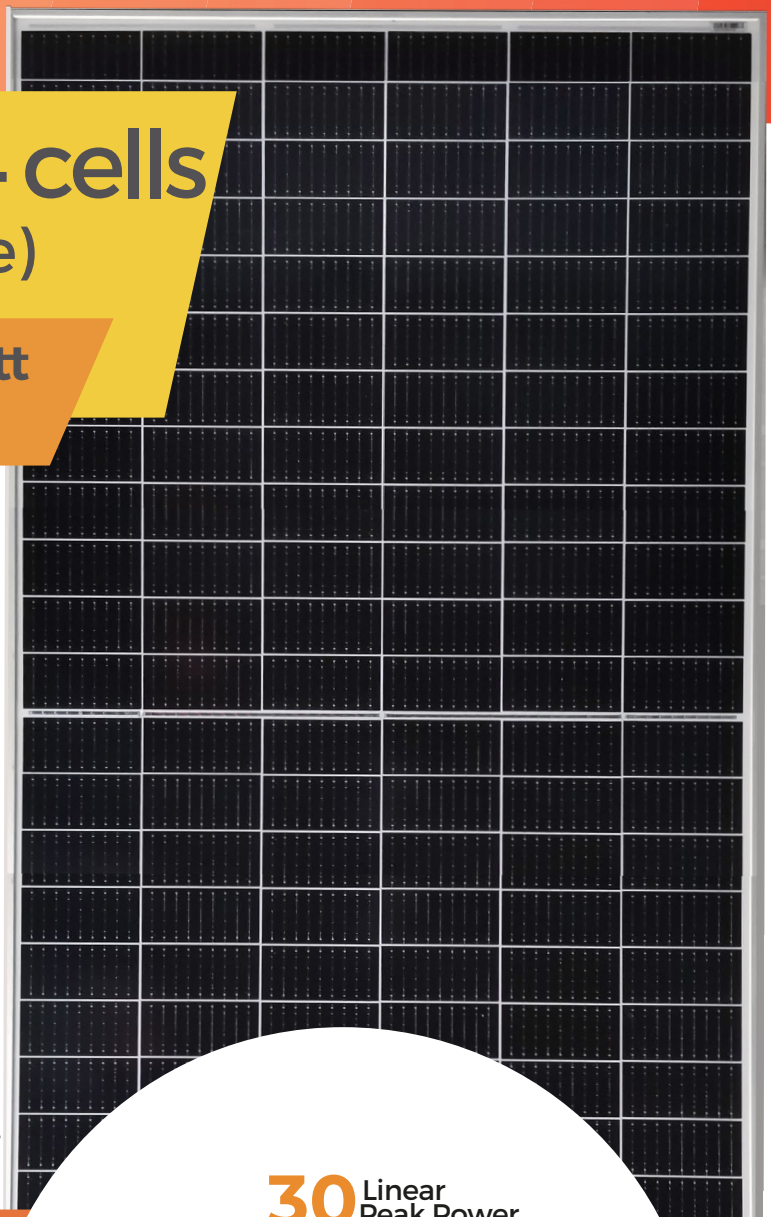
Upsolar

166 | Bifacial 144 cells (glass-glass type)

Power Output (STC) : **455-475 Watt**
Max. Efficiency (STC): **21.26%**



High Mechanical Load
Certified to withstand high wind and snow loads up to 5400Pa

Enhanced Performances
Bifacial feature allows a power boost up to 20% vs monofacial

Lower LCOE
Higher power output over the long term increases projects ROI

Excellent Low-Light Performance
Tier 1 certified solar cells allows better performance in low-light environments

Ideal for Large Scale Installations
Lower installations time and BOS (Balance of Systems) costs

Salt Mist and Ammonia Resistant
Certified by Bureau Veritas to withstand usage near coastal environments

PID resistant
Designed to minimise cell degradation in extreme environments

IEC 61215 61730 | cULus CEC listed UL 1703 | CE | TÜV | Intertek

Secure Investment

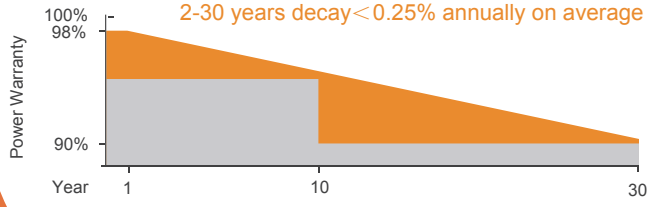
Upsolar provides exceptional product coverage for all HJT modules toensure our customers achieve superior long-term value from theirsolar installations. To further improve our product warranty, whichcovers unanticipated module damage, we've recently expanded our terms from a 12-year period to a 25-year period.

In addition, Upsolar offers a 30-year performance guarantee known as the Linear Module Warranty. Whereas traditional policies feature a single trigger point leading to drastic coverage reductions after just 12 years, Upsolar's coverage more accurately corresponds to system performance, providing coverage for over 25-years.

Overall, our goal is to deliver not only top-notch modules, but also peace of mind, for decades to come.

30 YEARS Linear Peak Power Warranty Coverage

+25 Year Product Guarantee



*Upsolar has expanded its manufacturing operations in Asia, Europe and North America, keeping its modules duty-free in the event of new CVD or AD policies. Please ask about pricing, payment terms and conditions to meet your needs.

Bifacial Series | 166 PV Module 144 cells

Electrical Characteristics at STC

STC: Irradiance 1,000 W/m², Module temperature 25°C, AM=1.5

MODEL	UP-B455HH-G	UP-B460HH-G	UP-B465HH-G	UP-B470HH-G	UP-B475HH-G
Max Power Pm at STC (Wp)	455	460	465	470	475
Max Power Voltage Vm (V)	45.10	45.30	45.50	45.70	45.90
Max Power Current Im (A)	10.09	10.15	10.22	10.28	10.35
Open-Circuit Voltage Voc (V)	53.05	53.35	53.65	53.95	54.25
Short-Circuit Current Isc (A)	10.90	10.94	10.98	11.02	11.06
Module Efficiency (STC)	20.36%	20.59%	20.81%	21.04%	21.26%
Bifacial Factor			0.70+/-0.05		

Bifacial Output-rearside Power Gain

5%	Max Power Pm (STC)	478	483	488	494	499
	Module Efficiency (STC)	21.38%	21.62%	21.85%	22.09%	22.32%
15%	Max Power Pm (STC)	523	529	535	541	546
	Module Efficiency (STC)	23.42%	23.68%	23.93%	24.19%	24.45%
25%	Max Power Pm (STC)	569	575	581	588	594
	Module Efficiency (STC)	25.45%	25.73%	26.01%	26.29%	26.57%

Components & Additional Data

Power tolerance	0/+3%
Front Glass	High Transparency Tempered Glass 0.078" // 2.0 mm
Junction Box	IP 67 or above
Output Cables	0.3m // IEC/ UL approved (4 mm², 12AWG) (PV Wire Type)
Connectors	MC4 compatible (IP67, IEC and UL approved)
Frame	Anodized aluminium alloy type 6063-T5
Encapsulation Material	EVA
Back Sheet	High Transparency Tempered Glass 0.078" // 2.0 mm
Temperature Range	-40˚F to +185˚F // -40˚C to +85˚C
Series fuse rating	20A
Maximum system voltage	1,500V (IEC/UL)

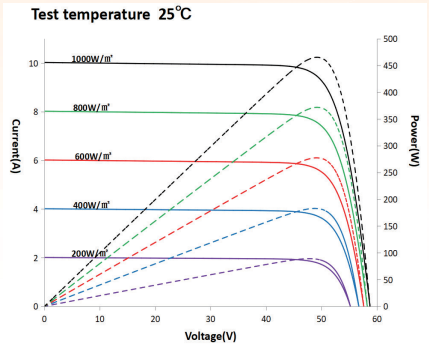
Specifications

Cells	HJT bifacial solar cells 166 x 83
Number of Cells	144 (6 x 24)
Dimensions (in // mm)	83.94 x 41.26 x 1.18 // 2132 x 1048 x 30
Weight (lb // kg)	63.9 // 29.0

Temperature Coefficients

NOCT (˚C)	45 ± 2
Temperature Coefficients of Isc (% / ˚C)	0.05 ± 0.01
Temperature Coefficients of Voc (% / ˚C)	-0.22 ± 0.02
Temperature Coefficients of Im (% / ˚C)	-0.02 ± 0.02
Temperature Coefficients of Vm (% / ˚C)	-0.25 ± 0.03
Temperature Coefficients of Pm (% / ˚C)	-0.24 ± 0.05

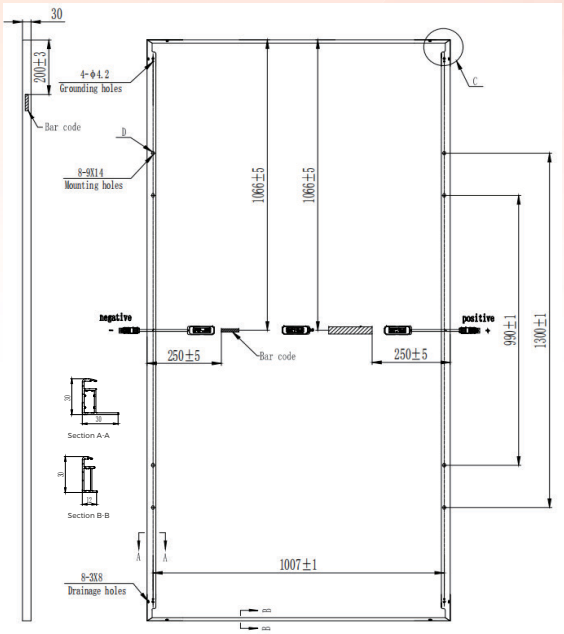
IV Curves



Options Available

Frameless option available

Transparent backsheet option available



Upsolar is not responsible for damages caused by errors or omissions on this data sheet.
All information is subject to change without notice.