



# M6 | Bifacial 144 cells (glass-glass type)

Power Output (STC): **450 - 470 Watt**  
Max. Efficiency (STC): **21.62%**



**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



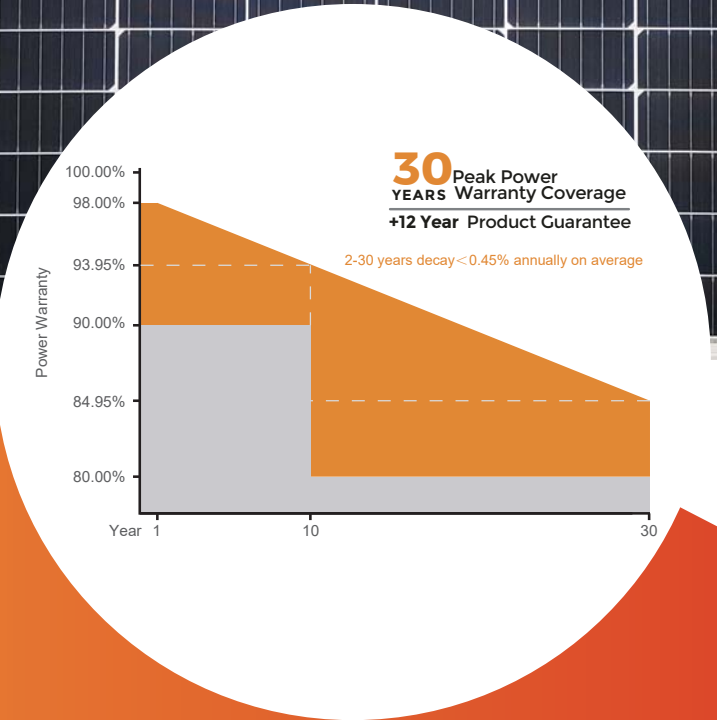
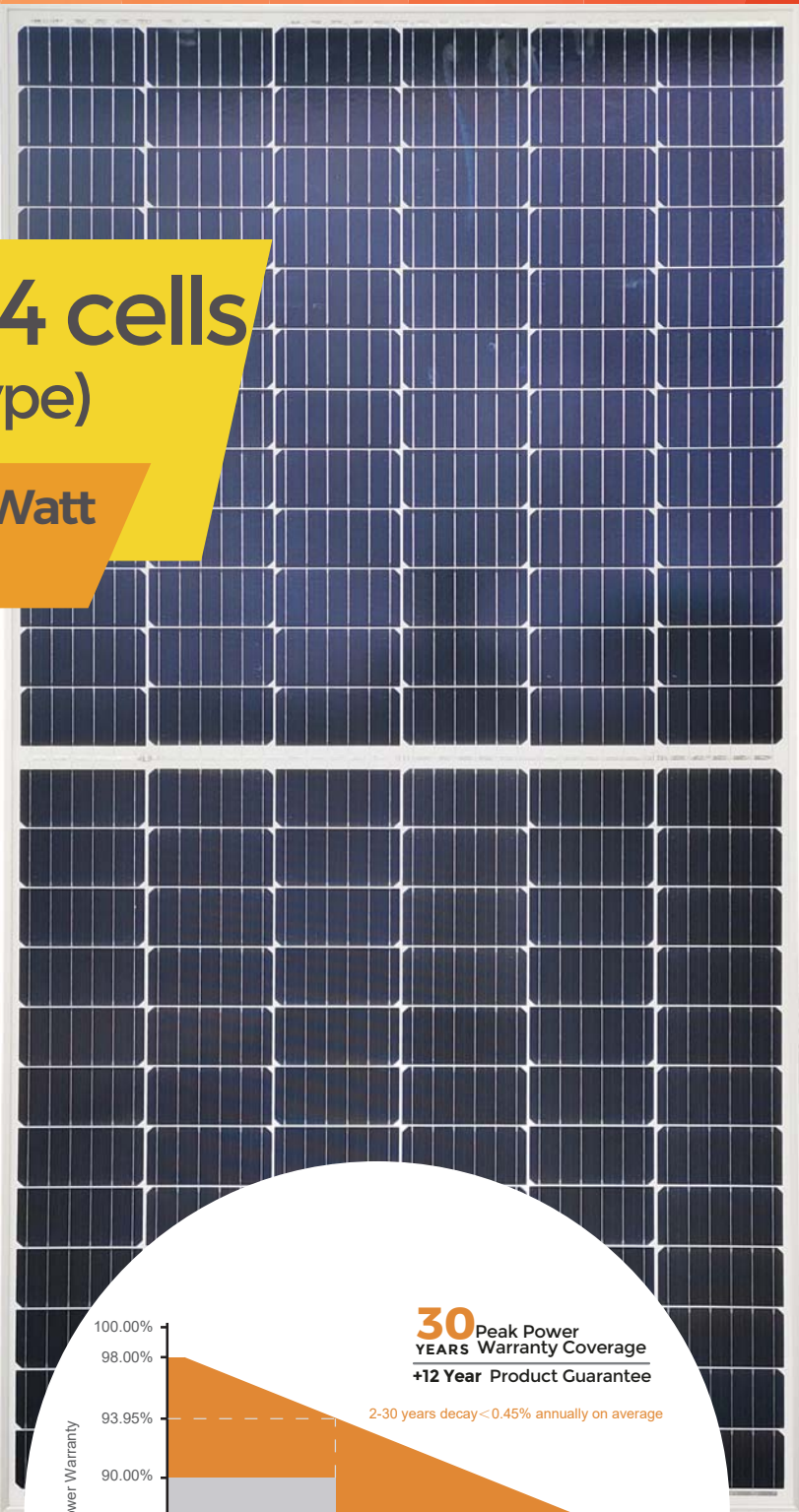
## Secure Investment

Upsolar provides exceptional product coverage for all modules to ensure our customers achieve superior long-term value from their solar installations. To further improve our product warranty, which covers unanticipated module damage, we've recently expanded our terms from a 10-year period to a 12-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 10 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.

\*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 | Mono 166 144 cells

## Electrical Characteristics at STC

STC: Irradiance 1,000 W/m<sup>2</sup>, Module temperature 25°C, AM=1.5

MODEL	UP-B450MH-G (72M6)	UP-B455MH-G (72M6)	UP-B460MH-G (72M6)	UP-B465MH-G (72M6)	UP-B470MH-G (72M6)
Max Power Pm at STC (Wp)	450	455	460	465	470
Max Power Voltage Vm (V)	41.35	41.55	41.75	41.95	42.15
Max Power Current Im (A)	10.88	10.95	11.02	11.08	11.15
Open-Circuit Voltage Voc (V)	49.55	49.75	49.95	50.15	50.35
Short-Circuit Current Isc (A)	11.60	11.68	11.76	11.84	11.92
Module Efficiency (STC)	20.70%	20.93%	21.16%	21.16%	21.62%
Bifacial Factor	0.70+/-0.05				

## Bifacial Output-rearside Power Gain

5%	Max Power Pm (STC)	473	478	483	488	494
	Module Efficiency (STC)	21.74%	21.98%	22.22%	22.46%	22.70%
15%	Max Power Pm (STC)	518	523	529	535	541
	Module Efficiency (STC)	23.81%	24.07%	24.34%	24.60%	24.87%
25%	Max Power Pm (STC)	563	569	575	581	588
	Module Efficiency (STC)	25.88%	26.17%	26.45%	26.74%	27.03%

## Components & Additional Data

Power tolerance	0/+3%
Front Glass	High Transparency Tempered Glass 0.078" // 2.0 mm
Junction Box	IP 68 or above
Output Cables	0.3m // IEC/ UL approved (4 mm <sup>2</sup> , 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 +194°F // -40°C to +90°C
Series fuse rating	20A
Maximum system voltage	1,500V (IEC/UL)

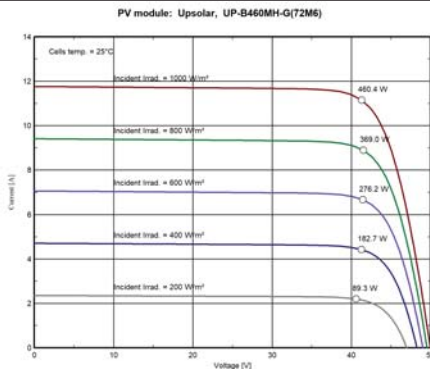
## Specifications

Cells	Monocrystalline bifacial solar cells 166 x 83
Number of Cells	144 (6 x 24)
Dimensions (in // mm)	82.44 x 40.86 x 1.18 // 2094 x 1038 x 30
Weight (lb // kg)	61.7 // 28.0

## Temperature Coefficients

NMOT (°C)	43 ± 2
Temperature Coefficients of Isc (% / °C)	0.05 ± 0.01
Temperature Coefficients of Voc (% / °C)	-0.28 ± 0.02
Temperature Coefficients of Im (% / °C)	-0.02 ± 0.02
Temperature Coefficients of Vm (% / °C)	-0.30 ± 0.02
Temperature Coefficients of Pm (% / °C)	-0.35 ± 0.02

## IV Curves



## Options Available

- Frameless option available
- Transparent backsheet option available

