



# 6" Monocrystalline PV module 60 cells

Power Output: **285 - 310 Watt**  
Max. Efficiency: **19.1%**

**BLACK SERIES**



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



**Outstanding Temperature Coefficients**  
Reduces power loss for solar modules operating in high temperature climates



**Anti-reflective Surface**  
Increases the panel's exposure and efficiency of converting sunlight into energy



**Universal Design**  
Compatible with residential, commercial and ground-mounted installations



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



**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



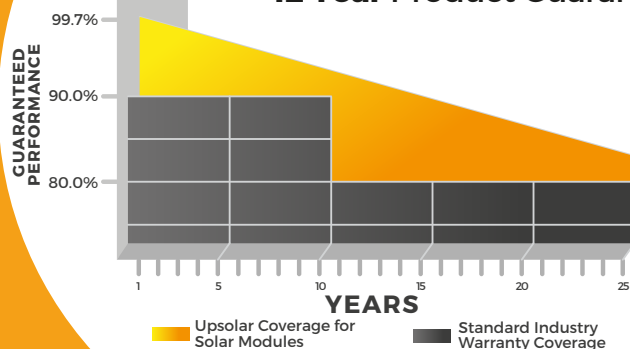
## Secure Investment

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 25-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.

**25** Linear Peak Power  
**YEARS** Warranty Coverage  
**+12 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.

# Mono Series | 6" PV Modules 60 cells

## Electrical Characteristics @ STC\*

## Black Series

MODEL	UP-M285M-B	UP-M290M-B	UP-M295M-B	UP-M300M-B	UP-M305M-B	UP-M310M-B
Max Power Pm (Wp)	285	290	295	300	305	310
Max Power Voltage Vm (V)	31.6	31.8	32.0	32.2	32.4	32.6
Max Power Current Im (A)	9.02	9.12	9.22	9.32	9.41	9.51
Open-Circuit Voltage Voc (V)	40.1	40.4	40.7	41.0	41.3	41.6
Short-Circuit Current Isc (A)	9.40	9.50	9.58	9.67	9.76	9.85
Module Efficiency	17.5%	17.8%	18.1%	18.4%	18.7%	19.1%
Maximum System Voltage (V)	1000(IEC)/1000(UL), 1500(IEC)/1500(UL)					
Power Tolerance	0/+3%					
Series Fuse Rating (A)	20A					

STC: Irradiance 1000 W/m<sup>2</sup>, Module temperature 25°C, AM=1.5

## Components & Mechanical Data

Front Glass	High Transparency Tempered Glass 0.125" // 3.2 mm
Junction Box	IP 65 or above
Bypass Diode	3 diodes
Output Cables	1.0 m // 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 (0.018" // 0.45 mm ± 0.001" // 0.03 mm thickness)
Back Sheet	Black multilayer polymer film
Temperature Range	-40°F to +194°F // -40°C to +90°C
Max Load	75 lbs / ft <sup>2</sup> (UL Standard) // 5400 Pa (IEC Standards)
Impact Resistance	Steel ball - 1.18 lbs // 535 g dropped from 51" // 1.3 m high

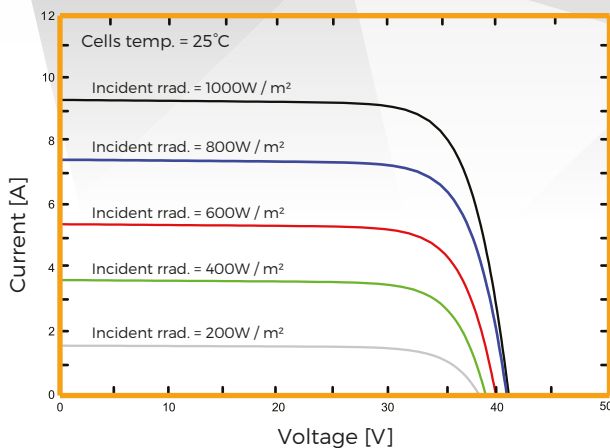
## Specifications

Cells	Monocrystalline silicon solar cells 6" x 6" // 156 mm x 156 mm
Number of Cells	60 (6 x 10)
Dimensions (in // mm)	64.57 x 39.06 x 1.38 // 1640 x 992 x 35
Weight (lb // kg)	40.8 // 18.5

## Temperature Coefficients

NOCT (°C)	45 ± 2
Temperature Coefficients of Isc (% / °C)	0.05 ± 0.01
Temperature Coefficients of Voc (% / °C)	-0.30 ± 0.02
Temperature Coefficients of Im (% / °C)	-0.02 ± 0.02
Temperature Coefficients of Vm (% / °C)	-0.42 ± 0.03
Temperature Coefficients of Pm (% / °C)	-0.40 ± 0.05

## IV Curves



## Rear View

