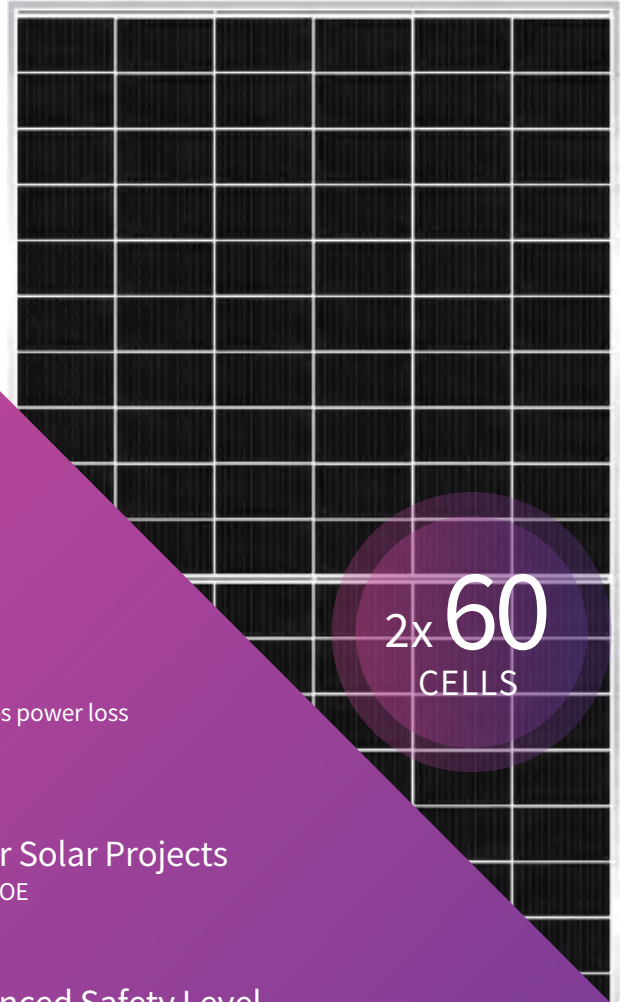


GIWA 5

Bifacial HJT Solar Module (Half-cut)

610-640W



Higher Power Output

The output power is as high as 640W
Bifaciality is up to 90%
Provide up to 25% extra power from rear side



Less Power Loss

Unique half-cut cell technology reduces power loss
Anti-PID & LID
Promise a higher yield for PV system



Ideal Choice For Solar Projects

Lower BOS / Lower LCOE
Improved ROI



Enhanced Safety Level

IP68 water resistance
Long-term weather endurance

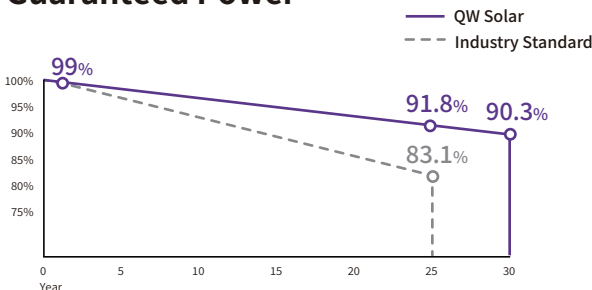
5.0%

Excellent Linear Power Warranty

Average annual degradation below 0.3% from 2nd year to 30th year.
At least 5% higher power output than P-type module after 25 years.



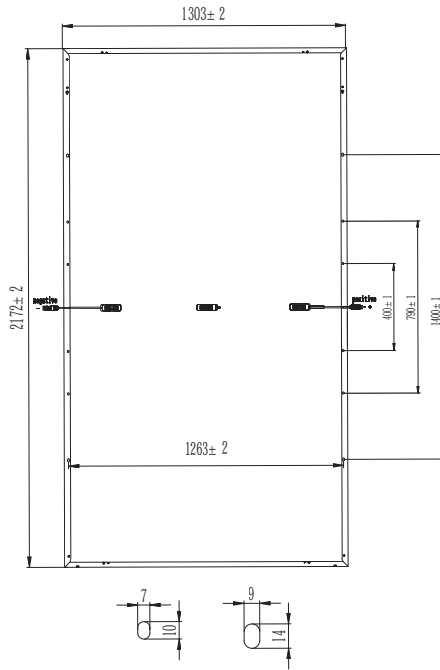
Guaranteed Power



25 years Product Warranty | 30 years Linear Performance Warranty



TECHNICAL DRAWINGS



ELECTRICAL CHARACTERISTICS

Model/QWBDN120-	610W	615W	620W	625W	630W	635W	640W
Testing Condition: STC Maximum Power (Pmax/W)	610	615	620	625	630	635	640
Operating Voltage (Vmpp/V)	37.58	37.82	38.06	38.30	38.54	38.78	39.01
Operating Current (Impp/A)	16.10	16.13	16.16	16.19	16.22	16.25	16.28
Open-Circuit Voltage (Voc/V)	44.60	44.77	44.95	45.13	45.30	45.48	45.65
Short-Circuit Current (Isc/A)	17.10	17.13	17.16	17.19	17.22	17.25	17.28
Module Efficiency (%)	21.55	21.73	21.91	22.08	22.26	22.44	22.61

STC: Irradiance 1000W/m², Spectra at AM1.5, Cell Temperature 25°C.
Power Output Tolerance: 0~+5W, Test Uncertainty for Pmax: ±3%

REAR SIDE POWER GAIN(REFERENCE TO 630W FRONT)

Pmax Gain	5%	10%	15%	20%	25%
Pmax/W	661	693	724	756	787
Vmpp/V	38.54	38.54	38.56	38.56	38.56
Impp/A	16.38	17.98	18.78	19.61	20.41
Voc/V	45.30	45.30	45.30	45.33	45.33
Isc/A	17.88	18.78	19.71	20.65	21.59

MECHANICAL CHARACTERISTICS

Solar Cell	HJT 210 x 105mm
No. of Cells	120 (2 x 60)
Module Dimensions	2172 x 1303 x 33mm (85.51 x 51.30 x 1.30 inches)
Weight	34.9kg
Front Glass	2.0mm AR Coating Semi-tempered Glass
Back Glass	2.0mm Glazed Semi-tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Output Cables	4mm ² , 300mm(+)/300mm(-) or Customized Length
Connectors	MC4

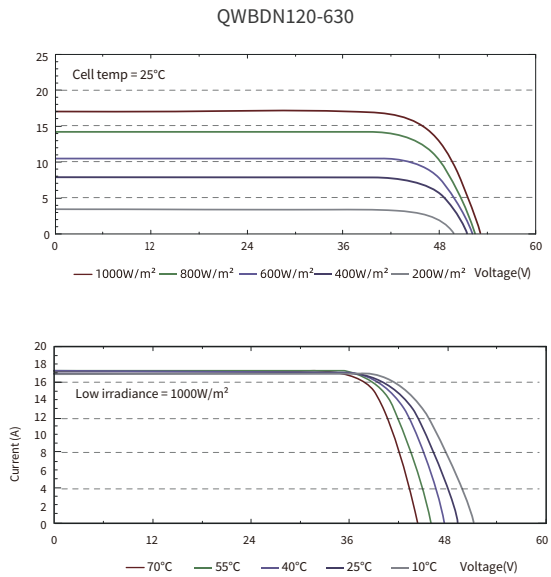
APPLICATION CONDITIONS

Maximun System Voltage	DC1500V
Operating Temperature	-40°C~+85°C
Maximun Series Fuse	30A
Safety Protection Class	Class II
Mechanical Load	Front side 5400Pa, Back side 2400Pa
Refer. Bifaciality Factor	85%±5%

TEMPERATURE CHARACTERISTICS

Temperature Coefficient of Pmax	-0.26%/°C
Temperature Coefficient of Voc	-0.22%/°C
Temperature Coefficient of Isc	+0.047%/°C
Nominal Module Operating Temperature (NOCT)	42±2°C

I-V CURVE



PACKING CONFIGURATION

Type of Shipping	Platform Trailer (17.5m)	Container 40'HC
Pieces/Pallet	33	33
Total Amount	825	594