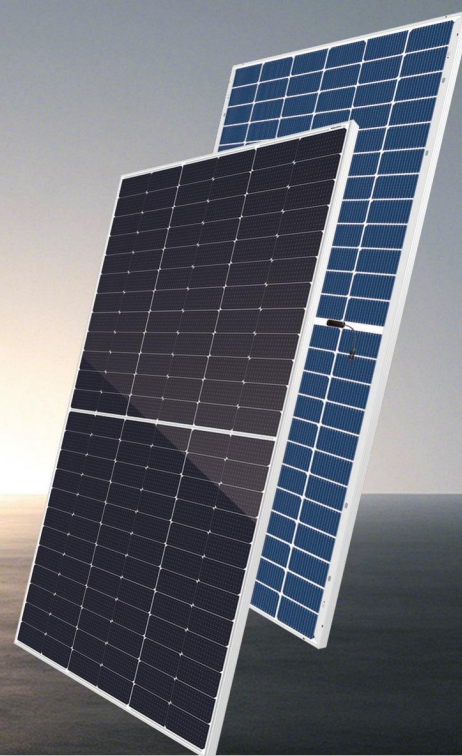




Himin 2.0 182

HG-580W~600W-182M/144TB

TOPCon Bifacial high efficiency PV module



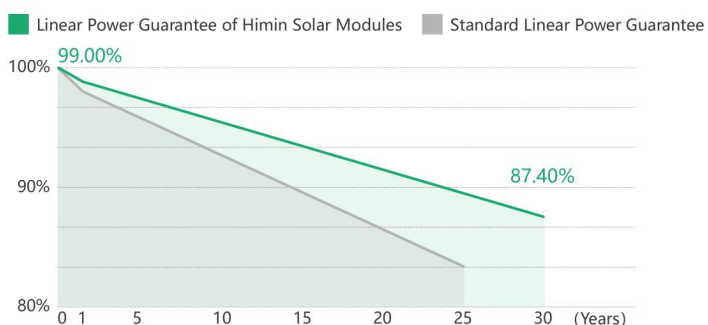
23.23%

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



-  **12 YEARS** Product warranty
-  **30 YEARS** Linear power warranty
-  **0.4%** 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)	580	585	590	595	600
Open-Circuit Voltage (Voc/V)	52.19	52.34	52.49	52.64	52.79
Short-Circuit Current (Isc/A)	13.89	13.97	14.05	14.13	14.21
Voltage at Pmax (Vmp/V)	43.91	44.06	44.21	44.36	44.51
Current at Pmax (Imp/A)	13.20	13.28	13.35	13.42	13.49
Module Efficiency (%)	22.45	22.65	22.84	23.03	23.23
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)	437	441	445	449	453
Open-Circuit Voltage (Voc/V)	49.59	49.72	49.81	49.90	49.99
Short-Circuit Current (Isc/A)	11.37	11.45	11.53	11.61	11.69
Voltage at Pmax (Vmp/V)	40.84	40.92	41.01	41.10	41.19
Current at Pmax (Imp/A)	10.71	10.78	10.86	10.93	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)	609	614	620	625	630
	Module Efficiency (%)	23.57	23.78	23.98	24.18	24.39
15%	Maximum Power (Pmax/W)	667	673	679	684	690
	Module Efficiency (%)	25.82	26.04	26.27	26.49	26.71
25%	Maximum Power (Pmax/W)	725	731	738	744	750
	Module Efficiency (%)	28.07	28.31	28.55	28.79	29.03

Mechanical Data

Cell Type	182×91mm Mono
Cell Configuration	144(6×24)
Module Dimensions	2278×1134×30mm
Module Weight	31.5kg
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

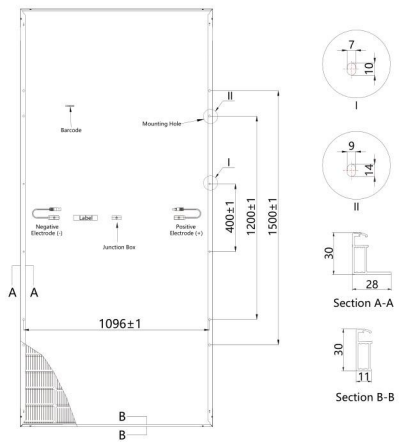
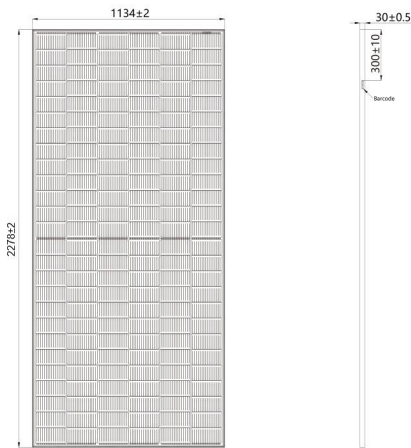
Temperature Coefficients

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

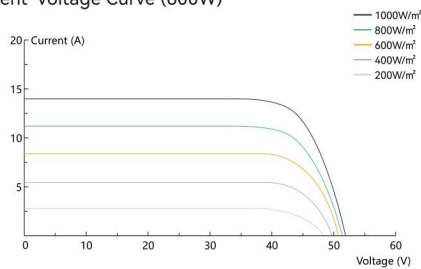
Transportation method	Number of modules per cabinet	Number of modules per pallet
40HQ container	740 pcs	37 pcs + 37 pcs

Module Dimensions (mm)



I-V Curves

Current-Voltage Curve (600W)



Power-Voltage Curve (600W)

