard module in cloudy, foggy and low light condition



Low Power Degradation

First year power degradation <1.0%, year 2-30 power degradation <0.40% each year



Low Temperature coefficient

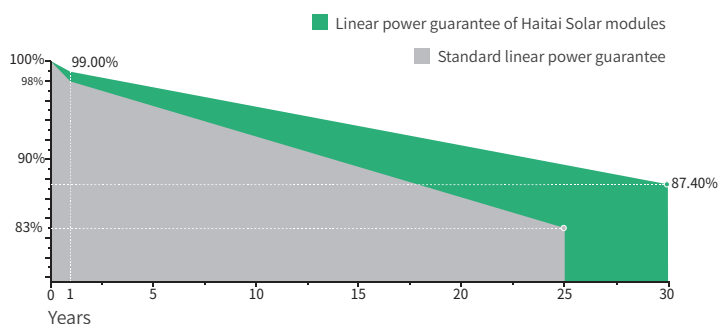
Passivated contact cell technology for higher power generation in operating



Better Anti-LID

N-type cells with boron-oxide-free composite LID to increase module power generation

LINEAR PERFORMANCE WARRANTY



12 YEARS product warranty



30 YEARS linear power warranty



0.40% Linear attenuation of 0.40% per year within 30 years

CERTIFICATES

- IEC 61215, IEC 61730
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational health and safety management systems
- IEC 62941: 2019 Photovoltaic Module Manufacturer Quality Management System



Electrical Data (STC)

Maximum Power (Pmax/W)	420	425	430	435	440
Open Circuit Voltage (Voc/V)	38.7	38.85	39.00	39.15	39.30
Short Circuit Current (Isc/A)	13.57	13.67	13.78	13.89	13.99
Voltage at Maximum Power (Vmp/V)	32.49	32.64	32.79	32.94	33.09
Current at Maximum Power (Imp/A)	12.93	13.03	13.12	13.21	13.30
Module Efficiency (%)	21.51	21.76	22.02	22.28	22.53
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)	316	320	324	328	332
Open Circuit Voltage (Voc/V)	36.75	36.9	37.05	37.2	37.35
Short Circuit Current (Isc/A)	11.1	11.2	11.29	11.38	11.48
Voltage at Maximum Power (Vmp/V)	30.19	30.34	30.49	30.64	30.79
Current at Maximum Power (Imp/A)	10.48	10.56	10.64	10.72	10.79

NMOT (Nominal Module 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)	441	446	452	457	462
	Module Efficiency (%)	22.58	22.85	23.12	23.39	23.66
15%	Maximum Power (Pmax/W)	483	489	495	500	506
	Module Efficiency (%)	24.73	25.03	25.32	25.62	25.91
25%	Maximum Power (Pmax/W)	525	531	538	544	550
	Module Efficiency (%)	26.89	27.21	27.53	27.85	28.17

Mechanical Data

Cell Type	182×91mm Mono
Cell Orientation	108(6×18)
Module Dimensions	1722×1134×30mm
Weight	24.0kg
Front Glass	2.0mm high transmittance, reinforced glass
Rear Glass	2.0mm part of the structure is grid-like white ceramic glass
Frame Material	Anodized aluminum alloy
Junction Box	Protection class IP68
Cable	4.0 mm ² positive pole: 200 mm negative pole: 250 mm wire length can be customized
Connector	MC4 compatible connector

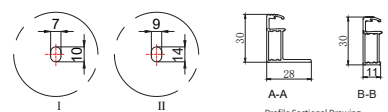
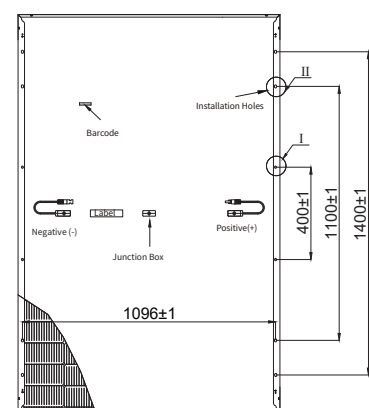
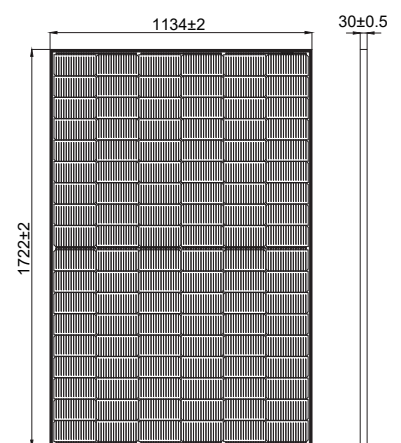
Temperature Coefficients

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

Module Dimensions (mm)



I-V Curve

