Delivering Safe Solar

Upsolar

Photovoltaic Modules 2014

Photovoltaic Modules
by UPSOLAR

- *High-quality modules* **Guaranteed**
- *Innovation in* **product development**
- *International* **brand recognition**

UPSOLAR BY THE NUMBERS

- Over 1 GW shipped since 2007
- 246 million USD in 2013 sales
- Representatives in 11 countries for 5 continents, 150 employees worldwide
- 400 MW of production capacity

ABOUT UPSOLAR

Upsolar provides high-quality solar modules at competitive prices for customers around the world. By controlling each stage of the production flow, identifying the most efficient and innovative technology, and deploying on-the-ground teams dedicated to serving customers, Upsolar delivers modules with the best quality-to-cost ratio on the market.

Upsolar has expanded and increased its market share every year since the company was founded, growing from 95 MW in 2009 to 221 MW in 2013. Upsolar has continued to expand every year since its founding in 2006, supported by a strong network of manufacturing partners, a consistent stream of new office openings and global team expansion. By investing in a world-class on-the-ground sales network, Upsolar maintains close links with its customers to cement mutually beneficial long-term partnerships. Upsolar is incredibly proud of its high-quality and efficient global organization, as well as its experienced international team.

Critical to Upsolar's success is a rigorous quality-control management protocol.
Upsolar maintains online QC Management standards at partners' manufacturing facilities worldwide in collaboration with third party QC management provider, Bureau Veritas. By implementing stringent, industry-leading certification standards, Upsolar ensures that its manufacturing process is continually improved upon and that all Upsolar products undergo audits to guarantee high quality. Combined with an in-house R&D center, comprehensive warranties and performance guarantees, Upsolar's commitment to quality assures its customer base an extremely reliable PV module. As a result, Upsolar is able to deliver a better-performing product at a lower cost, driving a clean investment that is built to last for decades.

High-quality modules. Guaranteed.

IN-HOUSE TESTING AND DEVELOPMENT CENTER

Upsolar selects quality components from the world's top materials suppliers. Technicians at our Shanghai-based Research and Development Center are constantly testing our products to ensure they have the ability to withstand the assault of time and potentially harsh climates for more than twenty-five years. Our in-house capabilities include testing in the following areas:

- Thermal cycling (TC50 or TC200)
- Humidity Freeze (HF10)
- Damp Heat (DH1000)
- UV preconditioning test
- Impulse voltage test
- Cut susceptibility test
- Dielectric withstand
- Wet leakage current
- Peel strength test
- Hot-spot
- Measurement of NOCT
- Bypass diode thermal test
- Reverse current overload test
- Mechanical load test
- EL imaging test
- Cross linking extent
- Impact test
- Grounding continuity test

EXPERIENCED PRODUCTION PLATFORMS, FIRST-CLASS EQUIPMENT

Upsolar's reputable manufacturing platforms utilize equipment from leading providers such as Roth & Rau, Applied Materials/Baccini, Spire, ASYS Group and NPC. Our business model, which leverages flexible manufacturing capabilities, is designed for ultimate responsiveness to both customer needs and market trends. We're focused on continually improving our manufacturing process by implementing programs to improve standards—something we call "Excellence At Each Step." These measures enhance quality control while reducing the need for identifying new raw material suppliers, substantially minimizing the likelihood of supply shortages.

TOTAL QUALITY PROCESS

The cornerstone of Upsolar's success is our meticulous attention to quality. In collaboration with quality control management provider Bureau Veritas, Upsolar adheres to high standards through both online and offline protocols. Upsolar technicians are stationed at each of our manufacturing partners' locations to ensure the conformity of all materials, improve assembly processes and confirm the specifications of final products. We also regularly bath-test our components, assembled parts and completed modules. This testing—conducted both randomly and following any changes to specifications, components or assembly processes—enables Upsolar to produce quality modules without compromising production flow. Upon completion, each shipment is tracked and traced by an inspection report, witnessed by Bureau Veritas.









Innovation in product development.

STRATEGIC ALLIANCES WITH INNOVATIVE PARTNERS

Upsolar's commitment to innovation and quality has led us to forge core partnerships with like-minded companies such as Enphase Energy, SolarEdge, Schweizer, Tigo Energy and Zep Solar. These partnerships enable Upsolar to integrate leading balance of systems solutions directly into our modules as they come to market in order to offer high-performing, tailored solutions for international customers. Our expert R&D team performs due diligence on a wide spectrum of technologies in order to identify opportunities to offer our customers the best and most innovative products on the market.

INCREASED ENERGY HARVEST AND REDUCED COSTS

Our focus on innovation enables Upsolar to bring the most advanced modules to market at a low-cost, providing our customers with products that add value and accelerate their return on investment. For example, Upsolar is one of the first to offer "smart modules," which are integrated with module-level power electronics technologies to significantly increase systems' energy harvest while enhancing safety and reducing installation and maintenance costs. "Smart modules" are also equipped with monitoring and management capabilities, allowing customers to view system output to ensure they're getting most out of their investments at all times.

READY TO MEET ANY NEEDS

Staying competitive in the PV industry requires us to carefully follow technology developments and monitor global demand for renewable energy. Our significant focus on research, coupled with a flexible business model, means that we can respond rapidly to customer needs and changing market conditions. We specialize in offering a full range of products that can be customized to meet varying performance needs and aesthetic preferences.

International brand recognition

WORLD CLASS INSURANCE AND WARRANTIES

Upsolar goes above and beyond to ensure customers are making a secure investment when choosing our modules. Whereas traditional warranties have only two trigger points over the course of 25 years, Upsolar's Reinforced Module Warranty offers 6—occurring at years 3, 7, 12, 16, 20 and 25—to ensure our customers benefit from premium value over the lifetime of their solar installations.

WHERE WE OPERATE

Upsolar has built offices and regional teams across five continents, which allows us to develop strong, on-the-ground relationships with our customers and provide the solar solutions best suited to their needs. Here's where you can find us:

STRONG REFERENCES GLOBALLY

From commercial rooftops to BIPV applications to utility-scale systems, Upsolar's modules can be found in projects around the world.

Upsolar

6" Polycrystalline *PV module* 60 cells

Key Features

- **Flexible Production***
- **High Quality Bill of Materials**
- **Reinforced Module Warranty**
- **Universal Design (residential, commercial, ground mounted)**
- **Best seller for its performance/price ratio**

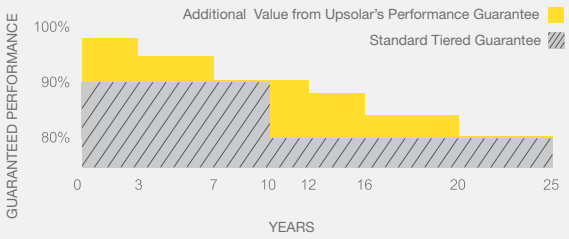
IEC 61215 61730 · cULus CEC listed UL 1703 · CE · MCS · JET · TÜV · ICIM · Intertek · PV CYCLE

Secure Investment

Upsolar provides industry-leading product coverage for all our modules to ensure our customers achieve superior long-term value from their solar installations. In addition to a 10-year product warranty, which covers unanticipated module damage, Upsolar implements a 25-year performance guarantee known as the Reinforced Module Warranty.

Whereas traditional warranties offer only two trigger points over 25 years, the Reinforced Module Warranty features six trigger points at years 3, 7, 12, 16, 20 and 25. Upsolar also maintains relationships with third-party insurance providers to offer an additional layer of protection for interested parties.

Product guarantee for 10 years
Performance guarantee for 25 years



PowerGuard SPECIALTY INSURANCE SERVICES Upsolar has teamed up with PowerGuard Specialty Insurance Services to provide customers with a second level of product coverage. The 25-year, non-cancellable warranty is backed by PowerGuard's network of trusted providers, each rated A (Excellent) or better by A.M. Best, meaning the warranty stays in place with or without Upsolar's involvement.

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

Poly Series
6" PV Module 60 cells

Electrical Characteristics @ STC*

MODEL	UP-M240P	UP-M245P	UP-M250P	UP-M255P	UP-M260P
Max Power Pm (Wp)	240	245	250	255	260
Max Power Voltage Vm (V)	30.2	30.4	30.6	30.8	31.0
Max Power Current Im (A)	7.95	8.06	8.17	8.28	8.39
Open-Circuit Voltage Voc (V)	37.6	37.8	38.0	38.2	38.4
Short-Circuit Current Isc (A)	8.40	8.45	8.50	8.55	8.60
Module Efficiency	14.8%	15.1%	15.4%	15.7%	16.0%
Maximum System Voltage (V)	1000(IEC)/1000(UL)				
Power Tolerance	±3%				
Series Fuse Rating (A)	20A				

*STC: Irradiance 1000 W/m², 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 mm², 12AWG) (PV Wire Type)
Connectors	MC4 (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	White multilayer polymer film
Temperature Range	-40°F to +194°F // -40°C to +90°C
Max Load	75 lbs / ft² (UL Standard) // 5400 Pa (IEC Standard)
Impact Resistance	Steel ball - 1.18 lbs // 535 g dropped from 51" // 1.3 m high

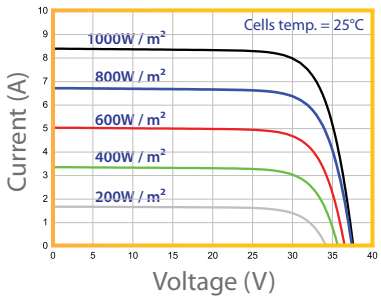
Specifications

Cells	Polycrystalline 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 1.57 // 1640 x 992 x 40
Weight (lb // kg)	41.9 // 19.0

Temperature Coefficients

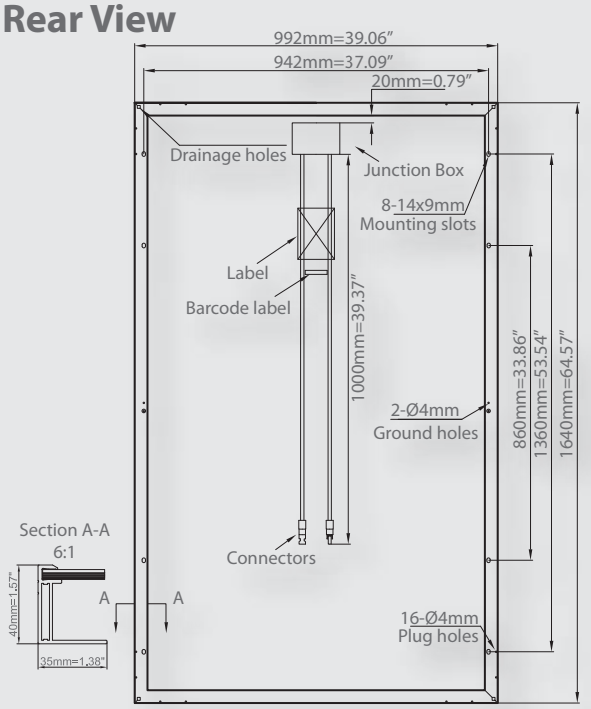
NOCT (°C)	45 ± 2
Temperature Coefficients of Isc (% / °C)	0.05 ± 0.01
Temperature Coefficients of Voc (% / °C)	-0.30 ± 0.02
Temperature Coefficients of Im (% / °C)	-0.02 ± 0.02
Temperature Coefficients of Vm (% / °C)	-0.42 ± 0.03
Temperature Coefficients of Pm (% / °C)	-0.43 ± 0.05

IV Curves



● Deviation of Vm (V), Im (A), Voc (V) and Isc (A) of ±2.5%

Rear View



Options Available

Zep Frame	SolarEdge Integrated
Solrif Frame	Frameless
Tigo Integrated	35mm Frame

UP-EN-EU-042014-V3

Upsolar

6" Polycrystalline PV module 60 cells

Black Series

Key Features

- Flexible Production*
- High Quality Bill of Materials
- Reinforced Module Warranty
- Universal Design (residential, commercial)
- Best seller for its performance/price ratio

Secure Investment

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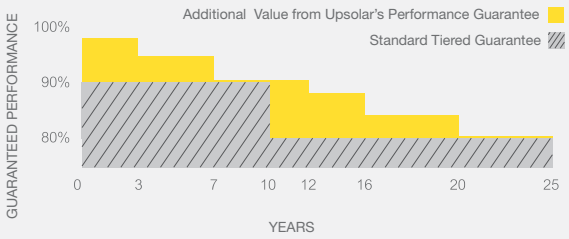
Whereas traditional warranties offer only two trigger points over 25 years, the Reinforced Module Warranty features six trigger points at years 3, 7, 12, 16, 20 and 25. Upsolar also maintains relationships with third-party insurance providers to offer an additional layer of protection for interested parties.

Product guarantee for 10 years
Performance guarantee for 25 years



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Electrical Characteristics @ STC*

MODEL	UP-M235P-B	UP-M240P-B	UP-M245P-B	UP-M250P-B	UP-M255P-B
Max Power Pm (Wp)	235	240	245	250	255
Max Power Voltage Vm (V)	30.2	30.4	30.6	30.9	31.1
Max Power Current Im (A)	7.79	7.89	8.00	8.10	8.20
Open-Circuit Voltage Voc (V)	37.6	37.8	38.0	38.2	38.4
Short-Circuit Current Isc (A)	8.30	8.35	8.40	8.45	8.50
Module Efficiency	14.4%	14.8%	15.1%	15.4%	15.7%
Maximum System Voltage (V)	1000(IEC)/1000(UL)				
Power Tolerance	±3%				
Series Fuse Rating (A)	20A				

*STC: Irradiance 1000 W/m², Module temperature 25°C, AM=1.5

Poly Series
6'' PV Module 60 cells
Black

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 mm², 12AWG) (PV Wire Type)
Connectors	MC4 (IP67, IEC and UL approved)
Frame	E-coated 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 / ft² (UL Standard) // 5400 Pa (IEC Standards)
Impact Resistance	Steel ball - 1.18 lbs // 535 g dropped from 51" // 1.3 m high

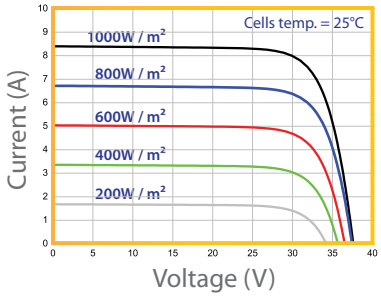
Specifications

Cells	Polycrystalline 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 1.57 // 1640 x 992 x 40
Weight (lb // kg)	41.9 // 19.0

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)	-0.43 ± 0.05

IV Curves



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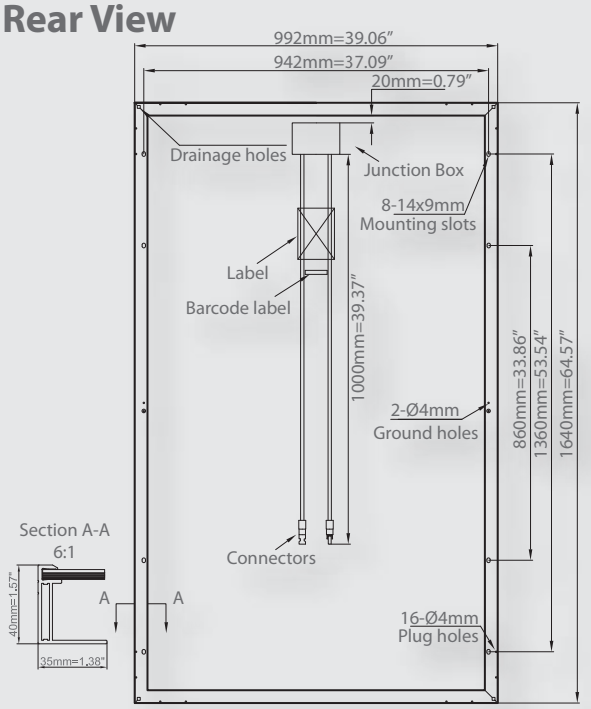
Rear View



Options Available

Zep Frame	SolarEdge Integrated
Solrif Frame	Frameless
Tigo Integrated	35mm Frame

UP-EN-EU-042014-V3

Upsolar

6" Polycrystalline *PV module* 72 cells

Key Features

- **Flexible Production***
- **High Quality Bill of Materials**
- **Reinforced Module Warranty**
- **Reinforced Structure (thicker glass, stronger frame)**
- **Ideal for ground mounted systems**

IEC 61215 61730 · cULus CEC listed UL 1703 · CE · MCS · TÜV · ICIM · Intertek · PV CYCLE

Secure Investment

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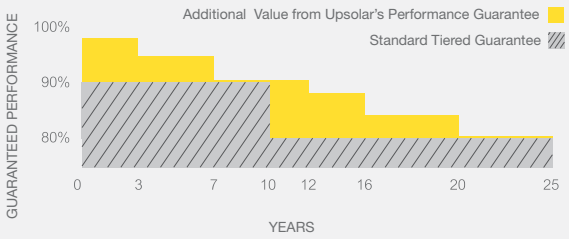
Whereas traditional warranties offer only two trigger points over 25 years, the Reinforced Module Warranty features six trigger points at years 3, 7, 12, 16, 20 and 25. Upsolar also maintains relationships with third-party insurance providers to offer an additional layer of protection for interested parties.

Product guarantee for 10 years
Performance guarantee for 25 years



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Poly Series
6'' PV Module 72 cells

Electrical Characteristics @ STC*

MODEL	UP-M290P	UP-M295P	UP-M300P	UP-M305P	UP-M310P
Max Power Pm (Wp)	290	295	300	305	310
Max Power Voltage Vm (V)	35.5	35.7	35.9	36.1	36.3
Max Power Current Im (A)	8.17	8.26	8.36	8.45	8.54
Open-Circuit Voltage Voc (V)	45.2	45.4	45.6	45.8	46.0
Short-Circuit Current Isc (A)	8.50	8.58	8.66	8.74	8.82
Module Efficiency	14.9%	15.2%	15.5%	15.70%	16.0%
Maximum System Voltage (V)	1000(IEC)/1000(UL)				
Power Tolerance	±3%				
Series Fuse Rating (A)	20A				

*STC: Irradiance 1000 W/m², Module temperature 25°C, AM=1.5

Components & Mechanical Data

Front Glass	High Transparency Tempered Glass 0.157" // 4.0 mm
Junction Box	IP 65 or above
Bypass Diode	3 diodes
Output Cables	1.0 m // IEC, UL approved (4 mm², 12AWG) (PV Wire Type)
Connectors	MC4 (IP67, IEC and UL approved)
Frame	E-coated aluminium alloy type 6063-T5
Encapsulation Material	EVA (0.018'' // 0.45 mm ± 0.001'' // 0.03 mm thickness)
Back Sheet	White multilayer polymer film
Temperature Range	-40°F to +194°F // -40°C to +90°C
Max Load	75 lbs / ft² (UL Standard) // 5400 Pa (IEC Standards)
Impact Resistance	Steel ball - 1.18 lbs // 535 g dropped from 51" // 1.3 m high

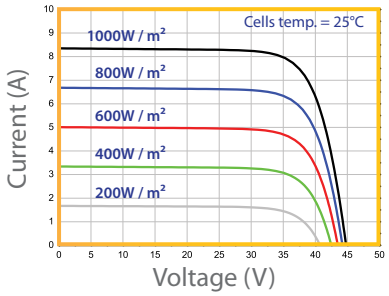
Specifications

Cells	Polycrystalline silicon solar cells 6" x 6" // 156 mm x 156 mm
Number of Cells	72 (6 x 12)
Dimensions (in // mm)	77 x 39.06 x 1.97 // 1956 x 992 x 50
Weight (lb // kg)	59.52 // 27.0

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)	-0.43 ± 0.05

IV Curves



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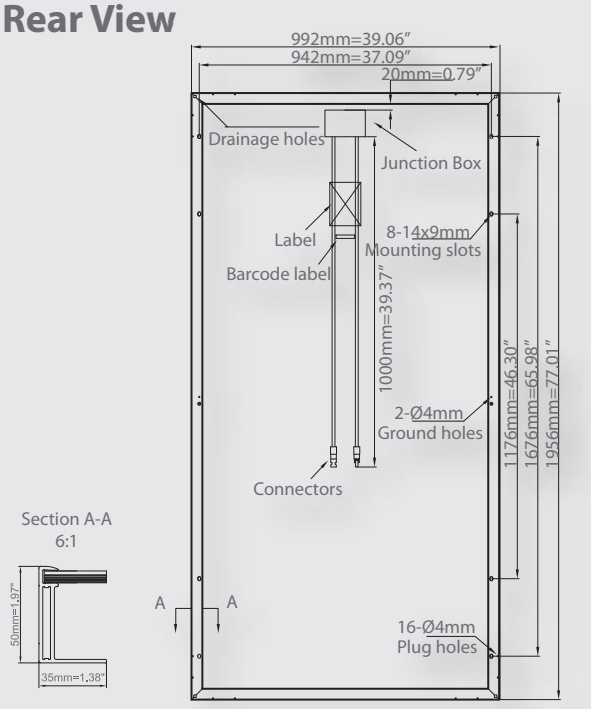
Rear View



Options Available

SolarEdge Integrated

Tigo Integrated

UP-EN-EU-042014-V3

Upsolar

6" Monocrystalline *PV module* 60 cells

Key Features

- **Flexible Production***
- **High Quality Bill of Materials**
- **Reinforced Module Warranty**
- **High Efficiency**
- **Universal Design (residential, commercial, ground mounted)**

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Secure Investment

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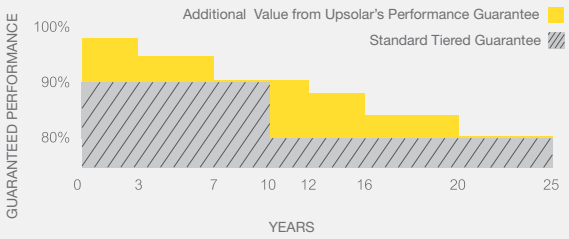
Product guarantee for 10 years
Performance guarantee for 25 years



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Mono Series
6'' PV Module 60 cells

Electrical Characteristics @ STC*

MODEL	UP-M250M	UP-M255M	UP-M260M	UP-M265M	UP-M270M
Max Power Pm (Wp)	250	255	260	265	270
Max Power Voltage Vm (V)	30.0	30.2	30.4	30.6	30.8
Max Power Current Im (A)	8.34	8.44	8.55	8.66	8.77
Open-Circuit Voltage Voc (V)	37.7	38.0	38.3	38.6	38.9
Short-Circuit Current Isc (A)	8.80	8.88	8.96	9.04	9.12
Module Efficiency	15.4%	15.7%	16.0%	16.3%	16.6%
Maximum System Voltage (V)	1000(IEC)/1000(UL)				
Power Tolerance	±3%				
Series Fuse Rating (A)	20A				

*STC: Irradiance 1000 W/m², Module temperature 25ºC, 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 mm², 12AWG) (PV Wire Type)
Connectors	MC4 (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	White multilayer polymer film
Temperature Range	-40°F to +194°F // -40°C to +90°C
Max Load	75 lbs / ft² (UL Standard) // 5400 Pa (IEC Standards)
Impact Resistance	Steel ball - 1.18 lbs // 535 g dropped from 51" // 1.3 m high

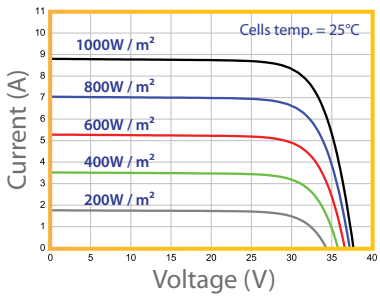
Specifications

Cells	Monocrystalline silicon solar cells 6" x 6" // 156 mm x 156 mm
Cell Diameter	7.9" // 200 mm
Number of Cells	60 (6 x 10)
Dimensions (in // mm)	64.57 x 39.06 x 1.57 // 1640x992x40
Weight (lb // kg)	41.9 // 19.0

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)	-0.43 ± 0.05

IV Curves



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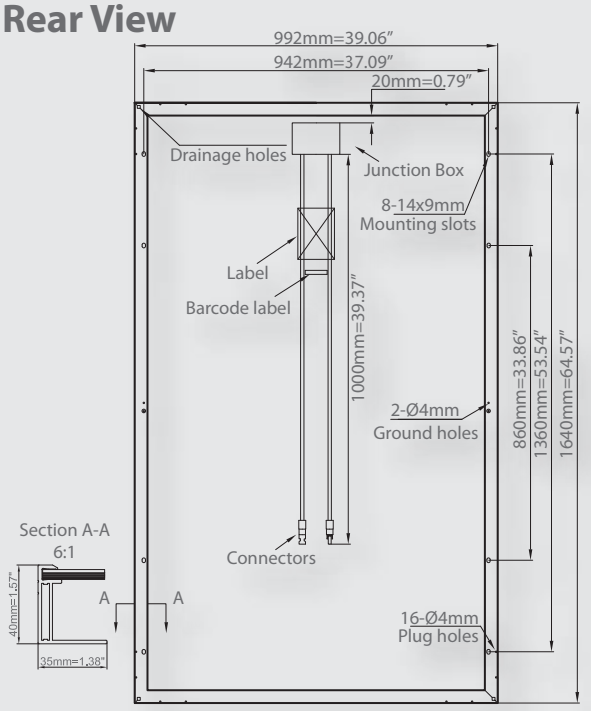
Rear View



Options Available

Zep Frame
Solrif Frame
Tigo Integrated
SolarEdge Integrated

UP-EN-EU-042014-V3

Upsolar

6" Monocrystalline PV module 60 cells
Black Series

Key Features

- Flexible Production*
- High Quality Bill of Materials
- Reinforced Module Warranty
- High Efficiency
- Universal Design (residential, commercial)

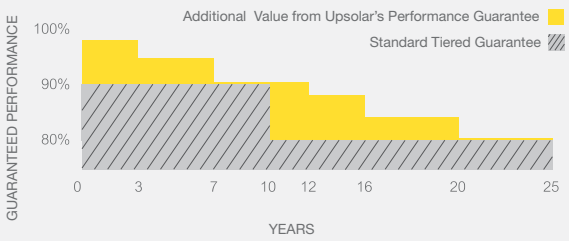
IEC 61215 61730 · cULus CEC listed UL 1703 · CE · TÜV · ICIM · Intertek · PV CYCLE

Secure Investment

Upsolar provides industry-leading product coverage for all our modules to ensure our customers achieve superior long-term value from their solar installations. In addition to a 10-year product warranty, which covers unanticipated module damage, Upsolar implements a 25-year performance guarantee known as the Reinforced Module Warranty.

Whereas traditional warranties offer only two trigger points over 25 years, the Reinforced Module Warranty features six trigger points at years 3, 7, 12, 16, 20 and 25. Upsolar also maintains relationships with third-party insurance providers to offer an additional layer of protection for interested parties.

Product guarantee for 10 years
Performance guarantee for 25 years



PowerGuard SPECIALTY INSURANCE SERVICES

Upsolar has teamed up with PowerGuard Specialty Insurance Services to provide customers with a second level of product coverage. The 25-year, non-cancellable warranty is backed by PowerGuard's network of trusted providers, each rated A (Excellent) or better by A.M. Best, meaning the warranty stays in place with or without Upsolar's involvement.

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Mono Series
6" PV Module 60 cells
Black

Electrical Characteristics @ STC*

MODEL	UP-M245M-B	UP-M250M-B	UP-M255M-B	UP-M260M-B	UP-M265M-B
Max Power Pm (Wp)	245	250	255	260	265
Max Power Voltage Vm (V)	30.2	30.3	30.5	30.7	30.9
Max Power Current Im (A)	8.12	8.24	8.36	8.48	8.60
Open-Circuit Voltage Voc (V)	37.7	38.0	38.3	38.6	38.9
Short-Circuit Current Isc (A)	8.60	8.70	8.80	8.90	9.00
Module Efficiency	15.1%	15.4%	15.7%	16.0%	16.3%
Maximum System Voltage (V)	1000(IEC)/1000(UL)				
Power Tolerance	±3%				
Series Fuse Rating (A)	20A				

*STC: Irradiance 1000 W/m², 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 mm², 12AWG) (PV Wire Type)
Connectors	MC4 (IP67, IEC and UL approved)
Frame	E-coated 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 / ft² (UL Standard) // 5400 Pa (IEC Standards)
Impact Resistance	Steel ball - 1.18 lbs // 535 g dropped from 51" // 1.3 m high

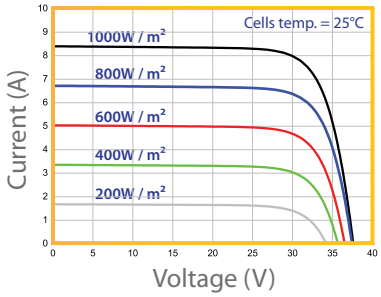
Specifications

Cells	Monocrystalline silicon solar cells 6" x 6" // 156 mm x 156 mm
Cell Diameter	7.9" // 200 mm
Number of Cells	60 (6 x 10)
Dimensions (in // mm)	64.57 x 39.06 x 1.57 // 1640 x 992 x 40
Weight (lb // kg)	41.9 // 19.0

Temperature Coefficients

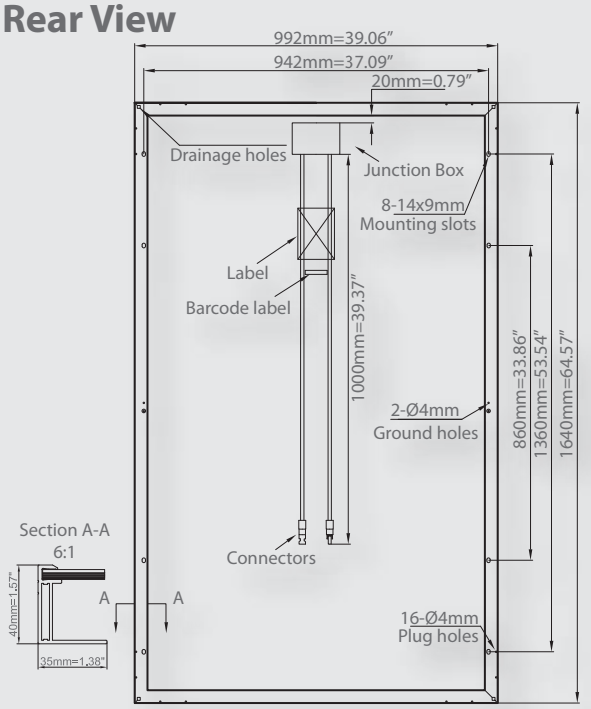
NOCT (°C)	45 ± 2
Temperature Coefficients of Isc (% / °C)	0.05 ± 0.01
Temperature Coefficients of Voc (% / °C)	-0.30 ± 0.02
Temperature Coefficients of Im (% / °C)	-0.02 ± 0.02
Temperature Coefficients of Vm (% / °C)	-0.42 ± 0.03
Temperature Coefficients of Pm (% / °C)	-0.43 ± 0.05

IV Curves



● Deviation of Vm (V), Im (A), Voc (V) and Isc (A) of ±2.5%

Rear View



Options Available

Zep Frame
Solrif Frame
SolarEdge Integrated
Tigo Integrated

UP-EN-EU-042014-V3

Upsolar

6" Monocrystalline *PV module* 72 cells

Key Features

- **Flexible Production***
- **High Quality Bill of Materials**
- **Reinforced Module Warranty**
- **Reinforced Structure (thicker glass, stronger frame)**
- **Ideal for ground mounted systems**

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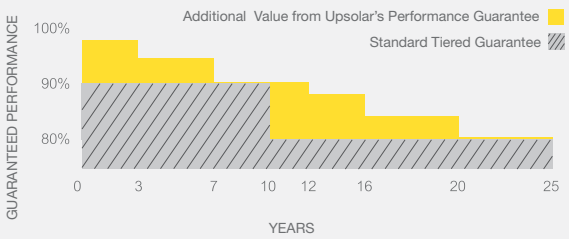
Product guarantee for 10 years
Performance guarantee for 25 years



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Mono Series
6" PV Module 72 cells

Electrical Characteristics @ STC*

MODEL	UP-M300M	UP-M305M	UP-M310M	UP-M315M	UP-M320M
Max Power Pm (Wp)	300	305	310	315	320
Max Power Voltage Vm (V)	36.0	36.2	36.4	36.6	36.8
Max Power Current Im (A)	8.34	8.43	8.52	8.61	8.70
Open-Circuit Voltage Voc (V)	45.2	45.5	45.8	46.1	46.4
Short-Circuit Current Isc (A)	8.80	8.88	8.96	9.04	9.12
Module Efficiency	15.5%	15.7%	16.0%	16.2%	16.5%
Maximum System Voltage (V)	1000(IEC)/1000(UL)				
Power Tolerance	±3%				
Series Fuse Rating (A)	20A				

*STC: Irradiance 1000 W/m², Module temperature 25ºC, AM=1.5

Components & Mechanical Data

Front Glass	High Transparency Tempered Glass 0.157" // 4.0 mm
Junction Box	IP 65 or above
Bypass Diode	3 diodes
Output Cables	1.0 m // IEC, UL approved (4 mm², 12AWG) (PV Wire Type)
Connectors	MC4 (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	White multilayer polymer film
Temperature Range	-40°F to +194°F // -40°C to +90°C
Max Load	75 lbs / ft² (UL Standard) // 5400 Pa (IEC Standards)
Impact Resistance	Steel ball - 1.18 lbs // 535 g dropped from 51" // 1.3 m high

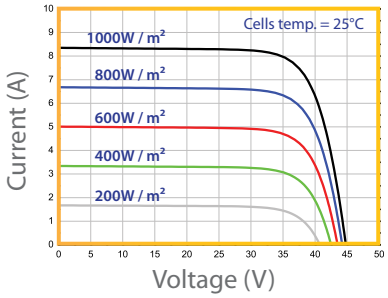
Specifications

Cells	Monocrystalline silicon solar cells 6" x 6" // 156 mm x 156 mm
Cell Diameter	7.9" // 200 mm
Number of Cells	72 (6 x 12)
Dimensions (in // mm)	77 x 39.06 x 1.97 // 1956 x 992 x 50
Weight (lb // kg)	59.52 // 27.0

Temperature Coefficients

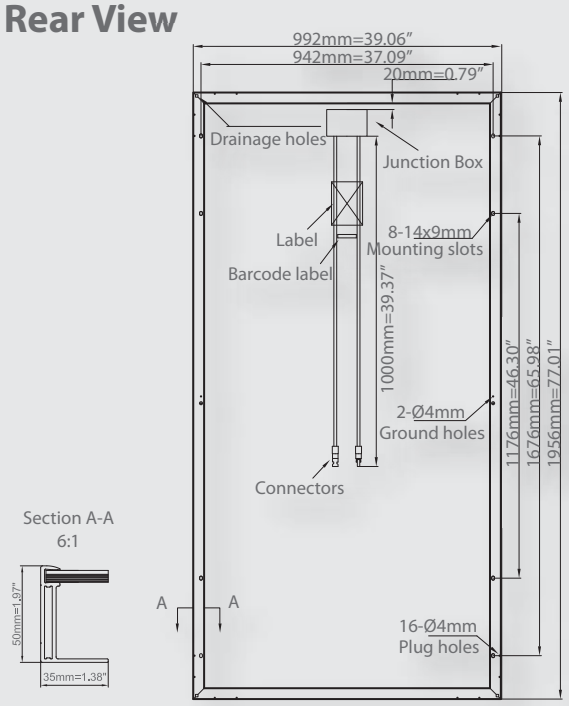
NOCT (°C)	45 ± 2
Temperature Coefficients of Isc (% / °C)	0.05 ± 0.01
Temperature Coefficients of Voc (% / °C)	-0.30 ± 0.02
Temperature Coefficients of Im (% / °C)	-0.02 ± 0.02
Temperature Coefficients of Vm (% / °C)	-0.42 ± 0.03
Temperature Coefficients of Pm (% / °C)	-0.43 ± 0.05

IV Curves



● Deviation of Vm (V), Im (A), Voc (V) and Isc (A) of ±2.5%

Rear View



UP-EN-EU-042014-V3

Upsolar

5" Monocrystalline *PV module* 72 cells

Key Features

- **Flexible Production***
- **High Quality Bill of Materials**
- **Reinforced Module Warranty**
- **Easy to handle, modular**
- **Ideal for residential**

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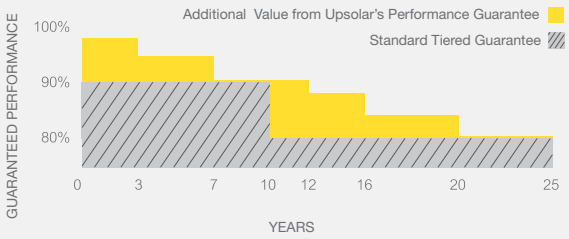
Product guarantee for 10 years
Performance guarantee for 25 years



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Electrical Characteristics @ STC*

MODEL	UP-M185M	UP-M190M	UP-M195M	UP-M200M	UP-M205M
Max Power Pm (Wp)	185	190	195	200	205
Max Power Voltage Vm (V)	36.0	36.3	36.6	37.0	37.4
Max Power Current Im (A)	5.14	5.23	5.33	5.41	5.48
Open-Circuit Voltage Voc (V)	44.8	45.1	45.4	46.0	46.6
Short-Circuit Current Isc (A)	5.43	5.55	5.65	5.70	5.75
Module Efficiency	14.5%	14.9%	15.3%	15.7%	16.1%
Maximum System Voltage (V)	1000(IEC)/1000(UL)				
Power Tolerance	±3%				
Series Fuse Rating (A)	15A				

*STC: Irradiance 1000 W/m², Module temperature 25ºC, AM=1.5

Mono Series
5" PV Module 72 cells

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 mm², 12AWG) (PV Wire Type)
Connectors	MC4 (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	White multilayer polymer film
Temperature Range	-40°F to +194°F // -40°C to +90°C
Max Load	75 lbs / ft² (UL Standard) // 5400 Pa (IEC Standards)
Impact Resistance	Steel ball - 1.18 lbs // 535 g dropped from 51" // 1.3 m high

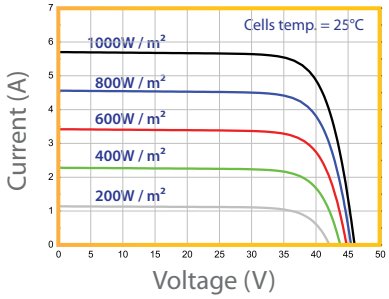
Specifications

Cells	Monocrystalline silicon solar cells 5" x 5" // 125 mm x 125 mm
Cell Diameter	6.5" // 165 mm
Number of Cells	72 (6 x 12)
Dimensions (in // mm)	62.20 x 31.81 x 1.57 // 1580 x 808 x 40
Weight (lb // kg)	34.0 // 15.4

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)	-0.43 ± 0.05

IV Curves



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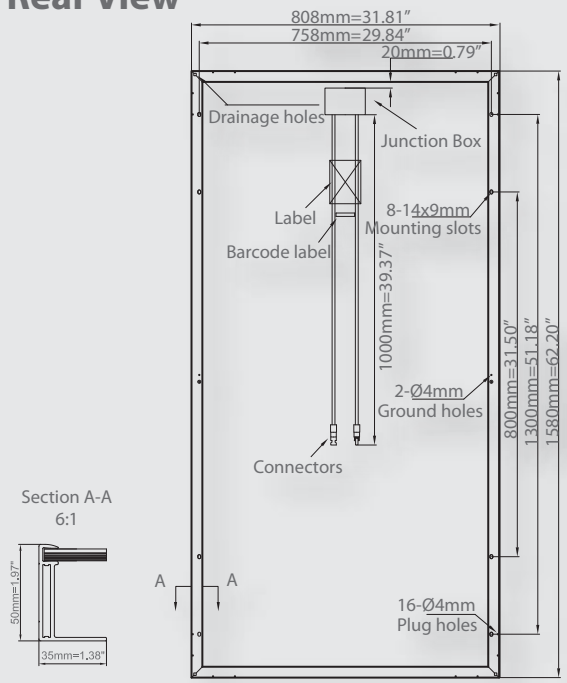
Rear View



Options Available

Zep Frame	SolarEdge Integrated
Solrif Frame	Frameless
Tigo Integrated	35mm Frame

Upsolar

5" Monocrystalline PV module 72 cells
Black Series

Key Features

- Flexible Production*
- High Quality Bill of Materials
- Reinforced Module Warranty
- Easy to handle, modular
- Ideal for residential

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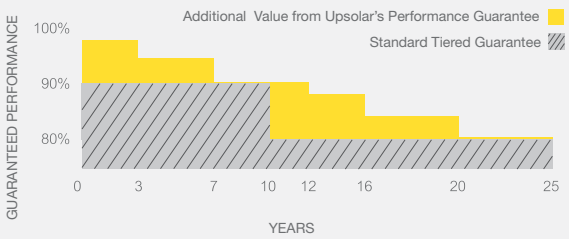
Product guarantee for 10 years
Performance guarantee for 25 years



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Electrical Characteristics @ STC*

MODEL	UP-M180M-B	UP-M185M-B	UP-M190M-B	UP-M195M-B	UP-M200M-B
Max Power Pm (Wp)	180	185	190	195	200
Max Power Voltage Vm (V)	36.2	36.4	36.6	36.8	37.0
Max Power Current Im (A)	4.97	5.08	5.19	5.30	5.41
Open-Circuit Voltage Voc (V)	44.8	45.0	45.3	45.6	45.9
Short-Circuit Current Isc (A)	5.22	5.30	5.40	5.50	5.60
Module Efficiency	14.1%	14.5%	14.9%	15.3%	15.7%
Maximum System Voltage (V)	1000(IEC)/1000(UL)				
Power Tolerance	±3%				
Series Fuse Rating (A)	15A				

*STC: Irradiance 1000 W/m², Module temperature 25°C, AM=1.5

Mono Series
5" PV Module 72 cells
Black

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 mm², 12AWG) (PV Wire Type)
Connectors	MC4 (IP67, IEC and UL approved)
Frame	E-coated 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 / ft² (UL Standars) // 5400 Pa (IEC Standards)
Impact Resistance	Steel ball - 1.18 lbs // 535 g dropped from 51" // 1.3 m high

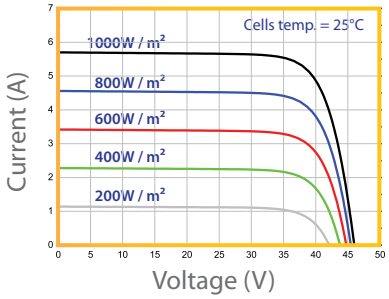
Specifications

Cells	Monocrystalline silicon solar cells 5" x 5" // 125 mm x 125 mm
Cell Diameter	6.5" // 165 mm
Number of Cells	72 (6 x 12)
Dimensions (in // mm)	62.20 x 31.81 x 1.57 // 1580 x 808 x 40
Weight (lb // kg)	34.0 // 15.4

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)	-0.43 ± 0.05

IV Curves



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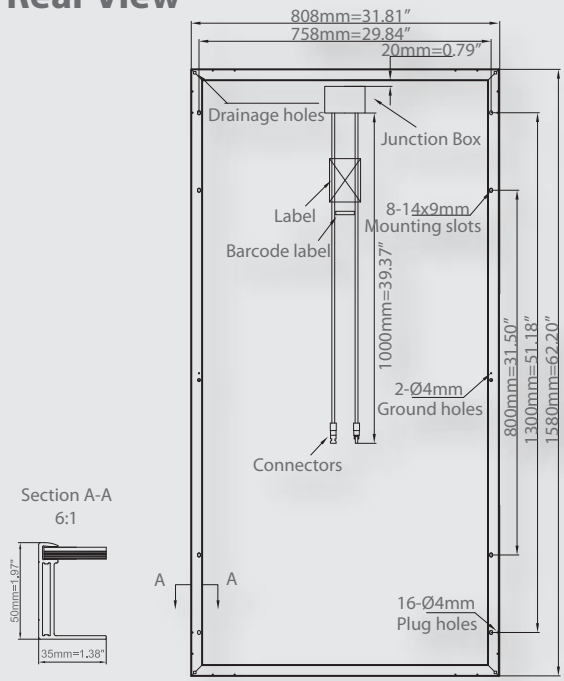
Rear View



Options Available

Zep Frame	SolarEdge Integrated
Solrif Frame	Frameless
Tigo Integrated	35mm Frame

UP-EN-EU-042014-V3

Upsolar ZS Span™

ZS Span™ Roof PV Module Installation Solution

Upsolar has partnered with Zep Solar to provide high-quality, efficient Zep Compatible™ monocrystalline and polycrystalline PV modules for residential, commercial and other applications. Zep Solar's ZS Span™ delivers one of the fastest, easiest and least expensive ways to install PV modules. ZS Span™ can offer up to a 25% reduction in roof attachment points - dramatically reducing the amount of time spent on the roof. ZS Span™ was developed based on customer needs and market requirements, making any PV project easier, faster, safer and more cost-competitive from start to finish.

Product Features & Benefits

- Auto-grounding hardware reduces installation time
- Eliminates clip hardware, long rails and cutting of rails
- Low profile installation and array skirt provide better aesthetics
- Reduces warehouse costs, space allocation, inventory tracking requirements and shipping costs
- Low system weight due to ultra low parts and SKU count
- Requires two Zep Solar tools for installation
- Specialized hardware = decreased risk of theft

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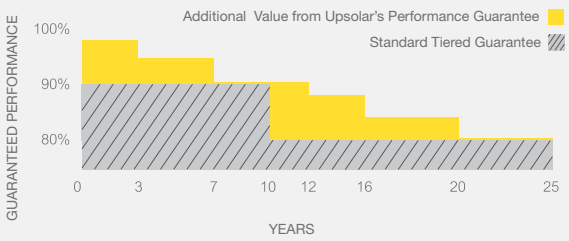
Product guarantee for 10 years
Performance guarantee for 25 years



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Upsolar Zep Compatible Module List

Monocrystalline 72 Cells Z185 - 205M

Sizes (in. // mm)	62.20 x 31.81 x 1.57 // 1580 x 808 x 40
Max Load	50 lbs/ft^2 // 2400 Pa
Weight (lb. // kg)	34.0 // 15.4
Cell Type	Monocrystalline silicon solar cells 5” x 5” // 125 x 125 mm
Impact resistance	Steel ball - 1.18 lbs // 535g dropped from 51” high // 1.3 m
Frame Material	ZEP Anodized aluminium alloy type 6063-T5
Cell arrangement	72 (6 x 12)

Monocrystalline 60 Cells Z250 - 270M

Sizes (in. // mm)	64.57 x 39.06 x 1.57 // 1640 x 992 x 40
Max Load	50 lbs/ft^2 // 2400 Pa
Weight (lb. // kg)	41.9 // 19.0
Cell Type	Monocrystalline silicon solar cells 6” x 6” // 156 x 156 mm
Impact resistance	Steel ball - 1.18 lbs // 535g dropped from 51” high // 1.3 m
Frame Material	ZEP Anodized aluminium alloy type 6063-T5
Cell arrangement	60 (6 x 10)

Polycrystalline 60 Cells Z240 - 260P

Sizes (in. // mm)	64.57 x 39.06 x 1.57 // 1640 x 992 x 40
Max Load	50 lbs/ft^2 // 2400 Pa
Weight (lb. // kg)	41.9 // 19.0
Cell Type	Polycrystalline silicon solar cells 6” x 6” // 156 x 156 mm
Impact resistance	Steel ball - 1.18 lbs // 535g dropped from 51” high // 1.3 m
Frame Material	ZEP Anodized aluminium alloy type 6063-T5
Cell arrangement	60 (6 x 10)

*Module frames available in black or silver.
*Module backsheets available in black or white.
*Please refer to Zep Solar instructions when evaluating the maximum load of your PV system.

Components, Accessories & Tools

Components


Spanner Bar/Bar Sleeve


Spanner Clamp


Cam Foot


Interlock


Ground Zep

Accessories


Wire Clip


Array Skirt


Array Skirt Cap Set


Universal Box Bracket

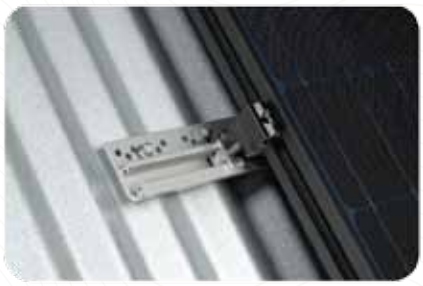
Installation Tools


Zep Tool


Flat Tool

Zep Solar components and accessories must be purchased separately, through Zep Solar distribution.
For more information on Zep Solar products, visit www.zepsolar.com.

Upsolar ZS Wave™



ZS Wave™ Corrugated Metal Roof PV Mounting Solution

Upsolar has partnered with Zep Solar to provide high-quality, efficient, Zep Compatible™ monocrystalline and poly-crystalline PV modules for residential, commercial and other applications. Designed for residential and commercial applications, Zep Solar's ZS Wave™ product delivers one of the fastest, easiest and least expensive ways to install PV modules on corrugated metal roofs. ZS Wave™ eliminates the use of mounting rail, dramatically reducing the amount of time spent on the roof. ZS Wave™ was developed based on customer needs and market requirements, making any PV project easier, faster, safer and more cost-competitive from start to finish.

Product Features & Benefits

- Auto-grounding hardware reduces installation time
- Eliminates clip hardware, long rails and cutting of rails
- Low system weight due to ultra low parts and SKU count
- Reduces warehouse costs, space allocation, inventory tracking requirements and shipping costs
- Requires one Zep Solar tool for installation
- Low profile installation and array skirt provide better aesthetics
- Specialized hardware = decreased risk of theft

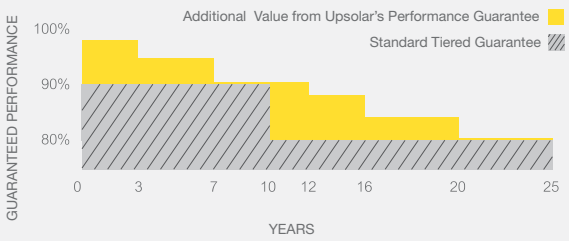
IEC 61215 61730 · cULus CEC listed UL 1703 · CE · MCS · TÜV · PV CYCLE

Secure Investment

Upsolar provides industry-leading product coverage for all our modules to ensure our customers achieve superior long-term value from their solar installations. In addition to a 10-year product warranty, which covers unanticipated module damage, Upsolar implements a 25-year performance guarantee known as the Reinforced Module Warranty.

Whereas traditional warranties offer only two trigger points over 25 years, the Reinforced Module Warranty features six trigger points at years 3, 7, 12, 16, 20 and 25. Upsolar also maintains relationships with third-party insurance providers to offer an additional layer of protection for interested parties.

Product guarantee for 10 years
Performance guarantee for 25 years



PowerGuard SPECIALTY INSURANCE SERVICES

Upsolar has teamed up with PowerGuard Specialty Insurance Services to provide customers with a second level of product coverage. The 25-year, non-cancellable warranty is backed by PowerGuard's network of trusted providers, each rated A (Excellent) or better by A.M. Best, meaning the warranty stays in place with or without Upsolar's involvement.

Upsolar Zep Compatible Module List

Monocrystalline 72 Cells Z185 - 205M

Sizes (in. // mm)	62.20 x 31.81 x 1.57 // 1580 x 808 x 40
Max Load	50 lbs/ft^2 // 2400 Pa
Weight (lb. // kg)	34.0 // 15.4
Cell Type	Monocrystalline silicon solar cells 5” x 5” // 125 x 125 mm
Impact resistance	Steel ball - 1.18 lbs // 535g dropped from 51” high // 1.3 m
Frame Material	ZEP Anodized aluminium alloy type 6063-T5
Cell arrangement	72 (6 x 12)

Monocrystalline 60 Cells Z250 - 270M

Sizes (in. // mm)	64.57 x 39.06 x 1.57 // 1640 x 992 x 40
Max Load	50 lbs/ft^2 // 2400 Pa
Weight (lb. // kg)	41.9 // 19.0
Cell Type	Monocrystalline silicon solar cells 6” x 6” // 156 x 156 mm
Impact resistance	Steel ball - 1.18 lbs // 535g dropped from 51” high // 1.3 m
Frame Material	ZEP Anodized aluminium alloy type 6063-T5
Cell arrangement	60 (6 x 10)

Polycrystalline 60 Cells Z240 - 260P

Sizes (in. // mm)	64.57 x 39.06 x 1.57 // 1640 x 992 x 40
Max Load	50 lbs/ft^2 // 2400 Pa
Weight (lb. // kg)	41.9 // 19.0
Cell Type	Polycrystalline silicon solar cells 6” x 6” // 156 x 156 mm
Impact resistance	Steel ball - 1.18 lbs // 535g dropped from 51” high // 1.3 m
Frame Material	ZEP Anodized aluminium alloy type 6063-T5
Cell arrangement	60 (6 x 10)

*Module frames available in black or silver.
*Module backsheets available in black or white.
*Please refer to Zep Solar instructions when evaluating the maximum load of your PV system.

Components, Accessories & Tools

Components


Interlock


Cam Foot


Ground Zep

Accessories


Wire Clip


Universal Box Bracket

Attachment Hardware


Big Foot

Installation Tools


Zep Tool


Flat Tool

Zep Solar components and accessories must be purchased separately, through Zep Solar distribution.
For more information on Zep Solar products, visit www.zepsolar.com.

Upsolar
ZS Comp / Trap / Seam™

ZS Comp / Trap / Seam™
Composition Shingle, Trapezoidal Metal and Standing Seam Metal Roof PV Mounting Solution

Upsolar has partnered with Zep Solar to provide high-quality, efficient, Zep Compatible™ monocrystalline and polycrystalline PV modules for residential, commercial and other applications. Designed for residential and commercial applications, Zep Solar's installation systems deliver one of the fastest, easiest and least expensive ways to install PV modules on composition shingle, trapezoidal metal and standing seam roofs. Zep Solar's installation systems eliminate the use of rails, dramatically reducing the amount of time spent on the roof. Zep Solar's products were developed based on customer needs and market requirements, making any PV project easier, faster, safer and more cost-competitive from start to finish.

Product Features & Benefits

- Auto-grounding hardware reduces installation time
- Eliminates clip hardware, long rails and cutting of rails
- Low profile installation and array skirt provide better aesthetics
- Reduces warehouse costs, space allocation, inventory tracking requirements and shipping costs
- Low system weight due to ultra low parts and SKU count
- Requires one Zep Solar tool for installation
- Specialized hardware = decreased risk of theft

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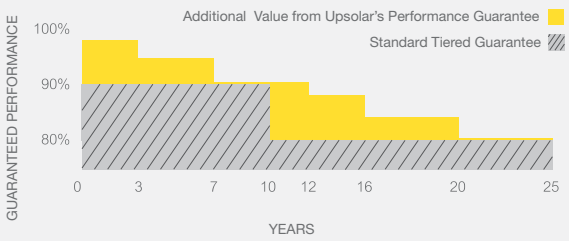
Product guarantee for 10 years
Performance guarantee for 25 years



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Upsolar Zep Compatible Module List

Monocrystalline 72 Cells Z185 - 205M

Sizes (in. // mm)	62.20 x 31.81 x 1.57 // 1580 x 808 x 40
Max Load	50 lbs/ft^2 // 2400 Pa
Weight (lb. // kg)	34.0 // 15.4
Cell Type	Monocrystalline silicon solar cells 5” x 5” // 125 x 125 mm
Impact resistance	Steel ball - 1.18 lbs // 535g dropped from 51” high // 1.3 m
Frame Material	ZEP Anodized aluminium alloy type 6063-T5
Cell arrangement	72 (6 x 12)

Monocrystalline 60 Cells Z250 - 270M

Sizes (in. // mm)	64.57 x 39.06 x 1.57 // 1640 x 992 x 40
Max Load	50 lbs/ft^2 // 2400 Pa
Weight (lb. // kg)	41.9 // 19.0
Cell Type	Monocrystalline silicon solar cells 6” x 6” // 156 x 156 mm
Impact resistance	Steel ball - 1.18 lbs // 535g dropped from 51” high // 1.3 m
Frame Material	ZEP Anodized aluminium alloy type 6063-T5
Cell arrangement	60 (6 x 10)

Polycrystalline 60 Cells Z240 - 260P

Sizes (in. // mm)	64.57 x 39.06 x 1.57 // 1640 x 992 x 40
Max Load	50 lbs/ft^2 // 2400 Pa
Weight (lb. // kg)	41.9 // 19.0
Cell Type	Polycrystalline silicon solar cells 6” x 6” // 156 x 156 mm
Impact resistance	Steel ball - 1.18 lbs // 535g dropped from 51” high // 1.3 m
Frame Material	ZEP Anodized aluminium alloy type 6063-T5
Cell arrangement	60 (6 x 10)

*Module frames available in black or silver.
*Module backsheets available in black or white.
*Please refer to Zep Solar instructions when evaluating the maximum load of your PV system.

Components, Accessories & Tools

Components


Interlock


Leveling Foot


Ground Zep


Array Skirt

Accessories


Wire Clip


Universal Box Bracket


Array Skirt Cap Set

Attachment Hardware


Comp Mount, Type C


Trap Mount


Seam Mount

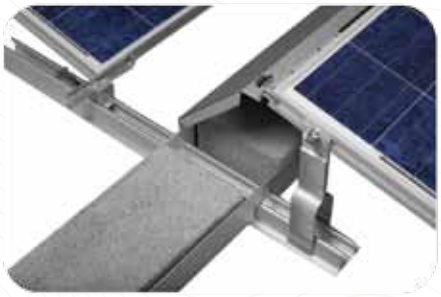
Installation Tools


Zep Tool


Flat Tool

Zep Solar components and accessories must be purchased separately, through Zep Solar distribution.
For more information on Zep Solar products, visit www.zepsolar.com.

Upsolar ZS Aero 11™



ZS Aero 11™ Flat Roof PV Mounting Solution

Upsolar has partnered with Zep Solar to provide high-quality, efficient, Zep Compatible™ monocrystalline and polycrystalline PV modules for residential, commercial and other applications. Designed for commercial applications, Zep Solar's ZS Aero™ 11 delivers one of the fastest, easiest and least expensive ways to install PV modules on flat roofs. Its tool-free, self-templating installation process allows installers to spend the least amount of time on the roof possible. ZS Aero™ 11 was developed based on customer needs and market requirements, making any PV project easier, faster, safer and more cost-competitive from start to finish.

Product Features & Benefits

- Auto-grounding hardware reduces installation time
- Eliminates the need for mounting rails
- Tool-Free Installation
- Reduces warehouse costs, space allocation, inventory tracking requirements and shipping costs
- Low system weight due to ultra low parts and SKU count
- Specialized hardware = decreased risk of theft

Secure Investment

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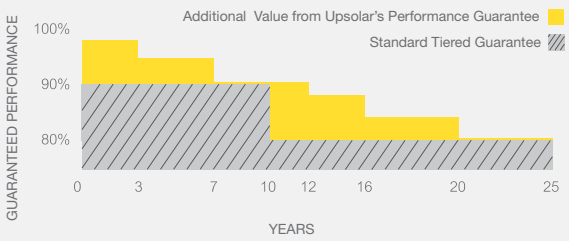
Product guarantee for 10 years
Performance guarantee for 25 years



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Upsolar Zep Compatible Module List

Monocrystalline 72 Cells Z185 - 205M

Sizes (in. // mm)	62.20 x 31.81 x 1.57 // 1580 x 808 x 40
Max Load	50 lbs/ft^2 // 2400 Pa
Weight (lb. // kg)	34.0 // 15.4
Cell Type	Monocrystalline silicon solar cells 5” x 5” // 125 x 125 mm
Impact resistance	Steel ball - 1.18 lbs // 535g dropped from 51” high // 1.3 m
Frame Material	ZEP Anodized aluminium alloy type 6063-T5
Cell arrangement	72 (6 x 12)

Monocrystalline 60 Cells Z250 - 270M

Sizes (in. // mm)	64.57 x 39.06 x 1.57 // 1640 x 992 x 40
Max Load	50 lbs/ft^2 // 2400 Pa
Weight (lb. // kg)	41.9 // 19.0
Cell Type	Monocrystalline silicon solar cells 6” x 6” // 156 x 156 mm
Impact resistance	Steel ball - 1.18 lbs // 535g dropped from 51” high // 1.3 m
Frame Material	ZEP Anodized aluminium alloy type 6063-T5
Cell arrangement	60 (6 x 10)

Polycrystalline 60 Cells Z240 - 260P

Sizes (in. // mm)	64.57 x 39.06 x 1.57 // 1640 x 992 x 40
Max Load	50 lbs/ft^2 // 2400 Pa
Weight (lb. // kg)	41.9 // 19.0
Cell Type	Polycrystalline silicon solar cells 6” x 6” // 156 x 156 mm
Impact resistance	Steel ball - 1.18 lbs // 535g dropped from 51” high // 1.3 m
Frame Material	ZEP Anodized aluminium alloy type 6063-T5
Cell arrangement	60 (6 x 10)

*Module frames available in black or silver.
*Module backsheets available in black or white.
*Please refer to Zep Solar instructions when evaluating the maximum load of your PV system.

Components, Accessories & Tools

Components


Front Leg


Row Connector


Diffuser Support


Wind Diffuser


Rear Leg


Ballast Pan


Ground Zep

Accessories


Wire Clip

Zep Solar components and accessories must be purchased separately, through Zep Solar distribution.
For more information on Zep Solar products, visit www.zepsolar.com.

Upsolar

6" Polycrystalline *PV module* 60 cells

Solrif

Key Features

- **Flexible Production***
- **High Quality Bill of Materials**
- **BIPV Application**
- **Easy to handle, modular**
- **Ideal for residential**

IEC 61215 61730 · CE · ICIM · PV CYCLE

Secure Investment

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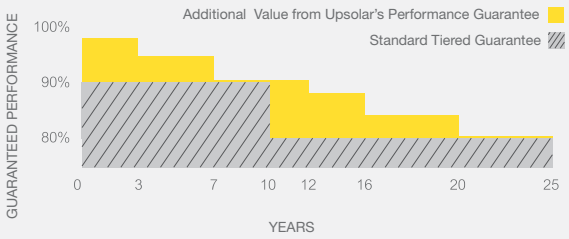
Product guarantee for 10 years
Performance guarantee for 25 years



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Electrical Characteristics @ STC*

MODEL	UP-S240P	UP-S245P	UP-S250P	UP-S255P	UP-S260P
Max Power Pm (Wp)	240	245	250	255	260
Max Power Voltage Vm (V)	30.2	30.4	30.6	30.8	31.0
Max Power Current Im (A)	7.95	8.06	8.17	8.28	8.39
Open-Circuit Voltage Voc (V)	37.6	37.8	38.0	38.2	38.4
Short-Circuit Current Isc (A)	8.40	8.45	8.50	8.55	8.60
Maximum System Voltage (V)	1000(IEC)/1000(UL)				
Power Tolerance	±3%				
Series Fuse Rating (A)	20A				

*STC: Irradiance 1000 W/m², Module temperature 25ºC, 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 mm², 12AWG) (PV Wire Type)
Connectors	MC4 (IP67, IEC and UL approved)
Frame	SOLRIF XL
Encapsulation Material	EVA (0.018'' // 0.45 mm ± 0.001'' // 0.03 mm thickness)
Back Sheet	White multilayer polymer film
Temperature Range	-40°F to +194°F // -40°C to +90°C
Max Load	75 lbs / ft² (UL Standard) // 5400 Pa (IEC Standards)
Impact Resistance	Steel ball - 1.18 lbs // 535 g dropped from 51" // 1.3 m high

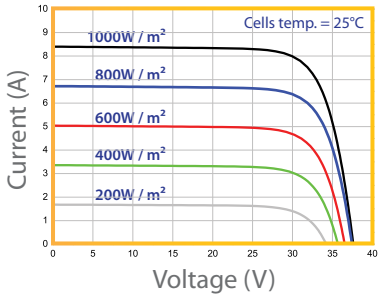
Specifications

Cells	Polycrystalline silicon solar cells 6" x 6" // 156 mm x 156 mm
Number of Cells	60 (6 x 10)
Dimensions (in // mm)	66.29 x 40.05 x 0.66 // 1684 x 1017.5 x 17
Weight (lb // kg)	41.9 // 21.3

Temperature Coefficients

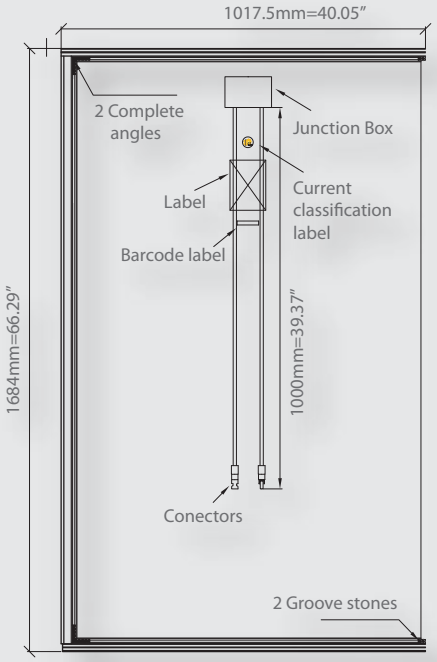
NOCT (°C)	45 ± 2
Temperature Coefficients of Isc (% / °C)	0.05 ± 0.01
Temperature Coefficients of Voc (% / °C)	-0.32 ± 0.02
Temperature Coefficients of Im (% / °C)	-0.02 ± 0.02
Temperature Coefficients of Vm (% / °C)	-0.42 ± 0.03
Temperature Coefficients of Pm (% / °C)	-0.43 ± 0.05

IV Curves



● Deviation of Vm (V), Im (A), Voc (V) and Isc (A) of ±2.5%

Rear View



Options available

Black Type

UP-EN-EU-042014-V3

Upsolar

6" Monocrystalline *PV module* 60 cells

Solrif

Key Features

- **Flexible Production***
- **High Quality Bill of Materials**
- **BIPV Application**
- **Easy to handle, modular**
- **Ideal for residential**

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Secure Investment

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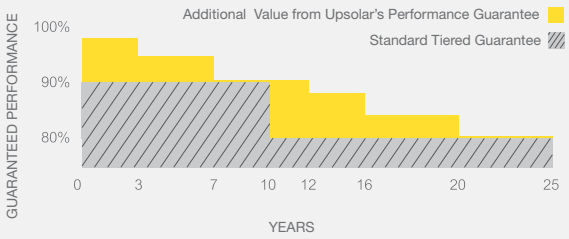
Product guarantee for 10 years
Performance guarantee for 25 years



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Electrical Characteristics @ STC*

MODEL	UP-S250M	UP-S255M	UP-S260M	UP-S265M	UP-S270M
Max Power Pm (Wp)	250	255	260	265	270
Max Power Voltage Vm (V)	30.0	30.2	30.4	30.6	30.8
Max Power Current Im (A)	8.34	8.44	8.55	8.66	8.77
Open-Circuit Voltage Voc (V)	37.7	38.0	38.3	38.6	38.9
Short-Circuit Current Isc (A)	8.80	8.88	8.96	9.04	9.12
Maximum System Voltage (V)	1000(IEC)/1000(UL)				
Power Tolerance	±3%				
Series Fuse Rating (A)	20A				

*STC: Irradiance 1000 W/m², Module temperature 25ºC, 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 mm², 12AWG) (PV Wire Type)
Connectors	MC4 (IP67, IEC and UL approved)
Frame	SOLRIF XL
Encapsulation Material	EVA (0.018'' // 0.45 mm ± 0.001'' // 0.03 mm thickness)
Back Sheet	White multilayer polymer film
Temperature Range	-40°F to +194°F // -40°C to +90°C
Max Load	75 lbs / ft² (UL Standard) // 5400 Pa (IEC Standards)
Impact Resistance	Steel ball - 1.18 lbs // 535 g dropped from 51" // 1.3 m high

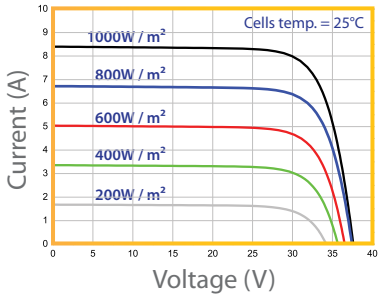
Specifications

Cells	Monocrystalline silicon solar cells 6" x 6" // 156 mm x 156 mm
Number of Cells	60 (6 x 10)
Dimensions (in // mm)	66.29 x 40.05 x 0.66 // 1684 x 1017.5 x 17
Weight (lb // kg)	41.9 // 21.3

Temperature Coefficients

NOCT (°C)	45 ± 2
Temperature Coefficients of Isc (% / °C)	0.05 ± 0.01
Temperature Coefficients of Voc (% / °C)	-0.32 ± 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)	-0.43 ± 0.05

IV Curves



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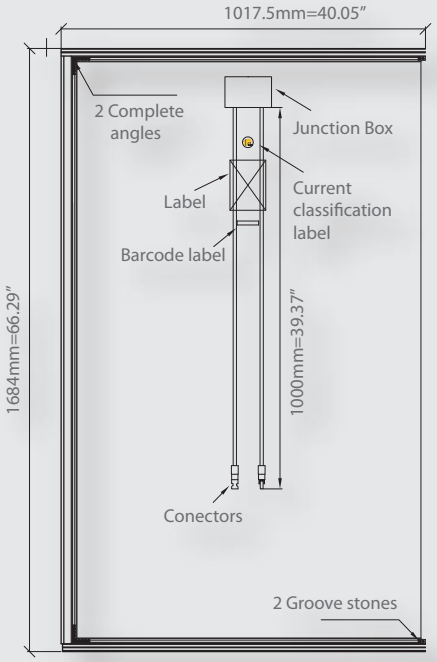
Rear View



Options available

Black Type

UP-EN-EU-042014-V3

Upsolar

5" Monocrystalline PV module 72 cells

Solrif

Key Features

- Flexible Production*
- High Quality Bill of Materials
- BIPV Application
- Easy to handle, modular
- Ideal for residential

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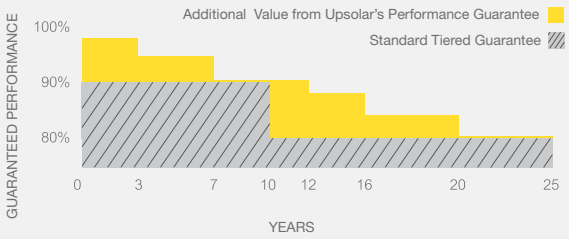
Product guarantee for 10 years
Performance guarantee for 25 years



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Electrical Characteristics @ STC*

MODEL	UP-S185M	UP-S190M	UP-S195M	UP-S200M	UP-S205M
Max Power Pm (Wp)	185	190	195	200	205
Max Power Voltage Vm (V)	36.0	36.3	36.6	37.0	37.4
Max Power Current Im (A)	5.14	5.23	5.33	5.41	5.48
Open-Circuit Voltage Voc (V)	44.8	45.1	45.4	46.0	46.6
Short-Circuit Current Isc (A)	5.43	5.55	5.65	5.70	5.75
Maximum System Voltage (V)	1000(IEC)/1000(UL)				
Power Tolerance	±3%				
Series Fuse Rating (A)	15A				

*STC: Irradiance 1000 W/m², Module temperature 25ºC, 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 mm², 12AWG) (PV Wire Type)
Connectors	MC4 (IP67, IEC and UL approved)
Frame	SOLRIF XL
Encapsulation Material	EVA (0.018'' // 0.45 mm ± 0.001'' // 0.03 mm thickness)
Back Sheet	White multilayer polymer film
Temperature Range	-40°F to +194°F // -40°C to +90°C
Max Load	75 lbs / ft² (UL Standard) // 5400 Pa (IEC Standards)
Impact Resistance	Steel ball - 1.18 lbs // 535 g dropped from 51" // 1.3 m high

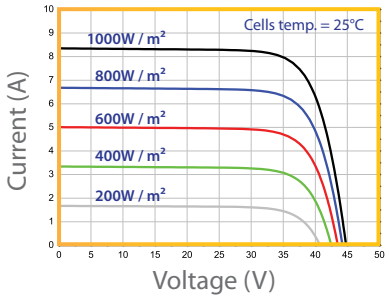
Specifications

Cells	Monocrystalline silicon solar cells 5" x 5" // 125 mm x 125 mm
Number of Cells	72 (6 x 12)
Dimensions (in // mm)	63.93 x 32.81 x 0.66 // 1624 x 833.5 x 17
Weight (lb // kg)	32.6 // 14.8

Temperature Coefficients

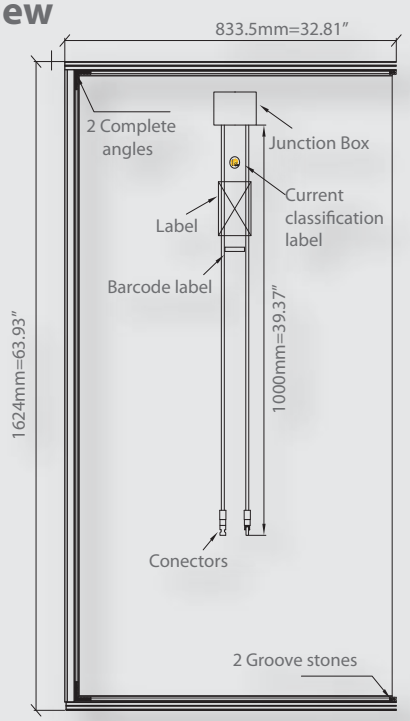
NOCT (°C)	45 ± 2
Temperature Coefficients of Isc (% / °C)	0.05 ± 0.01
Temperature Coefficients of Voc (% / °C)	-0.32 ± 0.02
Temperature Coefficients of Im (% / °C)	-0.02 ± 0.02
Temperature Coefficients of Vm (% / °C)	-0.42 ± 0.03
Temperature Coefficients of Pm (% / °C)	-0.43 ± 0.05

IV Curves



● Deviation of Vm (V), Im (A), Voc (V) and Isc (A) of ±2.5%

Rear View



Options available

Tigo Integrated

Black Type

Solaredge Integrated

Upsolar

Optimized by solaredge

Optimized Systems
by UPSOLAR & SOLAREDGE

Perform at your best with Upsolar and SolarEdge

Get **up to 25% more total output** from your photovoltaic system using the Upsolar Power Optimized System. Our comprehensive solution allows you to install across multiple roof orientations and in areas of partial-shading without losing any of the potential from the sun.

Energy Harvest Optimization

Up to 25% more energy: Increased energy yield & faster return on investment through module level MPP tracking:

- More energy harvesting in shade
- No soiling mismatch loss
- No aging mismatch loss

Constraint Free Design

Maximum space optimization with minimum design time:

- Modules on different orientation and tilts in the same string
- Different modules types in a single string
- Strings of different lengths connected to same inverter
- Longer strings - up to 50 modules per string

Automatic DC Safety - Safe DC™

Safety during installation, maintenance and firefighting, to prevent electric shock and arcing:

- Installation: Safe string voltage - until inverter & AC supply are turned on
- Maintenance: Safe string voltage - automatic once inverter/AC supply is turned off
- Emergency: Safe string voltage - automatic after grid disconnection

Cost Efficient Maintenance

Full visibility of system performance & remote troubleshooting:

- Module-level performance data
- Presentation of complete system on virtual site map
- Automatic alerts on system issues for precise fault recognition
- Easy access via web browser from a computer or a smartphone

IEC 61215 61730 | cULus CEC listed UL 1703 | CE | TÜV | PV CYCLE

System Overview

All of the components used adhere to Upsolar stringent quality standards, resulting in exceptional system safety and stable output that will last for decades.

SolarEdge

Upsolar modules with integrated SolarEdge DC power optimizer units

- High efficiency monocrystalline and polycrystalline cell technology
- High Quality Bill of Materials
- Performance stability without PID losses
- MPP tracking at module level with Integrated SolarEdge Power Optimizer
- Advanced, real-time performance logging
- Easy installation
- Automatic module shut-down for installer and firefighter safety
- Unique PassThru Connector enables quick filed replacements
- 10 year product warranty
- 25 year performance guarantee - 6 levels

SolarEdge Inverter

- Single-phase for system sizes from 2.2 – 6 kWp; three-phase for system sizes from 5 – 17 kWp
- Highest reliability at lowest cost with 98% efficiency
- Compliant with new Low Voltage Directive (VDE-AR-N 4105) and EEG 2012
- Built-in communication hardware for recording power
- 12 year product warranty - optional extension up to 25 years

Monitoring

- Module-level, string and system level performance data
- Presentation of complete system on virtual site map
- Automatic alerts on system issues
- Easy access via web browser from a computer or smartphone
- Free basic monitoring for 25 years

Upsolar Modules

Cell Type	No. of Cells	Backsheet Color	Frame	Min power	Max power
Mono 5”	72 cells	☐	Standard & ZEP	185 Wp	205 Wp
Mono 5”	72 cells	■	Standard & ZEP	180 Wp	200 Wp
Mono 6”	60 cells	☐	Standard & ZEP	250 Wp	270 Wp
Mono 6”	60 cells	■	Standard & ZEP	245 Wp	265 Wp
Poly 6”	60 cells	☐	Standard & ZEP	240 Wp	260 Wp
Poly 6”	60 cells	■	Standard & ZEP	235 Wp	255 Wp
Poly 6”	72 cells	☐	Standard	290 Wp	310 Wp

Output during operation (modules connected to SolarEdge inverter)

Maximum Output Current	15	Adc
Operating Output Voltage	5 - 60	Vdc
Total Maximum String Voltage (Controlled by Inverter) - EU 1-ph	500	Vdc
Total Maximum String Voltage (Controlled by Inverter) - EU 3-ph	950	Vdc

Output during standby

Safety Output Voltage per Power Optimizer	1	Vdc

PV System design using a SolarEdge inverter

Minimum Number of Modules per String	8 (1-ph system) / 16 (3-ph system)	
Maximum Number of Modules per String	Module power dependent; maximum 25 (1-ph system) / 50 (3-ph system)	
Maximum Power per String	5250 (1-ph system) / 11250 (3-ph system)	W
Parallel Strings of Different Lengths or Orientations	Yes	

SolarEdge
Mono 60 Cells

Ideal for Residential Rooftops

Optimized by solaredge

6" Monocrystalline PV module 60 cells

Electrical Characteristics @ STC*

MODEL	UP-M250MS	UP-M255MS	UP-M260MS	UP-M265MS	UP-M270MS
Max Power Pm (Wp)	250	255	260	265	270
Max Power Voltage Vm (V)	30.0	30.2	30.4	30.6	30.8
Max Power Current Im (A)	8.34	8.44	8.55	8.66	8.77
Open-Circuit Voltage Voc (V)**	37.7	38.0	38.3	38.6	38.9
Short-Circuit Current Isc (A)	8.80	8.88	8.96	9.04	9.12
Module Efficiency	15.4%	15.7%	16.0%	16.3%	16.6%
Maximum System Voltage (V)	1000(IEC)/600(UL)				
Power Tolerance	±3%				
Series Fuse Rating (A)	20A				

*STC: Irradiance 1000 W/m², Module temperature 25ºC, AM=1.5

**Voc = 1V when module disconnected

Components & Mechanical Data

Front Glass	High Transparency Tempered Glass 0.125" // 3.2 mm
Junction Box	Solaredge OPJ300-LV
Bypass Diode	3 diodes - ST STPS20H100CG
Output Cables	Amersol 37-713 (cross section: 6.0 mm²)
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	White multilayer polymer film
Temperature Range	-40°F to +185°F // -40°C to +85°C
Max Load	75 lbs / ft² (UL Standard) // 5400 Pa (IEC Standards)
Impact Resistance	Steel ball - 1.18 lbs // 535g dropped from 51" // 1.3 m high

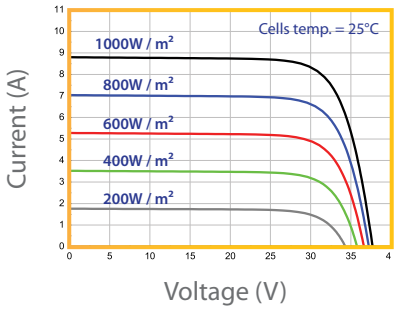
Specifications

Cells	Monocrystalline silicon solar cells 6" x 6" // 156 mm x 156 mm
Cell Diameter	7.9" // 200 mm
Number of Cells	60 (6 x 10)
Dimensions (in // mm)	64.57 x 39.06 x 1.57 // 1640 x 992 x 40
Weight (lb // kg)	41.9 // 19.0

Temperature Coefficients

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

IV Curves



● Deviation of Vm (V), Im (A), Voc (V) and Isc (A) of ±2.5%

Options available

Black Type

ZEP Frame

Ideal for Residential Rooftops

Optimized by solaredge

6" Polycrystalline PV module 60 cells

SolarEdge
Poly 60 Cells

Electrical Characteristics @ STC*

MODEL	UP-M240PS	UP-M245PS	UP-M250PS	UP-M255PS	UP-M260PS
Max Power Pm (Wp)	240	245	250	255	260
Max Power Voltage Vm (V)	30.2	30.4	30.6	30.8	31.0
Max Power Current Im (A)	7.95	8.06	8.17	8.28	8.39
Open-Circuit Voltage Voc (V)**	37.6	37.8	38.0	38.2	38.4
Short-Circuit Current Isc (A)	8.40	8.45	8.50	8.55	8.60
Module Efficiency	14.8%	15.1%	15.4%	15.7%	16.0%
Maximum System Voltage (V)	1000(IEC)/600(UL)				
Power Tolerance	±3%				
Series Fuse Rating (A)	20A				

*STC: Irradiance 1000 W/m², Module temperature 25ºC, AM=1.5
**Voc = 1V when module disconnected

Components & Mechanical Data

Front Glass	High Transparency Tempered Glass 0.125" // 3.2 mm
Junction Box	Solaredge OPJ300-LV
Bypass Diode	3 diodes - ST STPS20H100CG
Output Cables	Amersol 37-713 (cross section: 6.0 mm²)
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	White multilayer polymer film
Temperature Range	-40°F to +185°F // -40°C to +85°C
Max Load	75 lbs / ft² (UL Standard) // 5400 Pa (IEC Standards)
Impact Resistance	Steel ball - 1.18 lbs // 535g dropped from 51" // 1.3 m high

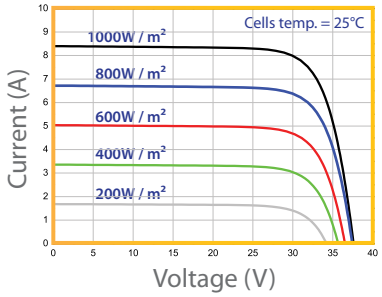
Specifications

Cells	Polycrystalline 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 1.57 // 1640x992x40
Weight (lb // kg)	41.9 // 19.0

Temperature Coefficients

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

IV Curves



● Deviation of Vm (V), Im (A), Voc (V) and Isc (A) of ±2.5%

Options available

Black Type

ZEP Frame

UP-EN-EU-042014-V3

SolarEdge
Poly 72 Cells

Ideal for Commercial Rooftops

Optimized by solaredge

6" Polycrystalline PV module 72 cells

Electrical Characteristics @ STC*

MODEL	UP-M290PS	UP-M295PS	UP-M300PS	UP-M305PS	UP-M310PS
Max Power Pm (Wp)	290	295	300	305	310
Max Power Voltage Vm (V)	35.5	35.7	35.9	36.1	36.3
Max Power Current Im (A)	8.17	8.26	8.36	8.45	8.54
Open-Circuit Voltage Voc (V)**	45.2	45.4	45.6	45.8	46.0
Short-Circuit Current Isc (A)	8.50	8.58	8.66	8.74	8.82
Module Efficiency	14.9%	15.2%	15.5%	15.70%	16.0%
Maximum System Voltage (V)	1000(IEC)/600(UL)				
Power Tolerance	±3%				
Series Fuse Rating (A)	20A				

*STC: Irradiance 1000 W/m², Module temperature 25ºC, AM=1.5

**Voc = 1V when module disconnected

Components & Mechanical Data

Front Glass	High Transparency Tempered Glass 0.157" // 4.0 mm
Junction Box	Solaredge OPJ300-LV
Bypass Diode	3 diodes - ST STPS20H100CG
Output Cables	Amersol 37-713 (cross section: 6.0 mm²)
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	White multilayer polymer film
Temperature Range	-40°F to +185°F // -40°C to +85°C
Max Load	75 lbs / ft² (UL Standard) // 5400 Pa (IEC Standards)
Impact Resistance	Steel ball - 1.18 lbs // 535g dropped from 51" // 1.3 m high

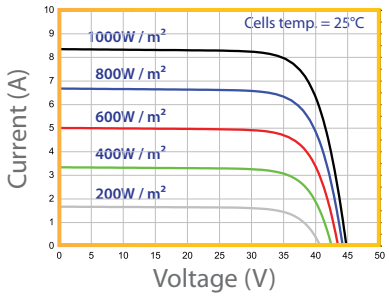
Specifications

Cells	Polycrystalline silicon solar cells 6" x 6" // 156 mm x 156 mm
Number of Cells	72 (6 x 12)
Dimensions (in // mm)	77 x 39.06 x 1.97 // 1956 x 992 x 50
Weight (lb // kg)	59.52 // 27.0

Temperature Coefficients

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

IV Curves



● Deviation of Vm (V), Im (A), Voc (V) and Isc (A) of ±2.5%

Options available

Black Type

Upsolar

Optimized by Tigo® energy

Upsolar Smart Modules

Optimized by Tigo Energy®

Improve ROI with No Upfront Cost

Smart Modules optimized by Tigo Energy deliver more energy, active management and enhanced safety through state-of-the-art module-embedded power electronics. Our solution offers Smart Curve™ technology, which enables 30% longer strings. The system works with all major inverters.

BOS Cost Savings

Equipped with Smart Curve Technology to dramatically reduce BOS Costs:

- Fixed Voc, 15% lower than traditional modules, not temperature dependent
- Longer strings, 30% more modules per string
- Lower BOS Costs – fewer combiners, disconnects, feeders and less copper

Maintenance Made Simple

Panel-Level monitoring provides unparalleled visibility and helps maintain arrays at peak efficiency:

- Module-level resolution
- Automated commissioning
- Detailed alerts & analytics
- Access from any computer, phone, or tablet
- Free basic monitoring for 25 years

Highest Power Density and Efficiency

Higher energy yield and mismatch tolerance from module-level MPPT:

- Eliminates all sources of mismatch: clouds, temperature, shade, soiling, aging, etc.
- More modules on any given roof or utility project
- Allows uneven strings and different orientations
- 99.6% CEC weighted efficiency

The Safest Solar Available

Detects and deactivates safety threats ensuring a worry-free solar experience:

- PV-Safe technology eliminates the voltage of individual solar panels when safety hazards are detected
- Automatic detection and prevention of safety hazards

IEC 61215 61730 | cULus CEC listed UL 1703 | CE | TÜV | PV CYCLE

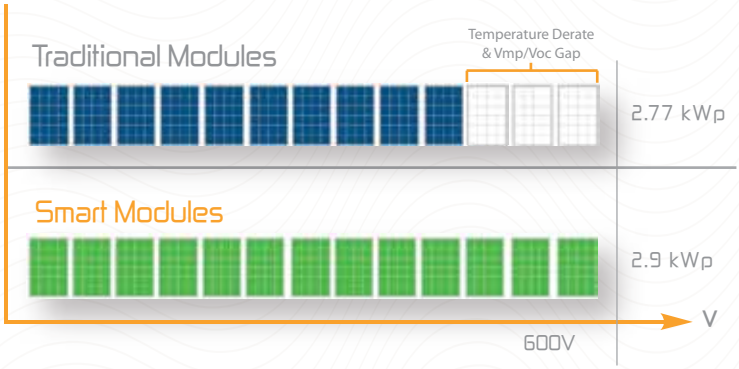
Smart Curve Technology

Optimized by Tigo energy

Tigo

What is Smart Curve?

Smart Curve technology limits the maximum voltage that a module can produce. This technology allows Upsolar to create a module with a much higher fill-factor by reducing the maximum voltage output of a module to be closer to Vmp.

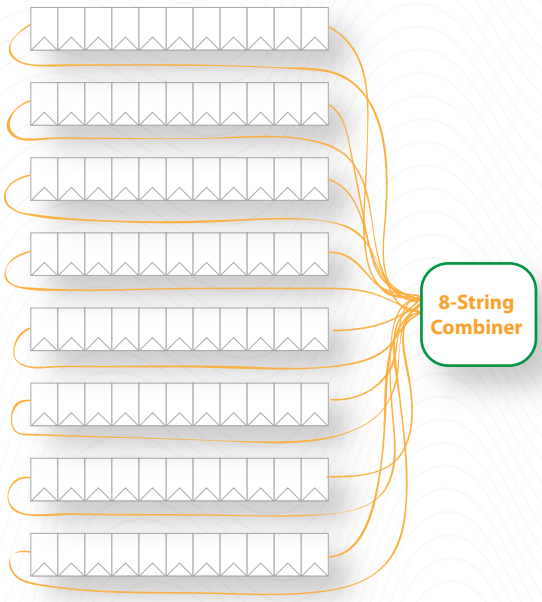


Modules with Smart Curve Technology:

- Have 15% lower Open Circuit Voltages than traditional modules
- Open Circuit Voltage is not affected by temperature (Coefficient of Voc = 0)
- Do not clip power even on extremely cold days
- Enable 30% longer strings and thus a higher average voltage
- Are CSA and TUV certified

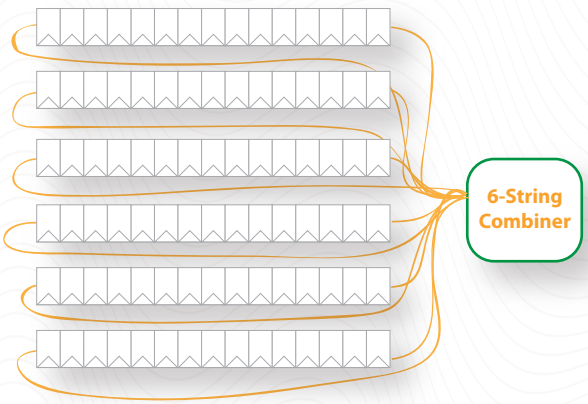
Longer Strings

Just like moving from 600V to 1000V or 1000V to 1500V systems, Smart Curve enables more modules per string with all the inherent BOS benefits.



Smart Curve enables 30% longer strings, resulting in:

- 30% fewer combiners, disconnects, DC feeders and home runs
- Reduced labor costs
- Higher average voltage across the year without a boost transformer
- ~0.4% lower I^2R losses



Upsolar Modules

Cell Type	No. of Cells	Backsheet Color	Frame	Min power	Max power
Mono 5”	72 cells	☐	Standard & ZEP	185 Wp	205 Wp
Mono 5”	72 cells	■	Standard & ZEP	180 Wp	200 Wp
Mono 6”	60 cells	☐	Standard & ZEP	250 Wp	270 Wp
Mono 6”	60 cells	■	Standard & ZEP	245 Wp	265 Wp
Poly 6”	60 cells	☐	Standard & ZEP	240 Wp	260 Wp
Poly 6”	60 cells	■	Standard & ZEP	235 Wp	255 Wp
Poly 6”	72 cells	☐	Standard	290 Wp	310 Wp

UP-EN-EU-042014-V3

Tigo
Poly 72 Cells

Ideal for Commercial Rooftops

Optimized by Tigo energy

6" Polycrystalline PV module 72 cells

Electrical Characteristics @ STC*

MODEL	UP-M290PT	UP-M295PT	UP-M300PT	UP-M305PT	UP-M310PT
Max Power Pm (Wp)	290	295	300	305	310
Max Power Voltage Vm (V)	35.5	35.7	35.9	36.1	36.3
Max Power Current Im (A)	8.17	8.26	8.36	8.45	8.54
Smart Curve Voltage (Voc**)	37.6	37.8	38.1	38.3	38.5
Short-Circuit Current Isc (A)	8.50	8.58	8.66	8.74	8.82
Module Efficiency	14.9%	15.2%	15.5%	15.7%	16.0%
Maximum System Voltage (V)	1000(IEC) / 1000(UL)				
Power Tolerance	±3%				
Series Fuse Rating (A)	15A				

*STC: Irradiance 1000 W/m², Module temperature 25ºC, AM=1.5

**Smart Curve technology reduces a module's open-circuit voltage to the Voc* value, which becomes the hard-limit of the output voltage.

Components & Mechanical Data

Front Glass	High Transparency Tempered Glass 0.157" // 4.0 mm
Junction Box	Tigo Maximizer™ MMJ – ES 50
Bypass Diode	3 diodes - International Rectifier 30CTQ100S
Output Cables	Amersol 37-713 (cross section: 4.0 mm²)
Connectors	MC4, (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	White multilayer polymer film
Temperature Range	-40°F to +194°F // -40°C to +90°C
Max Load	75 lbs / ft² (UL Standard) // 5400 Pa (IEC Standards)
Impact Resistance	Steel ball - 1.18 lbs // 535g dropped from 51" // 1.3 m high

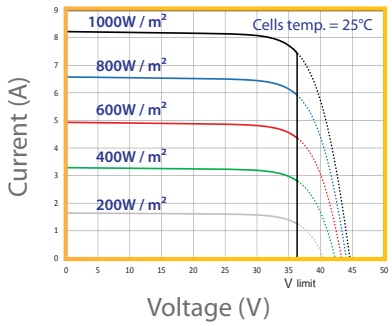
Specifications

Cells	Polycrystalline silicon solar cells 6" x 6" // 156 mm x 156 mm
Number of Cells	72 (6 x 12)
Dimensions (in // mm)	77 x 39.06 x 1.97 // 1956 x 992 x 50
Weight (lb // kg)	59.52 // 27.0

Temperature Coefficients

NOCT (°C)	45 ± 2
Temperature Coefficients of Isc (% / °C)	0.05 ± 0.01
Temperature Coefficients of Im (% / °C)	-0.02 ± 0.02
Temperature Coefficients of Pm (% / °C)	-0.43 ± 0.05
Temperature Coefficients of Voc (% / °C)	= 0

IV Curves



*Dotted line: std I-V curve (w/o Tigo)

● Deviation of Vm (V), Im (A), Voc (V) and Isc (A) of ±2.5%

Options Available

Black Type

Ideal for Commercial Rooftops

Optimized by Tigo energy

6" Monocrystalline PV module 60 cells

Tigo Mono 60 cells

Electrical Characteristics @ STC*

MODEL	UP-M250MT	UP-M255MT	UP-M260MT	UP-M265MT	UP-M270MT
Max Power Pm (Wp)	250	255	260	265	270
Max Power Voltage Vm (V)	30.0	30.2	30.4	30.6	30.8
Max Power Current Im (A)	8.34	8.44	8.55	8.66	8.77
Smart Curve Voltage (Voc**)	31.8	32.0	32.2	32.4	32.6
Short-Circuit Current Isc (A)	8.80	8.88	8.96	9.04	9.12
Module Efficiency	15.4%	15.7%	16.0%	16.3%	16.6%
Maximum System Voltage (V)	1000(IEC) / 1000(UL)				
Power Tolerance	±3%				
Series Fuse Rating (A)	15A				

*STC: Irradiance 1000 W/m², Module temperature 25ºC, AM=1.5

**Smart Curve technology reduces a module's open-circuit voltage to the Voc* value, which becomes the hard-limit of the output voltage.

Components & Mechanical Data

Front Glass	High Transparency Tempered Glass 0.125" // 3.2 mm
Junction Box	Tigo Maximizer™ MMJ – ES 50
Bypass Diode	3 diodes - International Rectifier 30CTQ100S
Output Cables	Amersol 37-713 (cross section: 4.0 mm²)
Connectors	MC4, (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	White multilayer polymer film
Temperature Range	-40°F to +194°F // -40°C to +90°C
Max Load	75 lbs / ft² (UL Standard) // 5400 Pa (IEC Standards)
Impact Resistance	Steel ball - 1.18 lbs // 535g dropped from 51" // 1.3 m high

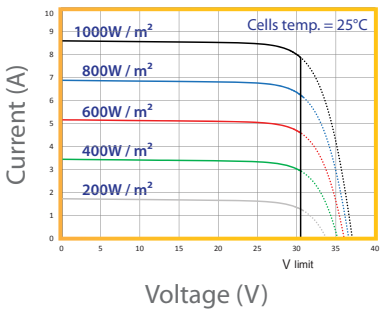
Specifications

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 1.57 // 1640 x 992 x 40
Weight (lb // kg)	41.9 // 19.0

Temperature Coefficients

NOCT (°C)	45 ± 2
Temperature Coefficients of Isc (% / °C)	0.05 ± 0.01
Temperature Coefficients of Im (% / °C)	-0.02 ± 0.02
Temperature Coefficients of Pm (% / °C)	-0.43 ± 0.05
Temperature Coefficients of Voc (% / °C)	= 0

IV Curves



*Dotted line: std I-V curve (w/o Tigo)

● Deviation of Vm (V), Im (A), Voc (V) and Isc (A) of ±2.5%

Options Available

Black Type

ZEP Frame

Tigo
Poly 60 Cells

Ideal for Commercial Rooftops

Optimized by Tigo energy

6" Polycrystalline PV module 60 cells

Electrical Characteristics @ STC*

MODEL	UP-M240PT	UP-M245PT	UP-M250PT	UP-M255PT	UP-M260PT
Max Power Pm (Wp)	240	245	250	255	260
Max Power Voltage Vm (V)	30.2	30.4	30.6	30.8	31.0
Max Power Current Im (A)	7.95	8.06	8.17	8.28	8.39
Smart Curve Voltage (Voc**)	32.0	32.2	32.4	32.6	32.9
Short-Circuit Current Isc (A)	8.40	8.45	8.50	8.55	8.60
Module Efficiency	14.8%	15.1%	15.4%	15.7%	16.0%
Maximum System Voltage (V)	1000(IEC) / 1000(UL)				
Power Tolerance	±3%				
Series Fuse Rating (A)	15A				

*STC: Irradiance 1000 W/m², Module temperature 25ºC, AM=1.5

**Smart Curve technology reduces a module's open-circuit voltage to the Voc* value, which becomes the hard-limit of the output voltage.

Components & Mechanical Data

Front Glass	High Transparency Tempered Glass 0.125" // 3.2 mm
Junction Box	Tigo Maximizer ™ MMJ – ES 50
Bypass Diode	3 diodes - International Rectifier 30CTQ100S
Output Cables	Amersol 37-713 (cross section: 4.0 mm²)
Connectors	MC4, (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	White multilayer polymer film
Temperature Range	-40°F to +194°F // -40°C to +90°C
Max Load	75 lbs / ft² (UL Standard) // 5400 Pa (IEC Standards)
Impact Resistance	Steel ball - 1.18 lbs // 535g dropped from 51" // 1.3 m high

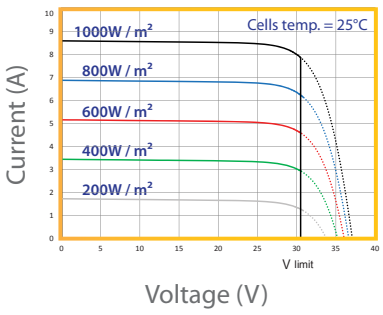
Specifications

Cells	Polycrystalline 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 1.57 // 1640 x 992 x 40
Weight (lb // kg)	41.9 // 19.0

Temperature Coefficients

NOCT (°C)	45 ± 2
Temperature Coefficients of Isc (% / °C)	0.05 ± 0.01
Temperature Coefficients of Im (% / °C)	-0.02 ± 0.02
Temperature Coefficients of Pm (% / °C)	-0.43 ± 0.05
Temperature Coefficients of Voc (% / °C)	= 0

IV Curves



*Dotted line: std I-V curve (w/o Tigo)

● Deviation of Vm (V), Im (A), Voc (V) and Isc (A) of ±2.5%

Options Available

Black Type

ZEP Frame

Project references

Project Location
FRANCE, La Palme
Total Output Power
5.1 MWp
Technology
N/A
Name of the Client
JMB
Module Type
UP-M190M
Type of Area
Open area

Project Location
FRANCE, Vias
Total Output Power
1 MWp
Technology
N/A
Name of the Client
JMB
Module Type
UP-M180M
Type of Area
Commercial Rooftop

Project Location
BELGIUM, Retie
Total Output Power
4.32 kWp
Technology
N/A
Name of the Client
IZEN
Module Type
UP-M180MB
Type of Area
Residential Rooftop

Project Location
FRANCE, Vendres
Total Output Power
4.4 MWp
Technology
N/A
Name of the Client
JMB
Module Type
UP-M190M
Type of Area
Commercial Rooftop

Project references

Project Location
CANADA, Colombie
Total Output Power
46.8 kWp
Technology
N/A
Name of the Client
Focused Energy
Module Type
UP-M225P
Type of Area
Open area

Project Location
FRANCE, Cernay
Total Output Power
253 kWp
Technology
N/A
Name of the Client
Spie Est
Module Type
UP-M225P
Type of Area
Rooftop of a supermarket

Project Location
USA, California
Total Output Power
780 kWp
Technology
N/A
Name of the Client
JKB Energy
Module Type
UP-M280P
Type of Area
Open area

Project Location
GERMANY
Total Output Power
13.68 kWp
Technology
N/A
Name of the Client
Orange Solar
Module Type
UP-M180M
Type of Area
Residential Rooftop

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