



# Zep Compatible Modules

(Systems I & II)

## Introduction to the Zep Solution

Upsolar has partnered with Zep Solar™ to provide quality monocrystalline and polycrystalline panels compatible with Zep Solar's integrated mounting and grounding solutions. Upsolar modules manufactured with the Zep Groove can be used in a wide range of installation options. With a turn, drop, and lock during the installation of each panel, the streamlined process decreases installation time by up to 78% and eliminates the need for individually grounding each module. Zep Solar's Interlock can only be fastened with the custom Zep Tool, making it theft resistant. In addition, a complete line of complimentary Zep Solar hardware reduces the parts count by up to 80%, making Upsolar modules faster and easier to install.

## Zep Systems I & II

### Benefits of Zep Systems:

- FAST AND SIMPLE TO INSTALL THROUGH DROP-IN MOUNTING SOLUTION
- LOW PARTS AND SKU COUNT IN COMPARISON TO CONVENTIONAL MOUNTING SOLUTIONS
- SUPERIOR AESTHETIC SOLUTION FOR RESIDENTIAL ROOFTOPS
- LONG RAIL ELIMINATION REDUCES INVENTORY AND FREIGHT COST
- THEFT RESISTANT AND AUTO GROUING HARDWARE
- COMPACT PACKAGING WITH MODULE AND MOUNTING HARDWARE DELIVERED ON THE SAME PALLET

**Applications** Composition shingle \ Flat and curved tile \ Standing seam metal



Available with black or silver frame

## Components & Accessories



Interlock



Ground Zep



Zep Tool



Spanner Clamp



Leveling Foot



Spanner Bar



Bar Sleeve



Array Skirt



Cam Foot



Wire Clip



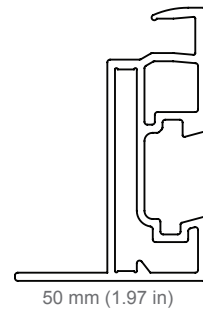
Universal Box Bracket



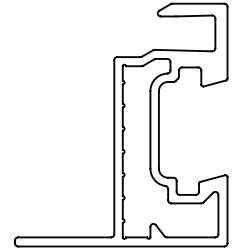
Flat Tool

Zep Solar components and accessories must be purchased separately, directly from Zep Solar. For more information on Zep Solar products, visit [www.zepsolar.com](http://www.zepsolar.com)

# Upsolar Zep Compatible Module List



50 mm (1.97 in)



40 mm (1.57 in)

## Monocrystalline 72 Cells M180 - 205M

Sizes (mm)	1580 x 808 x 40
Max Load	5400 Pa
Weight (kg)	15.4
Cell Type	Monocrystalline silicon solar cells 125 mm x 125 mm
Impact resistance	Steel ball - 535 g dropped from 1.3 m high
Frame Material	Anodized aluminum alloy type 6063-T5
Cell arrangement	72 (6 x 12)



## Polycrystalline 54 Cells M190 - 215P

Sizes (mm)	1482 x 992 x 40
Max Load	5400 Pa
Weight (kg)	17.5
Cell Type	Polycrystalline silicon solar cells 156 mm x 156 mm
Impact resistance	Steel ball - 535 g dropped from 1.3 m high
Frame Material	Anodized aluminum alloy type 6063-T5
Cell arrangement	54 (6 x 9)



## Polycrystalline 60 Cells M220 - 240P

Sizes (mm)	1640 x 992 x 40
Max Load	5400 Pa
Weight (kg)	19.0
Cell Type	Polycrystalline silicon solar cells 156 mm x 156 mm
Impact resistance	Steel ball - 535 g dropped from 1.3 m high
Frame Material	Anodized aluminum alloy type 6063-T5
Cell arrangement	60 (6 x 10)



## Polycrystalline 72 Cells M260 - 280P

Sizes (mm)	1956 x 992 x 50
Max Load	—
Weight (kg)	27.0
Cell Type	Polycrystalline silicon solar cells 156 mm x 156 mm
Impact resistance	Steel ball - 535 g dropped from 1.3 m high
Frame Material	Anodized aluminum alloy type 6063-T5
Cell arrangement	72 (6 x 12)



\*Module frame/backsheets are available in white or black

\*Please refer to Zep Solar instructions when evaluating the maximum load of your PV system.

### Certifications:



### Laboratories:



### PowerGuard Warranty Summary

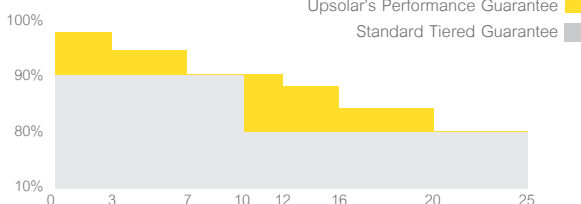
Upsolar's PowerClip warranty policy protects against design defects, delaminating modules, power output falling outside the established degradation curve and coverage begins immediately.

The Program guarantees the funding of valid claims filed by end-customers pursuant to Upsolar's module warranty; is worldwide and protects all modules sold by Upsolar Group Co., Ltd. and subsidiary companies.

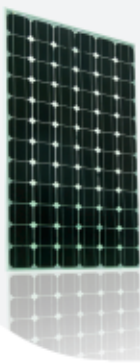
The Program delivers non-cancelable, irrevocable coverage and is fully-paid for; meaning valid claims will be paid out regardless of the solvency or existence of Upsolar over the full 25-year term, by A.M. Best rated "A" (Excellent) or better internationally recognized insurance providers.

### WARRANTIES:

Product guarantee: 10 years



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# Monocrystalline PV module

## 72 cells

with SOLRIF frame



### Electrical Characteristics

Model	UP-S175M	UP-S180M	UP-S185M	UP-S190M	UP-S195M	UP-S200M
Max Power Pm (Wp)	175	180	185	190	195	200
Max Power Voltage Vm (V)	35.6	35.8	36.0	36.3	36.6	37.0
Max Power Current Im (A)	4.92	5.03	5.14	5.23	5.33	5.41
Open-Circuit Voltage Voc (V)	44.4	44.6	44.8	45.1	45.4	46.0
Short-Circuit Current Isc (A)	5.29	5.38	5.43	5.55	5.65	5.70
Maximum System Voltage (V)	1000 (IEC) / 600 (UL)					
Power Tolerance	± 3%					
Series Fuse Rating (A)	15					

### Components & Mechanical Data

Front Glass	High Transparency Tempered Glass, 3.2 mm - <b>Saint Gobain</b> (Albarino) // <b>Pilkington</b>
Junction Box	<b>Huber+Suhner</b> (IP 67) Radox RH3 // <b>Tyco</b> , 1740971-1
Bypass Diode	3 diodes - <b>ST</b> STPS1545CG // <b>Diotec</b> SL1515
Output Cables	Cable <b>Tyco</b> 1m, ZHSCG (4 mm <sup>2</sup> et 12AWG), IEC and UL approved.
Connectors	<b>MC4</b> // <b>H+S</b> , IP67, IEC and UL approved
Frame	<b>SOLRIF XL</b>
Encapsulation Material	EVA (0.50 ± 0.03 mm thickness)
Back Foil	White TPT (0.32 ± 0.03 mm thickness)
Silicone Sealant	<b>White</b>
Temperature Range	-40°C to +90°C
Max Load	5400 Pa
Impact Resistance	Steel ball - 535 g dropped from 1.3 m high

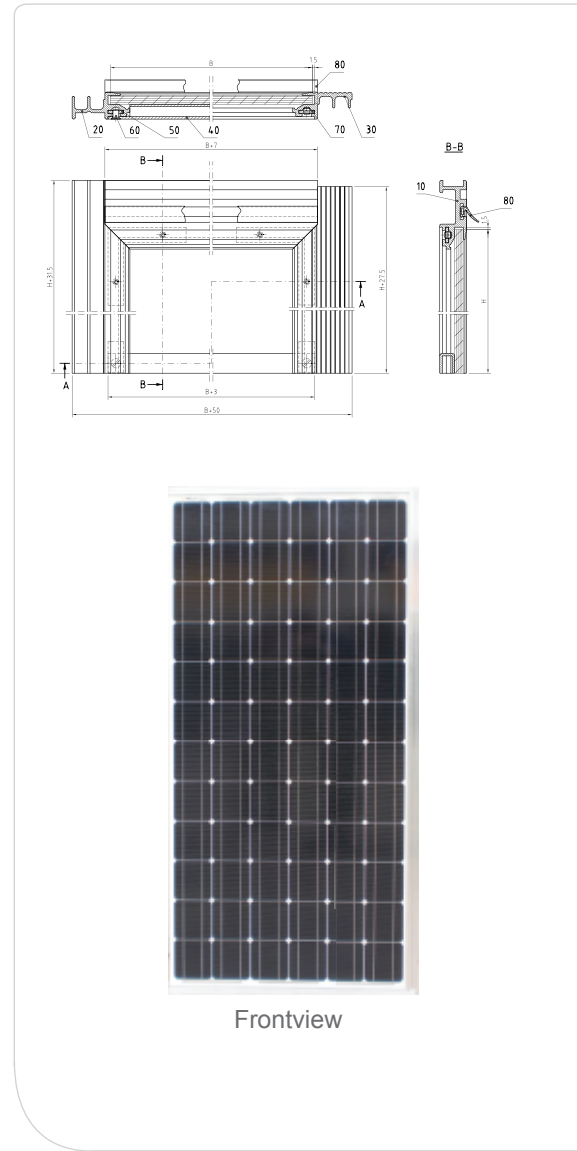
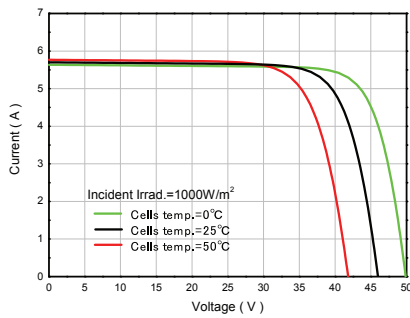
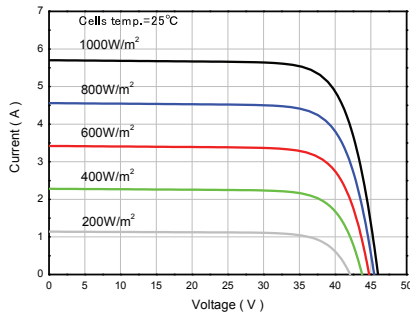
### Specifications

Cells	Monocrystalline silicon solar cells 125 mm x 125 mm
Number of cells	72 (6 x 12)
Dimensions (mm)	1624 x 834
Weight (kg)	14.8

## Temperature Coefficients

NOCT (°C)	45 ± 2
Temperature Coefficient of Isc (%/°C)	0.05 ± 0.01
Temperature Coefficient of Voc (%/°C)	-0.32 ± 0.02
Temperature Coefficient of Im (%/°C)	-0.02 ± 0.02
Temperature Coefficient of Vm (%/°C)	-0.42 ± 0.03
Temperature Coefficient of Pm (%/°C)	-0.43 ± 0.05

## IV Curves

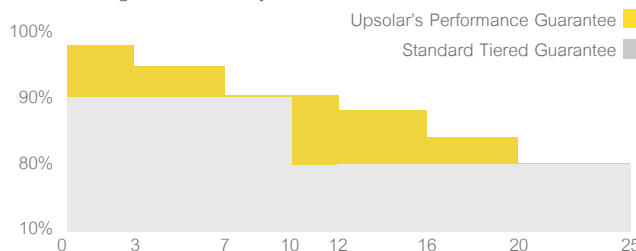


### NOTE:

- STC: Irradiance 1000 W/m<sup>2</sup>, Module temperature 25°C, AM = 1.5
- Nominal Operating Cell Temperature above data is only for reference
- Deviation of Vm(V), Im(A), Voc(V) and Isc(A) of ±10%

### WARRANTIES:

Product guarantee: 10 years



### PowerGuard Warranty Summary

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### Certifications:



AS/NZS 5033 Compliant PV Modules

### Laboratories:



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# Monocrystalline PV module

## 72 cells (Black series) with SOLRIF frame



### Electrical Characteristics

Model	UP-S170M-B	UP-S175M-B	UP-S180M-B	UP-S185M-B	UP-S190M-B	UP-S195M-B
Max Power Pm (Wp)	170	175	180	185	190	195
Max Power Voltage Vm (V)	35.8	36.0	36.2	36.4	36.6	36.8
Max Power Current Im (A)	4.76	4.86	4.97	5.08	5.19	5.30
Open-Circuit Voltage Voc (V)	44.4	44.6	44.8	45.0	45.3	45.6
Short-Circuit Current Isc (A)	5.05	5.15	5.22	5.30	5.40	5.50
Maximum System Voltage (V)	1000 (IEC) / 600 (UL)					
Power Tolerance	± 3%					
Series Fuse Rating (A)	15					

### Components & Mechanical Data

Front Glass	High Transparency Tempered Glass, 3,2 mm - <b>Saint Gobain</b> (Albarino) // <b>Pilkington</b>
Junction Box	<b>Huber+Suhner</b> (IP 67) Radox RH3 // <b>Tyco</b> , 1740971-1
Bypass Diode	3 diodes - <b>ST</b> STPS1545CG // <b>Diotec</b> SL1515
Output Cables	Cable <b>Tyco</b> 1m, ZHSCG (4 mm <sup>2</sup> et 12AWG), IEC and UL approved.
Connectors	<b>MC4</b> // <b>H+S</b> , IP67, IEC and UL approved
Frame	<b>Solrif XL (black type)</b>
Encapsulation Material	EVA (0.50 ± 0.03 mm thickness)
Back Foil	Black TPT (0.32 ± 0.03 mm thickness)
Silicone Sealant	<b>Black</b>
Temperature Range	-40°C to +90°C
Max Load	5400 Pa
Impact Resistance	Steel ball - 535 g dropped from 1.3 m high

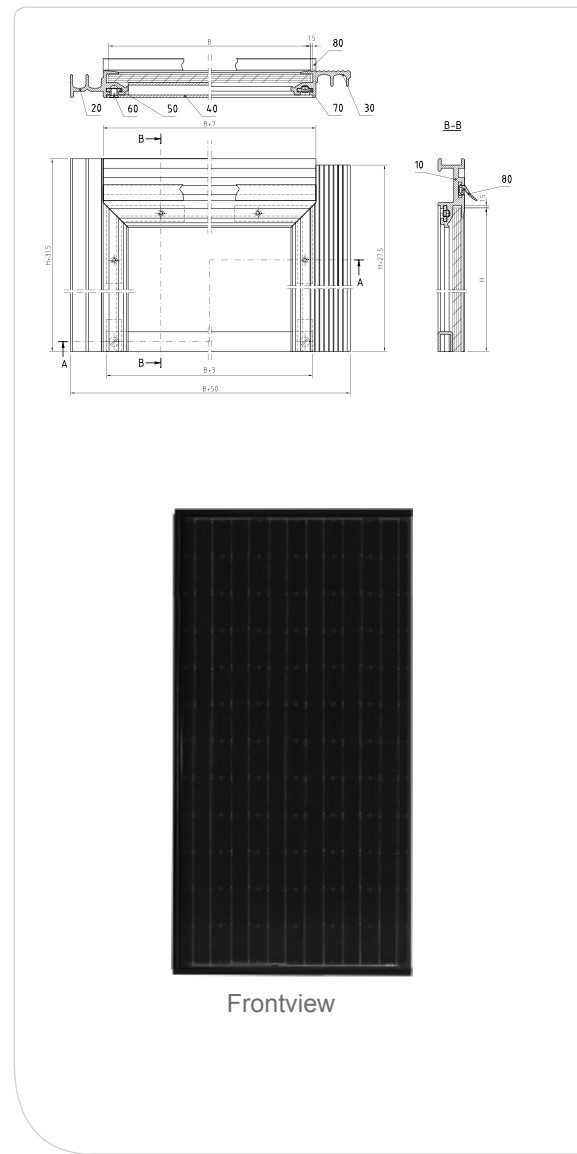
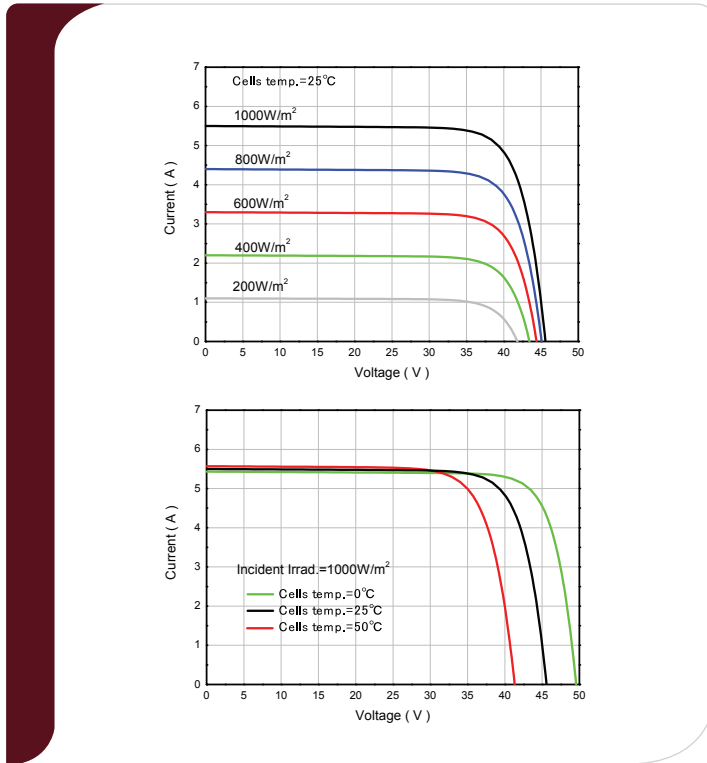
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Temperature Coefficient of Pm (%/°C)	-0.43 ± 0.05

## IV Curves

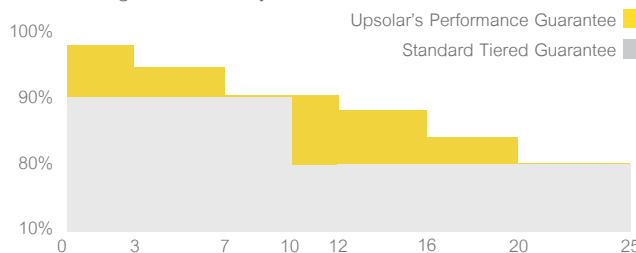


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