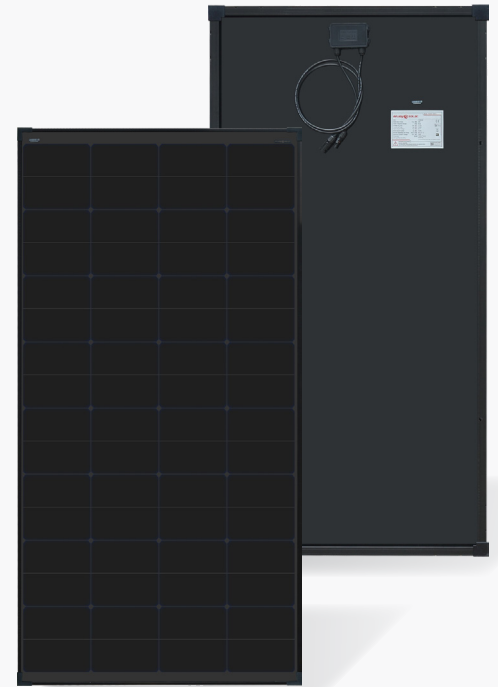


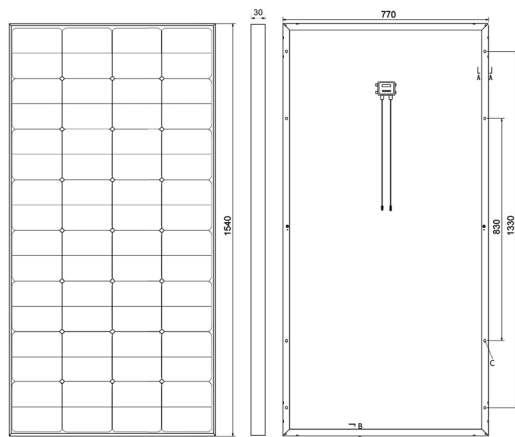
HPBC solar panel 230W 12V

Electrical characteristics

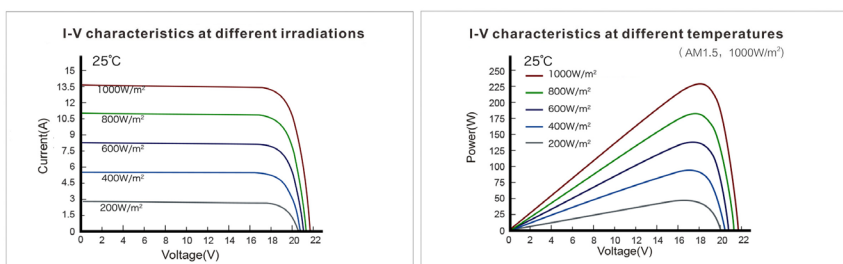
SKU	1180230
Maximum Power (Pmax)	230Wp
Voltage at Pmax (Vmp)	17.78V
Current at Pmax (Imp)	12.93A
Open-circuit Voltage (Voc)	21.7V
Short-circuit Current (Isc)	13.76A
Temperature coefficient of Voc	-0.270%/°C
Temperature coefficient of Isc	+0.048%/°C
Temperature coefficient of Power	-0.350%/°C
Normal operating cell Temperature	45 ± 2°C
Operating Temperature	-40 ~ +85°C
Maximum System Voltage	1000 VDC
Power Tolerance	0 ~ +3%
Junction box	IP67
Bypass diodes	3 pcs
Solar Cell	Mono 64 (4 × 16)
Connection cable and connector	4mm ² x 90cm, Solar Stecker (+/-)
Performance guarantee	25 years
Dimension (mm)	1540 × 770 × 30
Weight (kg)	11.0



Module diagram and characteristic curve



- HPBC solar cells
- 21.9% cell efficiency
- +3% Plus Tolerance Sorted
- reinforced aluminum frame
- TÜV Saar certified
- 25-year Product guarantee



*Measured at standard test conditions: irradiance 1.000W/m², air mass 1.5 spectrum, temperature 25°C
Electrical parameters may vary by -5% to +5%



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