

Haitai TaiHe 166

SM440~460DMH3-72 Bifacial high efficiency mono PV module

21.16%

Module Efficiency 21.16%

PRODUCT FEATURES



High Efficiency

Power can be generated on both sides to support additional output gains of up to 25%.

The multi-busbar half-cut technology can boost energy density to deliver higher output.



High Reliability

Certified in TUV salt spray, ammonia corrosion, 2400Pa wind load and 5400Pa snow load testing. Highly reliable.



High ROI

Effectively reducing BOS costs to achieve lower LCOE and enhanced project profitability.



Low Degradation

First-year degradation is less than 2.0%, with linear degradation of 0.45% per year for 30 years.



Low Risk of Hot Spot

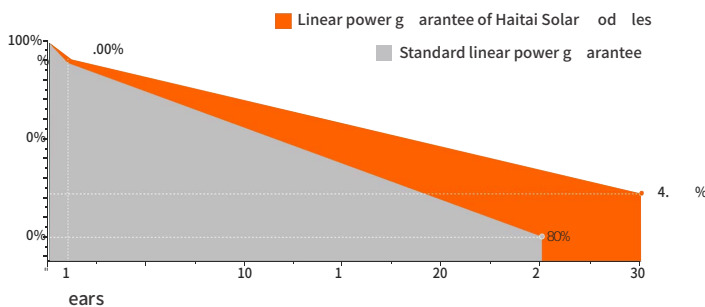
The next-generation cell technology and optimized circuit design adopted can support improved temperature coefficient and better hotspot resistance.



Low Risk of Micro-Crack

The multi-busbar technology contributes to more effective prevention of Micro crack and broken busbars.

LINEAR PERFORMANCE WARRANTY



12 YEARS product warranty

30 YEARS linear power warranty

0.45% Linear attenuation of 0.45% 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



Electrical Data (STC)

Maximum Power (Pmax/W)	440	445	450	455	460
Open Circuit Voltage (Voc/V)	49.08	49.28	49.48	49.68	49.88
Short Circuit Current (Isc/A)	11.39	11.46	11.53	11.59	11.66
Voltage at Maximum Power (Vmp/V)	40.54	40.74	40.94	41.14	41.34
Current at Maximum Power (Imp/A)	10.86	10.93	11.00	11.07	11.13
Module Efficiency (%)	20.24	20.47	20.70	20.93	21.16
Operating Temperature	-40° C~+85° C				
Maximum System Voltage	1000/1500V				
STC (Standard Testing Conditions): Irradiance 1000W/m ² , Cell Temperature 25°C, AM1.5					

Electrical Data (NMOT)

Maximum Power (Pmax/W)	328	332	336	340	344
Open Circuit Voltage (Voc/V)	45.01	45.21	45.41	45.61	45.81
Short Circuit Current (Isc/A)	9.46	9.54	9.61	9.67	9.74
Voltage at Maximum Power (Vmp/V)	37.34	37.54	37.74	37.94	38.14
Current at Maximum Power (Imp/A)	8.79	8.85	8.91	8.97	9.02
NMOT (Nominal Module Operating Temperature): Irradiance 800W/m ² , 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 (%)	21.26	21.50	21.74	21.98	22.22
15%	Maximum Power (Pmax/W)	506	512	518	523	529
	Module Efficiency (%)	23.28	23.54	23.81	24.07	24.34
25%	Maximum Power (Pmax/W)	550	556	563	569	575
	Module Efficiency (%)	25.30	25.59	25.88	26.17	26.45

Mechanical Data

Cell Type	166×83mm Mono
Cell Orientation	144(6×24)
Module Dimensions	2094×1038×30mm
Weight	28.0kg
Glass	2.0mm high transmittance, reinforced glass
Backsheet	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

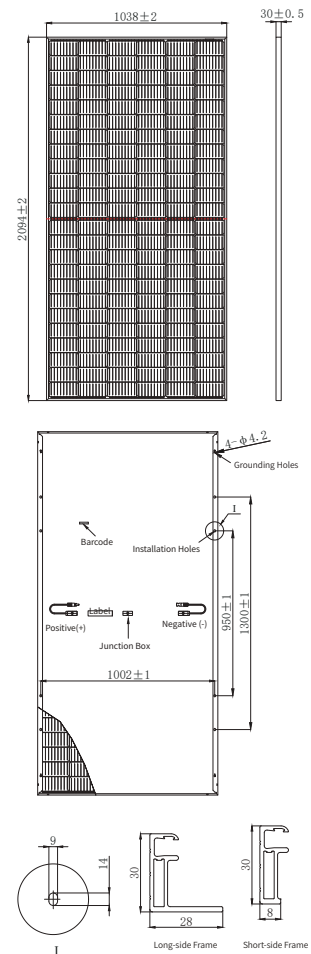
Temperature Coefficients

Temperature Coefficient (Pm)	-0.340%/°C
Temperature Coefficient (Voc)	-0.270%/°C
Temperature Coefficient (Isc)	0.048%/°C
NMOT (Nominal Module Operating Temperature)	41±3°C

Packaging

Transportation methods	Number of modules per cabinet	Number of modules per pallet
40HQ container	792pcs	36pcs+36pcs

Module Dimensions (mm)



I-V Curve

