

X3

10T~36T

THREE PHASE INVERTERS



X3 THREE PHASE INVERTER

SolaX have developed a range of three phase inverters unrivalled in the industry for their quality, reliability and efficiency.

The SolaX three-phase inverters boast a wide MPPT voltage range to allow for more energy harvesting and have a maximum input voltage of 1000V. In addition, all SolaX three-phase inverters are IP65 rated, have an integrated DC switch, WIFI as standard and an OptiCool temperature controlled fan.



X3



X3

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X3 THREE PHASE

ZDNY-TL10000 ZDNY-TL12000 ZDNY-TL15000 ZDNY-TL17000 ZDNY-TL20000

X3 THREE PHASE

X3-30T

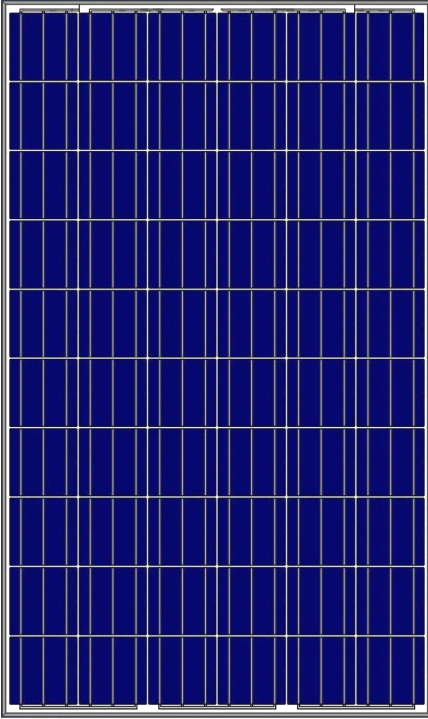
X3-36T

| INPUT (DC) | ZDNY-TL10000 ZDNY-TL12000 ZDNY-TL15000 ZDNY-TL17000 ZDNY-TL20000 | | | | | X3-30T | X3-36T |
|---|---|-----------|-----------|-----------|-----------|---|---------|
| Max. recommended DC power [W] | 10260 | 12300 | 15370 | 17420 | 20500 | 36000 | 43200 |
| Max. input DC voltage [V] | 1000 | | | | | 1000 | |
| Max. input current [A] | A:22/B:11 | A:22/B:11 | A:22/B:22 | A:22/B:22 | A:22/B:22 | A:34/B:34 | |
| MPPT voltage range [V] | 320-800 | 380-800 | 350-800 | 400-800 | 400-800 | 480-850 | 580-850 |
| Start input/output voltage [V] | 220/400 | | | | | 300 | |
| Number of MPP tracker/strings per MPP tracker | 2/A:3 B:1 | 2/A:3 B:1 | 2/A:3 B:3 | 2/A:3 B:3 | 2/A:3 B:3 | 2/A:4 B:4 | |
| OUTPUT (AC) | | | | | | | |
| AC nominal power [VA] | 10000 | 12000 | 15000 | 17000 | 20000 | 30000 | 36000 |
| Max. AC power [VA] | 10000 | 12000 | 15000 | 17000 | 20000 | 33000 | 40000 |
| Normal AC voltage; range [V] | 50; 44-55 / 60;55-65 | | | | | 3/PE 380, 400; +/--10%; 3/N/PE 380, 400; +/--10%; 3/PE 480; +/--10%; 3/N/PE 480; +/--10%; | |
| AC grid frequency; range [Hz] | 3/N/PE 230/400; 160-280 | | | | | 50;45-55 / 60;55-65 | |
| Max. AC current [A] | 16 | 20 | 24 | 25 | 29 | 48*3 | 48*3 |
| Power factor (full load) | 0.9 leading ~ 0.9lagging | | | | | 0.8 leading ~ 0.8 lagging | |
| Total harmonic distortion(THD) [%] | <3 | | | | | <2 | |
| POWER CONSUMPTION | | | | | | | |
| Standby power [W] | <10 | | | | | <7 | |
| EFFICIENCY | | | | | | | |
| MPPT efficiency [%] | 99.9 | | | | | 99.9 | |
| Euro efficiency [%] | 97.6 | | | | | 98.3 | |
| Max. efficiency [%] | 98.2 | | | | | 98.6 | |
| SAFETY & PROTECTION | | | | | | | |
| Over voltage protection | YES | | | | | YES | |
| Over current protection | YES | | | | | YES | |
| DC isolation impedance monitoring | YES(optional) | | | | | YES | |
| Ground fault current monitoring | YES | | | | | YES | |
| DC injection monitoring | YES | | | | | YES | |
| RCD protection | YES | | | | | YES | |
| Safety | IEC62109-1/IEC62109-2/AS3100 | | | | | IEC62109-1/IEC62109-2/AS3100 | |
| EMC | EN 61000-3-2/EN 61000-3-3/EN 61000-3-11/EN 61000-3-12/EN 61000-6-2/EN 61000-6-3 | | | | | EN 61000-3-2/EN 61000-3-3/EN 61000-3-11/EN 61000-3-12/EN 61000-6-2/EN 61000-6-3 | |
| Certification | G83;G59;VDE0126;VDE4105;CQC;IEC62172;IEC62116;IEC61683;IEC60068 | | | | | NB/T 32004-2013/ZVRT/VDE4105/G59/3/AS4777 | |
| ENVIRONMENTAL PARAMETERS | | | | | | | |
| Protection class | IP55 | | | | | IP65 | |
| Operating temperature [°C] | -25~+60 (derating at 45) | | | | | -20~ +60(derating at 45) | |
| Humidity [%] | 0~95 (non-condensing) | | | | | 0~95 | |
| Attitude [m] | 2000 | | | | | 2000 | |
| Storage temperature [°C] | -20~60 | | | | | -25~60 | |
| Noise emission [dB] | <50 | | | | | <50 | |
| DIMENSIONS & WEIGHT | | | | | | | |
| Dimensions (W*H*D) [mm] | 513 x 651.5 x 207 | | | | | 660*610*260 | |
| Weight [Kg] | 48 | 48 | 50.5 | 50.5 | 51 | 60 | |
| GENERAL DATA | | | | | | | |
| Topology | Transformerless | | | | | Transformerless | |
| Communication interface | RS485 / RS232 / WIFI (optional) / DRM | | | | | RS485 / WIFI (optional) / Ethernet / DRM | |
| Display | Backlight 128*64 point LCD | | | | | 4 LED | |
| Standard warranty(years) | 5-10 (Dependent On Territory) | | | | | 5-10 | |
| Cooling type | Forced-cooling | | | | | Forced-cooling | |



AS-6P30

POLYCRYSTALLINE MODULE



ADVANCED PERFORMANCE & PROVEN ADVANTAGES

- High module conversion efficiency up to 16.90% through advanced manufacturing technology.
- Low degradation and excellent performance under high temperature and low light conditions.
- Robust aluminum frame ensures the modules to withstand wind loads up to 2400Pa and snow loads up to 5400Pa.
- Positive power tolerance of 0 ~ +3 %.
- High ammonia and salt mist resistance.
- Potential induced degradation (PID) resistance.

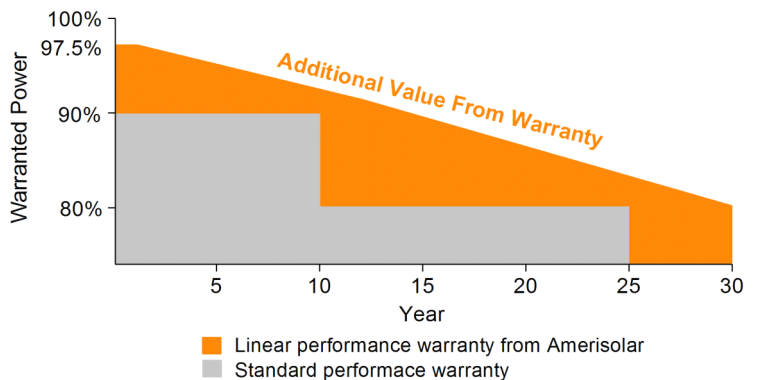
CERTIFICATIONS

- IEC61215, IEC61730, IEC62716, IEC61701, UL1703, CE, ETL(USA), JET(Japan), J-PEC(Japan), MCS(UK), CEC(Australia), FSEC(FL-USA), CSI Eligible (CA-USA), Israel Electric(Israel), Kemco(South Korea), InMetro(Brazil), TSE(Turkey)
- ISO9001:2008: Quality management system
- ISO14001:2004: Environmental management system
- OHSAS18001:2007: Occupational health and safety management system

**Passionately
committed to
delivering innovative
energy solution**

SPECIAL WARRANTY

- 12 year limited product warranty.
- Limited linear power warranty: 12 years 91.2% of the nominal power output, 30 years 80.6% of the nominal power output.



ELECTRICAL CHARACTERISTICS AT STC

| | | | | | | | | |
|---------------------------------------|----------------|-------|-------|-------|-------|-------|-------|-------|
| Nominal Power (P_{max}) | 240W | 245W | 250W | 255W | 260W | 265W | 270W | 275W |
| Open Circuit Voltage (V_{OC}) | 37.7V | 37.9V | 38.0V | 38.1V | 38.2V | 38.3V | 38.4V | 38.5V |
| Short Circuit Current (I_{SC}) | 8.57A | 8.66A | 8.75A | 8.83A | 8.90A | 8.98A | 9.06A | 9.15A |
| Voltage at Nominal Power (V_{mp}) | 29.9V | 30.1V | 30.3V | 30.5V | 30.7V | 30.9V | 31.1V | 31.3V |
| Current at Nominal Power (I_{mp}) | 8.03A | 8.14A | 8.26A | 8.37A | 8.47A | 8.58A | 8.69A | 8.79A |
| Module Efficiency (%) | 14.75 | 15.06 | 15.37 | 15.67 | 15.98 | 16.29 | 16.60 | 16.90 |
| Operating Temperature | -40°C to +85°C | | | | | | | |
| Maximum System Voltage | 1000V DC | | | | | | | |
| Maximum Series Fuse Rating | 15A | | | | | | | |

STC: Irradiance 1000W/m², Cell temperature 25°C, AM1.5

ELECTRICAL CHARACTERISTICS AT NOCT

| | | | | | | | | |
|---------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Nominal Power (P_{max}) | 177W | 180W | 184W | 188W | 191W | 195W | 199W | 202W |
| Open Circuit Voltage (V_{OC}) | 34.7V | 34.9V | 35.0V | 35.1V | 35.2V | 35.3V | 35.4V | 35.5V |
| Short Circuit Current (I_{SC}) | 6.94A | 7.01A | 7.09A | 7.15A | 7.21A | 7.27A | 7.34A | 7.41A |
| Voltage at Nominal Power (V_{mp}) | 27.2V | 27.4V | 27.6V | 27.8V | 27.9V | 28.1V | 28.3V | 28.5V |
| Current at Nominal Power (I_{mp}) | 6.51A | 6.57A | 6.67A | 6.77A | 6.85A | 6.94A | 7.04A | 7.09A |

NOCT: Irradiance 800W/m², Ambient temperature 20°C, Wind Speed 1 m/s

MECHANICAL CHARACTERISTICS

| | |
|-------------------|--|
| Cell type | Polycrystalline 156x156mm(6x6inches) |
| Number of cells | 60 (6x10) |
| Module dimensions | 1640x992x40mm(64.57x39.06x1.57inches) |
| Weight | 18.5kg(40.8lbs) |
| Front cover | 3.2mm(0.13inches) low-iron tempered glass |
| Frame | Anodized aluminum alloy |
| Junction box | IP65 or IP67 |
| Cable | 4mm ² (0.006inches ²), 900mm(35.43inches) |
| Connector | MC4 or MC4 compatible |

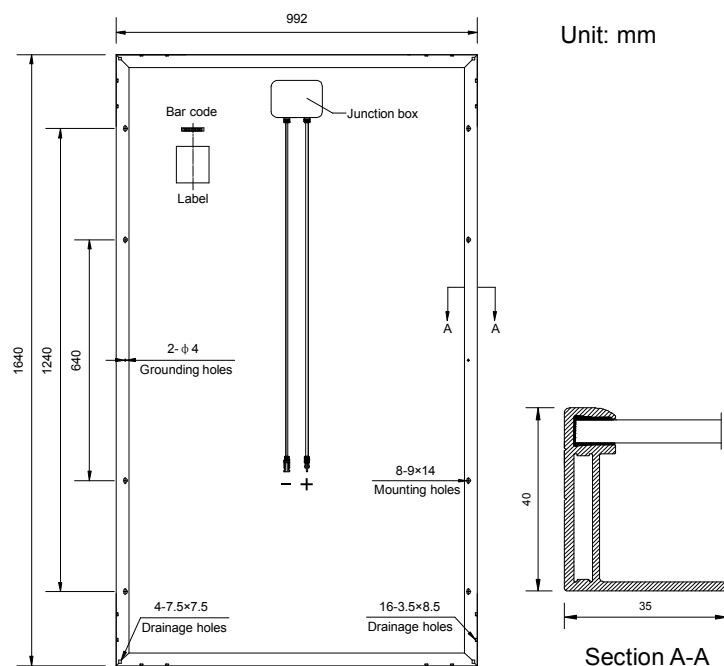
MECHANICAL CHARACTERISTICS

| | |
|---|-----------|
| Nominal Operating Cell Temperature (NOCT) | 45°C±2°C |
| Temperature Coefficients of P_{max} | -0.43%/°C |
| Temperature Coefficients of V_{OC} | -0.33%/°C |
| Temperature Coefficients of I_{SC} | 0.056%/°C |

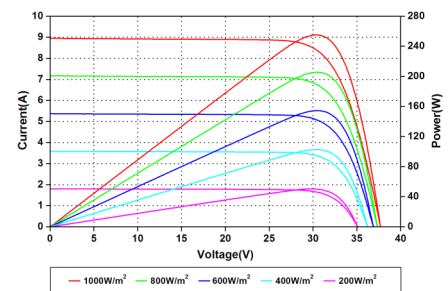
PACKAGING

| | |
|-----------------------------------|--------------|
| Standard packaging | 26pcs/pallet |
| Module quantity per 20' container | 312 pcs |
| Module quantity per 40' container | 728 pcs |

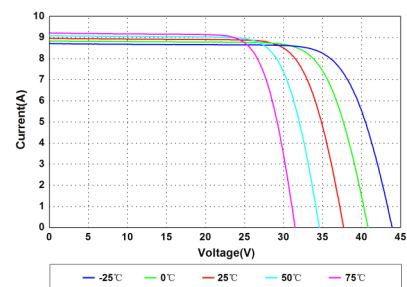
ENGINEERING DRAWINGS



IV CURVES



Current-Voltage and Power-Voltage Curves at Different Irradiances

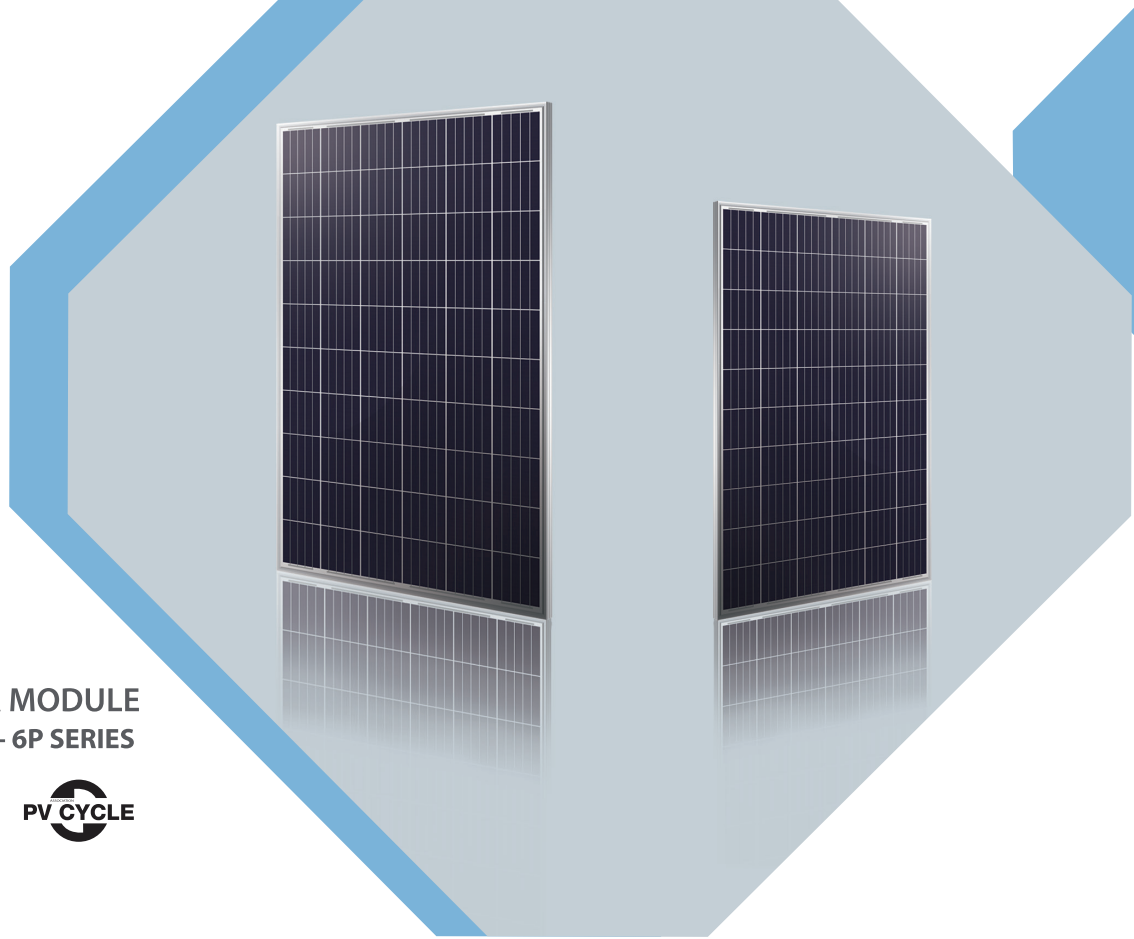


Current-Voltage Curves at Different Temperatures

Specifications in this datasheet are subject to change without prior notice.

255-275Watt

POLYCRYSTALLINE SOLAR MODULE
UNIVERSAL SOLAR USG - XXX - 6P SERIES



ANTI PID Anti P.I.D. Module
Protection against crystalline performance degradation. Passed TÜV SÜD Germany - system voltage durability test



Up to 16.9% High Module Conversion Efficiency
Up to 16.9%, through superior cell technology and leading manufacturing capability



Triple EL Tested
Triple 100% Electroluminescence (EL) tests minimize breakage rate



Intensive Wind and Snow Load Tests
Entire module certified to withstand extreme wind (2400 Pascal) and snow loads (5400 Pascal)*



Superior Frame Design
Specially designed drainage holes and rigid construction prevent frames from deforming. Screw less frame design for a long term durability



4 BUSBAR Solar Cell
Superior cell technology with 4 busbars for improved module efficiency



Self Clean Effect
Anti-reflective, hydrophobic layer improves light absorption and reduces surface dust



Excellent Weak Light Performance
Excellent performance under low light environments to capture early morning and late evening sunlight



ISO 14001 9001 World Class Manufacturing Facilities
Our manufacturing facilities are ISO certified for Quality assurance and deliver world class products

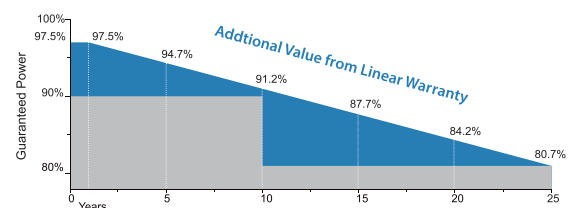


IP67 Rated Junction Box With 6 Diodes
IP67 rated junction box with 6 diodes enhancing output & Supports any orientation installation

Trust USG-XXX-6P Series for Reliable Performance

- World's trusted manufacturer of crystalline silicon photovoltaic module
- Un-rivalled manufacturing capacity and world-class technology
- Rigorous quality control meeting the highest international standards
- Tested for harsh environment

Industry Leading Australian Local Warranty



12 YEARS Warranty on Product Material & Workmanship



25 YEARS Linear Power Output Warranty

255-275Watt

Electrical Characteristics

| | USG-255-6P | USG-260-6P | USG-265-6P | USG-270-6P | USG-275-6P | Unit |
|---|------------|------------|------------|------------|------------|------|
| Rated Power at STC (Pmp) | 255 | 260 | 265 | 270 | 275 | W |
| Power Tolerance | +/- 3% | +/- 3% | +/- 3% | +/- 3% | +/- 3% | W |
| Maximum Power at STC | 255+/-3% | 260+/-3% | 265+/-3% | 270+/-3% | 275+/-3% | W |
| Minimum Module Efficiency (η _m) | 15.67 | 15.98 | 16.29 | 16.59 | 16.90 | % |
| Open Circuit Voltage (Voc) | 37.20 | 37.30 | 37.40 | 38.40 | 38.50 | V |
| Short Circuit Current (Isc) | 9.02 | 9.12 | 9.22 | 8.82 | 8.88 | A |
| Maximum Power Voltage (Vmp) | 30.20 | 30.30 | 30.40 | 32.70 | 33.00 | V |
| Maximum Power Current (Imp) | 8.45 | 8.59 | 8.73 | 8.28 | 8.34 | A |
| Maximum System Voltage | 1000(TÜV) | | | | | V |
| Maximum Series Fuse Rating | 15 | | | | | A |

STC: Irradiance 1000 W/m² module temperature 25°C AM=1.5;

Power measurement tolerance: +/-3%

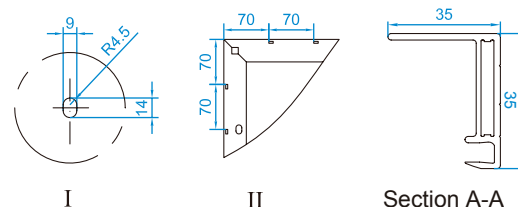
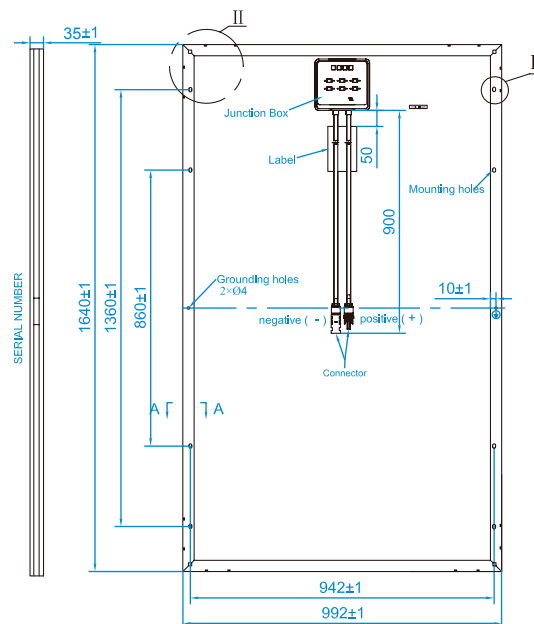
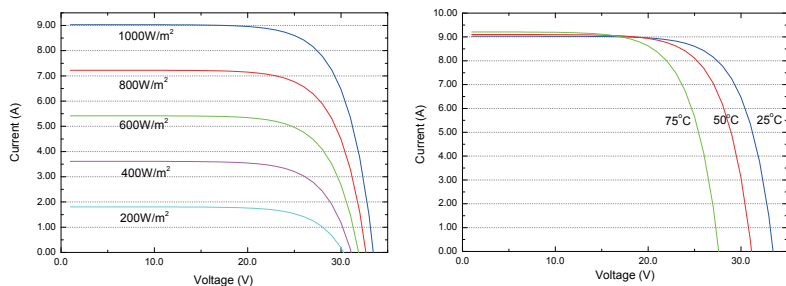
Temperature Characteristics

| | |
|---|------------|
| Pmax Temperature Coefficient | -0.42%/°C |
| Voc Temperature Coefficient | -0.32%/°C |
| Isc Temperature Coefficient | +0.04%/°C |
| Operating Temperature | -40~+85 °C |
| Nominal Operating Cell Temperature (NOCT) | 45±2 °C |

Packing Configuration

| Container | 20'GP | 40'GP | 40'HC |
|-----------------------|-------|-------|-------|
| Pieces per Pallet | 30 | 30 | 30/34 |
| Pallets per Container | 12 | 28 | 28 |
| Pieces per Container | 360 | 840 | 868 |

Current-Voltage & Power-Voltage Curve (USG-260-6P)



* All Dimensions in mm

* The above drawing is a graphical representation of the product.

Mechanical Specifications

| | |
|-----------------------|--|
| External Dimensions | 1640 x 992 x 35 mm |
| Weight | 18.5 kg |
| Solar Cells | Polycrystalline 156 x 156 mm (60pcs) |
| Front Glass | 3.2 mm tempered glass, low iron |
| Frame | Anodized/ Electrochromic aluminium alloy |
| Junction Box | IP67 |
| Output Cables | 4.0 mm ² , symmetrical lengths 900 mm |
| Connector | MC4 Compatible |
| Mechanical Load | 5400 Pa |
| Hailstone Impact Test | 80 km/h for 25 mm ice ball |