

Haitai TaiHe2.0 (210R)

HTM440~460DMH6-48NT

TOPCon Bifacial high efficiency PV module

23.02%

Module Efficiency



PRODUCT FEATURES



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

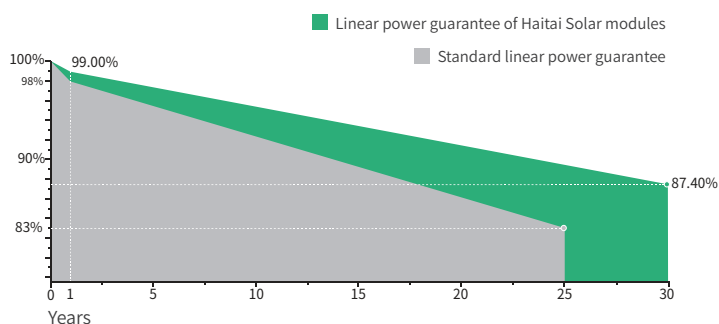
Passivated contact cell technology for higher power generation in operating



Better Anti-LID

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

LINEAR PERFORMANCE WARRANTY



product warranty



linear power warranty



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
- IEC62941:2019 Photovoltaic Module Manufacturer Quality Management System

Electrical Data (STC)

Maximum Power (Pmax/W)	440	445	450	455	460
Open Circuit Voltage (Voc/V)	34.84	34.99	35.14	35.29	35.44
Short Circuit Current (Isc/A)	15.79	15.9	16.01	16.12	16.23
Voltage at Maximum Power (Vmp/V)	29.42	29.57	29.72	29.87	30.02
Current at Maximum Power (Imp/A)	14.96	15.05	15.15	15.24	15.33
Module Efficiency (%)	22.02	22.27	22.52	22.77	23.02
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)	331	335	339	343	347
Open Circuit Voltage (Voc/V)	33.07	33.22	33.37	33.52	33.67
Short Circuit Current (Isc/A)	12.92	13.01	13.11	13.21	13.3
Voltage at Maximum Power (Vmp/V)	27.14	27.29	27.44	27.59	27.74
Current at Maximum Power (Imp/A)	12.2	12.28	12.36	12.44	12.51

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)	462	467	473	478	483
	Module Efficiency (%)	23.12	23.38	23.65	23.91	24.17
15%	Maximum Power (Pmax/W)	506	512	518	523	529
	Module Efficiency (%)	25.32	25.61	25.90	26.19	26.48
25%	Maximum Power (Pmax/W)	550	556	563	569	575
	Module Efficiency (%)	27.53	27.84	28.15	28.46	28.78

Mechanical Data

Cell Type	182×105mm Mono
Cell Orientation	96(6×16)
Module Dimensions	1762×1134×30mm
Weight	24.5kg
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 / Staübli Evo 2 connectors

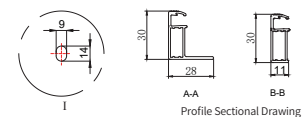
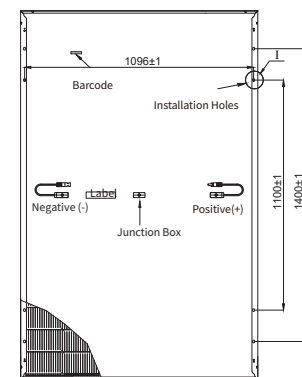
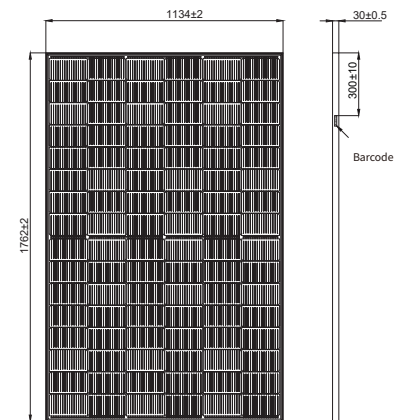
Temperature Coefficients

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	936pcs	36pcs +36pcs

Module Dimensions (mm)



I-V Curve

