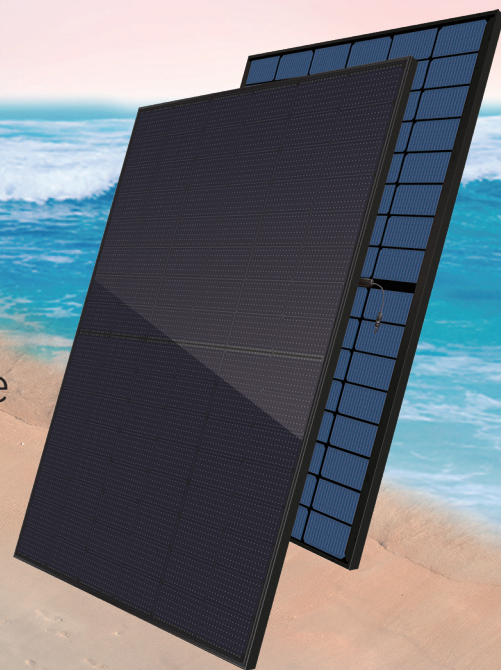


TaiHe 2.0 210R

HTM430~460DMH6-48NT

TOPCon Bifacial high efficiency PV module



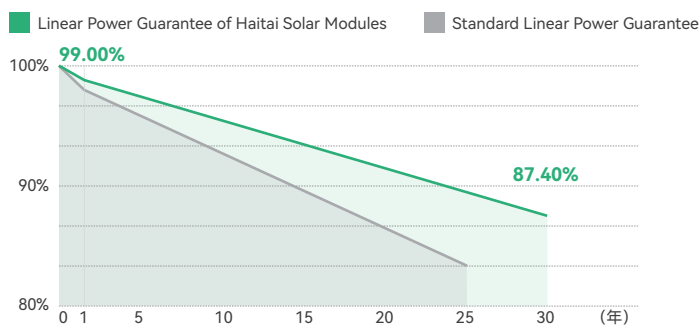
Country of Manufacture: China

23.02%
Conversion Efficiency

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
-  **Low Temperature Coefficient**
Passivated contact cell technology for higher power generation in operating
-  **Better Low Light Performance**
Higher power generation compared with standard modules in cloudy, foggy and low-light conditions
-  **Low Power Degradation**
First year power degradation <1.0%, year 2-30 power degradation <0.40% each year
-  **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
-  **0.4%** Linear attenuation of 0.4% per year within 30 years

This linear power warranty applies only to the front-side power of the module under Standard Test Conditions (STC). The bifacial power gain portion is not covered under the warranty. Specific terms are subject to the warranty document.

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 Output Power (Pmax/W) ±3%	430	435	440	445	450	455	460
Open-Circuit Voltage (Voc/V) ±3%	34.54	34.69	34.84	34.99	35.14	35.29	35.44
Short-Circuit Current (Isc/A) ±4%	15.56	15.68	15.79	15.90	16.01	16.12	16.23
Voltage at Pmax (Vmp/V)	29.12	29.27	29.42	29.57	29.72	29.87	30.02
Current at Pmax (Imp/A)	14.77	14.87	14.96	15.05	15.15	15.24	15.33
Module Conversion Efficiency (%)	21.52	21.77	22.02	22.27	22.52	22.77	23.02
Operating Temperature	-40° C~-+85° C						
Maximum System Voltage	1500V						
Front 1000 W/m², AM 1.5, Cell 25°C							

Electrical Data (NMOT)

Maximum Output Power (Pmax/W) ±3%	323	327	331	335	339	343	347
Open-Circuit Voltage (Voc/V) ±3%	32.77	32.92	33.07	33.22	33.37	33.52	33.67
Short-Circuit Current (Isc/A) ±4%	12.72	12.82	12.92	13.01	13.11	13.21	13.30
Voltage at Pmax (Vmp/V)	26.84	26.99	27.14	27.29	27.44	27.59	27.74
Current at Pmax (Imp/A)	12.04	12.12	12.20	12.28	12.36	12.44	12.51
AM1.5,800W/ m² , 20°C , 1m/s							

Electrical Data (BNPI)

Maximum Output Power (Pmax/W) ±3%	475	481	486	492	497	503	508
Open-Circuit Voltage (Voc/V) ±3%	34.67	34.81	34.96	35.11	35.26	35.41	35.56
Short-Circuit Current (Isc/A) ±4%	17.14	17.27	17.39	17.51	17.63	17.75	17.87
Voltage at Pmax (Vmp/V)	29.22	29.36	29.52	29.68	29.81	29.97	30.12
Current at Pmax (Imp/A)	16.27	16.39	16.47	16.58	16.68	16.79	16.88
Front 1000 W/m², rear 135 W/m²							

Electrical Data (BSI)

Short-Circuit Current (Isc/A)	19.06	19.21	19.34	19.48	19.61	19.75	19.88
Front 1000 W/m², rear 300 W/m²							

Bifacial Power Generation Parameters (Backside Gains)

5%	Maximum Power (Pmax/W)	452	457	462	467	473	478	483
	Module Efficiency (%)	22.60	22.86	23.12	23.38	23.65	23.91	24.17
15%	Maximum Power (Pmax/W)	495	500	506	512	518	523	529
	Module Efficiency (%)	24.75	25.04	25.32	25.61	25.90	26.19	26.48
25%	Maximum Power (Pmax/W)	538	544	550	556	563	569	575
	Module Efficiency (%)	26.90	27.21	27.53	27.84	28.15	28.46	28.78

Mechanical Parameters

Cell Type	182×105mm Mono
Cell Configuration	96(6×16)
Module Dimensions	1762×1134×30mm
Module Weight	24.5kg
Front Glass	2.0mm high transmittance, reinforced glass
Rear Glass	2.0mm part of the structure is grid-like black ceramic glass
Frame	Anodized aluminum alloy (black)
Junction Box	Protection class IP68
Cable	4.0mm² positive pole: 200 mm negative pole: 250 mm wire length can be customized
Connector	Manufacturer: Minghe Co.,LTD. Type: PV-MH8
Fire rating	Class C

Operating ratings

Maximum fuse rating	30A
Module Temperature Rating	T _{cell} ≤ 70°C
Power Binning	0~+5W
Bifaciality factor(Pmax)	80±5%
Bifaciality factor(Voc)	98±5%
Bifaciality factor(Isc)	80±5%

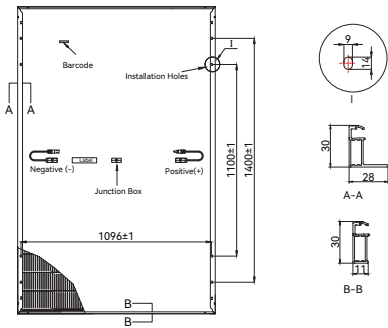
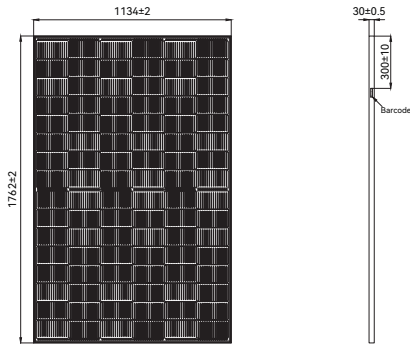
Temperature Coefficients

Temperature Coefficient (Pmax)	-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

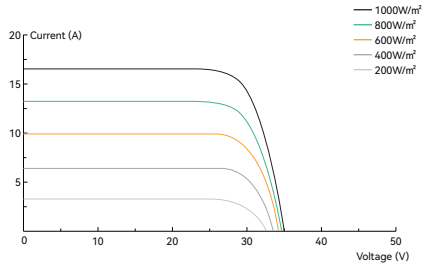
Transportation methods	Number of modules per cabinet	Number of modules per pallet
40HQ container	962 pcs	37 pcs + 37 pcs

Module Size (mm)



I-V Curves

Current-Voltage Curve (460W)



Power-Voltage Curve (460W)

