High-quality modules Guaranteed

Innovation in product development

International brand recognition

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 240 MW in 2014. 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.

UPSOLAR BY THE NUMBERS

- Over 1 GW shipped since 2007
- 268 million USD in 2014 sales
- Representatives in 11 countries for 5 continents, 150 employees worldwide
- 500-600 MW of production capacity
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.
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 feature a singular trigger point that results in drastic coverage reductions after just 10 years, our Linear Peak Power Warranty offers a gradual ramp that more accurately corresponds to system performance over 25 years.

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.

STRONG REFERENCES GLOBALLY

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

- Flexible Production*
- UL 1000V Rated
- Reinforced Module Warranty
- Universal Design (residential, commercial, ground mounted)
- Best seller for its performance/price ratio
- Salt Mist and Ammonia Resistant

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 feature a singular trigger point that results in drastic coverage reductions after just 10 years, our Linear Peak Power Warranty offers a gradual ramp that more accurately corresponds to system performance over 25 years.

Upsolar has teamed up with AIG Energy Warranty, a division of AIG, to provide system owners with a second layer of warranty protection through a deductible-free protection plan** that insures up to 90 percent of equipment costs and delivers peace of mind for years to come.

*Upsolar has expanded its manufacturing operations in Asia, Europe and North America to meet the needs of a global customer base. Please contact your sales representative to learn more about our BAA and TAA-compliant module offerings. **Coverage may not be available in all jurisdictions and is subject to actual policy language. Insurance and services provided by member companies of American International Group, Inc.
### 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 1.38 // 1640 x 992 x 35

**Weight (lb // kg)**
40.8 // 18.5

### Temperature Coefficients

- **NOCT (°C)**
  45 ± 2

- **Temperature Coefficients of Isc (% / °C)**
  0.05 ± 0.01

- **Temperature Coefficients of Voc (% / °C)**
  -0.30 ± 0.02

- **Temperature Coefficients of Im (% / °C)**
  -0.02 ± 0.02

- **Temperature Coefficients of Vm (% / °C)**
  -0.42 ± 0.03

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

### IV Curves

- **Cells temp. = -25°C**

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

### Rear View

- **Drainage holes**
- **Junction Box**
- **Mounting slots**
- **Label**
- **Barcode label**
- **Ground holes**
- **Connectors**

### Options Available

- **SolarEdge Integrated**
- **Tigo Integrated**
**Key Features**

- Flexible Production*
- UL 1000V Rated
- Reinforced Module Warranty
- Universal Design (residential, commercial)
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Delivering safe solar

Poly Series

6” PV Module 60 cells

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<td>Power Tolerance</td>
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<tr>
<td>Series Fuse Rating (A)</td>
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</tr>
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</table>

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

Electrical Characteristics @ STC*

** 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 compatible (IP67, IEC and UL approved)
- Frame: Anodized aluminium alloy type 6063-T5
- Encapsulation Material: EVA (0.018" // 0.45 mm ± 0.001" // 0.03 mm thickness)
- Back Sheet: Black multilayer polymer film
- Temperature Range: -40°F to +194°F // -40°C to +90°C
- Max Load: 75 lbs / 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 1.38 // 1640 x 992 x 35
- Weight (lb // kg): 40.8 // 18.5

** Temperature Coefficients **

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

** IV Curves **

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

** Options Available **

- SolarEdge Integrated
- Tigo Integrated

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UP-EN-US-072015-V3
6” Polycrystalline PV module 72 cells

Key Features

Flexible Production*

UL 1000V Rated

Reinforced Module Warranty

Reinforced Structure (thicker glass, stronger frame)

Ideal for ground mounted systems

Salt Mist and Ammonia Resistant

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.

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## Electrical Characteristics @ STC*

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<td>15.70%</td>
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<td>1000(UL)</td>
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<tr>
<td>Power Tolerance</td>
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<tr>
<td>Series Fuse Rating (A)</td>
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<td>20A</td>
<td></td>
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*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 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 +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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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<tr>
<td>Cells</td>
<td>Polycrystalline silicon solar cells 6” x 6” // 156 mm x 156 mm</td>
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<tr>
<td>Number of Cells</td>
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<tr>
<td>Dimensions (in // mm)</td>
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<td>Weight (lb // kg)</td>
<td>58.4 // 26.5</td>
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## Temperature Coefficients

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<tr>
<th>Parameter</th>
<th>Value</th>
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<tr>
<td>NOCT (°C)</td>
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<tr>
<td>Temperature Coefficients of Isc (% / °C)</td>
<td>0.05 ± 0.01</td>
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<tr>
<td>Temperature Coefficients of Voc (% / °C)</td>
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<tr>
<td>Temperature Coefficients of Im (% / °C)</td>
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<tr>
<td>Temperature Coefficients of Vm (% / °C)</td>
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<tr>
<td>Temperature Coefficients of Pm (% / °C)</td>
<td>-0.43 ± 0.05</td>
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</tbody>
</table>

## IV Curves

![IV Curves Graph](image)

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

## Options Available

- SolarEdge Integrated
- Tigo Integrated

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Monocrystalline PV module 60 cells

Key Features

Flexible Production*

UL 1000V Rated

Reinforced Module Warranty

High Efficiency

Universal Design (residential, commercial, ground mounted)

Salt Mist and Ammonia Resistant

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.

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Delivering safe solar

Mono Series
6" PV Module 60 cells
1000(IEC)/1000(UL)
0/+3%
20A
High Transparency Tempered Glass 0.125" // 3.2 mm
3 diodes
1.0 m // IEC, UL approved (4 mm², 12AWG) (PV Wire Type)
EVA (0.018'' // 0.45 mm ± 0.001'' // 0.03 mm thickness)
White multilayer polymer film
-40°F to +194°F // -40°C to +90°C
75 lbs / ft² (UL Standard) // 5400 Pa (IEC Standards)
Steel ball - 1.18 lbs // 535 g dropped from 51" // 1.3 m high
IP 65 or above

Specifications
Cells Monocrystalline silicon solar cells 6" x 6" // 156 mm x 156 mm
Number of Cells 60 (6 x 10)
Cell Diameter 7.9" // 200 mm or above
Dimensions (in // mm) 64.57 x 39.06 x 1.38 // 1640 x 992 x 35
Weight (lb // kg) 40.8 // 18.5

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

IV Curves

Options Available
SolarEdge Integrated
Tigo Integrated

Cells temp. = 25°C
1000W / m²
800W / m²
600W / m²
400W / m²
200W / m²

Rear View

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Key Features

Flexible Production*

UL 1000V Rated

Reinforced Module Warranty

High Efficiency

Universal Design (residential, commercial)

Salt Mist and Ammonia Resistant

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Electrical Characteristics @ STC*

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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 compatible (IP67, IEC and UL approved)
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- 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 or above
- Number of Cells: 60 (6 x 10)
- Dimensions (in // mm): 64.57 x 39.06 x 1.38 // 1640 x 992 x 35
- Weight (lb // kg): 40.8 // 18.5

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- NOCT (°C): 45 ± 2
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- Temperature Coefficients of Im (% / °C): -0.02 ± 0.02
- Temperature Coefficients of Vm (% / °C): -0.42 ± 0.03
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IV Curves

Options Available

- SolarEdge Integrated
- Tigo Integrated
Key Features

- Flexible Production*
- UL 1000V Rated
- Reinforced Module Warranty
- Reinforced Structure (thicker glass, stronger frame)
- Ideal for ground mounted systems
- Salt Mist and Ammonia Resistant

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 feature a singular trigger point that results in drastic coverage reductions after just 10 years, our Linear Peak Power Warranty offers a gradual ramp that more accurately corresponds to system performance over 25 years.

Upsolar has teamed up with AIG Energy Warranty, a division of AIG, to provide system owners with a second layer of warranty protection through a deductible-free protection plan** that insures up to 90 percent of equipment costs and delivers peace of mind for years to come.

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*Upsolar has expanded its manufacturing operations in Asia, Europe and North America to meet the needs of a global customer base. Please contact your sales representative to learn more about our BAA and TAA-compliant module offerings. **Coverage may not be available in all jurisdictions and is subject to actual policy language. Insurance and services provided by member companies of American International Group, Inc.
Electrical Characteristics @ STC*

<table>
<thead>
<tr>
<th>MODEL</th>
<th>UP-M305M</th>
<th>UP-M310M</th>
<th>UP-M315M</th>
<th>UP-M320M</th>
<th>UP-M325M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Power Pm (Wp)</td>
<td>305</td>
<td>310</td>
<td>315</td>
<td>320</td>
<td>325</td>
</tr>
<tr>
<td>Max Power Voltage Vm (V)</td>
<td>36.2</td>
<td>36.4</td>
<td>36.6</td>
<td>36.8</td>
<td>37.0</td>
</tr>
<tr>
<td>Max Power Current Im (A)</td>
<td>8.43</td>
<td>8.52</td>
<td>8.61</td>
<td>8.70</td>
<td>8.78</td>
</tr>
<tr>
<td>Open-Circuit Voltage Voc (V)</td>
<td>45.5</td>
<td>45.8</td>
<td>46.1</td>
<td>46.4</td>
<td>46.7</td>
</tr>
<tr>
<td>Short-Circuit Current Isc (A)</td>
<td>8.88</td>
<td>8.96</td>
<td>9.04</td>
<td>9.12</td>
<td>9.20</td>
</tr>
<tr>
<td>Module Efficiency</td>
<td>15.7%</td>
<td>16.0%</td>
<td>16.2%</td>
<td>16.5%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Maximum System Voltage (V)</td>
<td>1000(IEC)/1000(UL)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Tolerance</td>
<td>0/+3%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series Fuse Rating (A)</td>
<td>20A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*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 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 +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 or above
Number of Cells: 72 (6 x 12)
Dimensions (in // mm): 77.01 x 39.06 x 1.57 // 1956 x 992 x 40
Weight (lb // kg): 58.4 // 26.5

Temperature Coefficients

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NOCT (°C)</td>
<td>45 ± 2</td>
</tr>
<tr>
<td>Temperature Coefficients of Isc (% / °C)</td>
<td>0.05 ± 0.01</td>
</tr>
<tr>
<td>Temperature Coefficients of Voc (% / °C)</td>
<td>-0.30 ± 0.02</td>
</tr>
<tr>
<td>Temperature Coefficients of Im (% / °C)</td>
<td>-0.02 ± 0.02</td>
</tr>
<tr>
<td>Temperature Coefficients of Vm (% / °C)</td>
<td>-0.42 ± 0.03</td>
</tr>
<tr>
<td>Temperature Coefficients of Pm (% / °C)</td>
<td>-0.43 ± 0.05</td>
</tr>
</tbody>
</table>

IV Curves

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

Options Available

- SolarEdge Integrated
- Tigo Integrated

**Upsolar is not responsible for damages caused by errors or omissions on this data sheet. All information is subject to change without notice.**
Project Location: New South Wales, Australia  
Module Type: Smart Modules  
Total Output Power: 58.5 MWp  
Project Type: Rooftop  
Client: SCE Energy

Project Location: Kozani, Greece  
Module Type: UP-M230P  
Total Output Power: 1.5 MWp  
Project Type: Ground-mount  
Client: Eordaia

Project Location: Vias, France  
Module Type: UP-M180M  
Total Output Power: 1 MWp  
Project Type: Carport  
Client: JMB

Project Location: Frankenthal, Germany  
Module Type: UP-M240P  
Total Output Power: 38.3 kWp  
Project Type: Rooftop  
Client: Deimling Solar

Project Location: Osoyoos, British Columbia, Canada  
Module Type: UP-M225P  
Total Output Power: 48.8 kWp  
Project Type: Ground-mount  
Client: Focused Energy

Project Location: La Palme, France  
Module Type: UP-M190M  
Total Output Power: 5.1 MWp  
Project Type: Ground-mount  
Client: JMB