

# X3

10T~36T

## THREE PHASE INVERTERS



X3



X3

## 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.

### Get in touch now:

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# X3 THREE PHASE

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

# X3 THREE PHASE

X3-30T

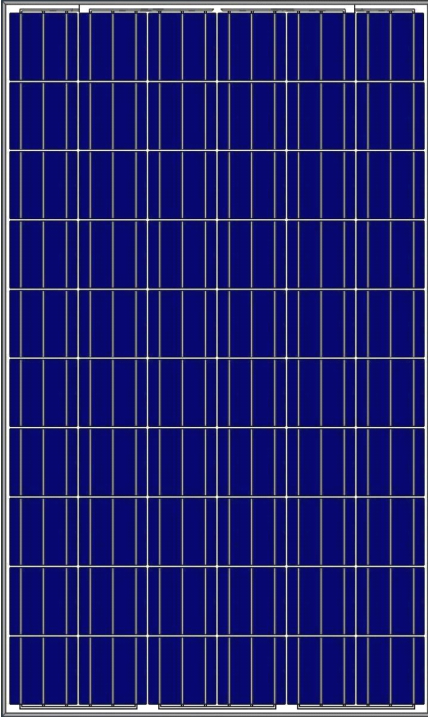
X3-36T

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.

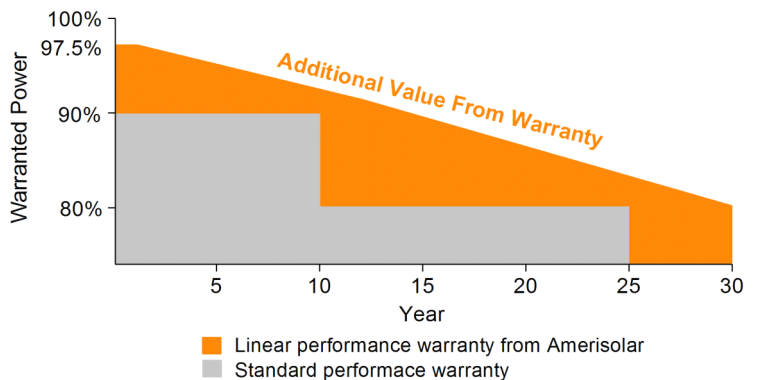
### CERTIFICATIONS

- 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/m<sup>2</sup>, 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/m<sup>2</sup>, 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 <sup>2</sup> (0.006inches <sup>2</sup> ), 900mm(35.43inches)
Connector	MC4 or MC4 compatible

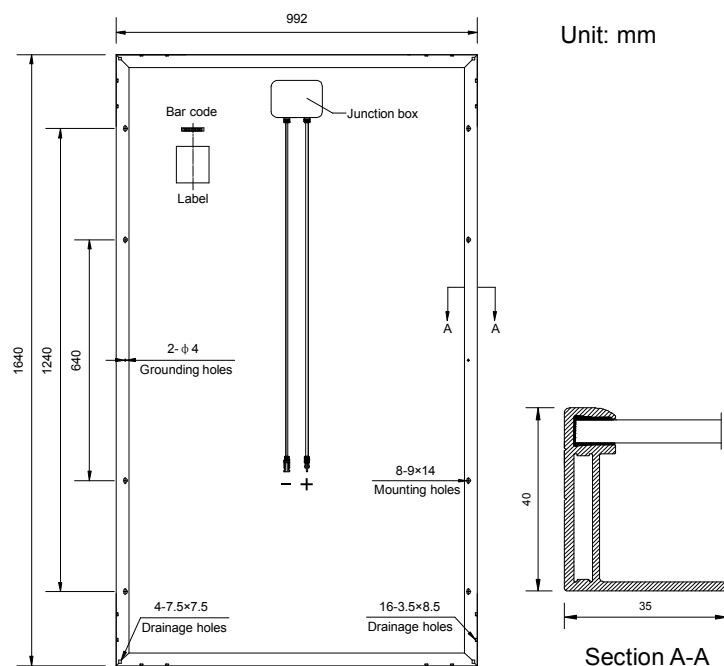
## MECHANICAL CHARACTERISTICS

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

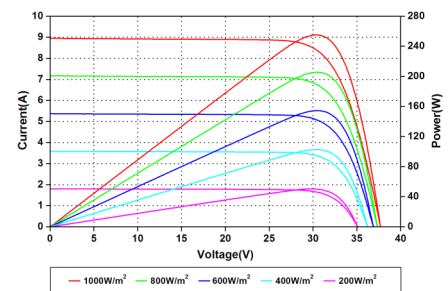
## PACKAGING

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

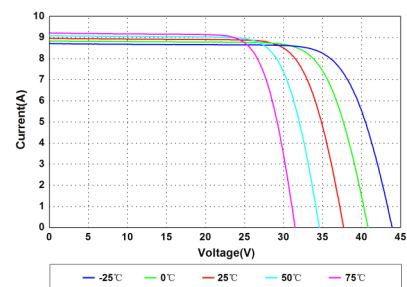
## ENGINEERING DRAWINGS



## IV CURVES



Current-Voltage and Power-Voltage Curves at Different Irradiances



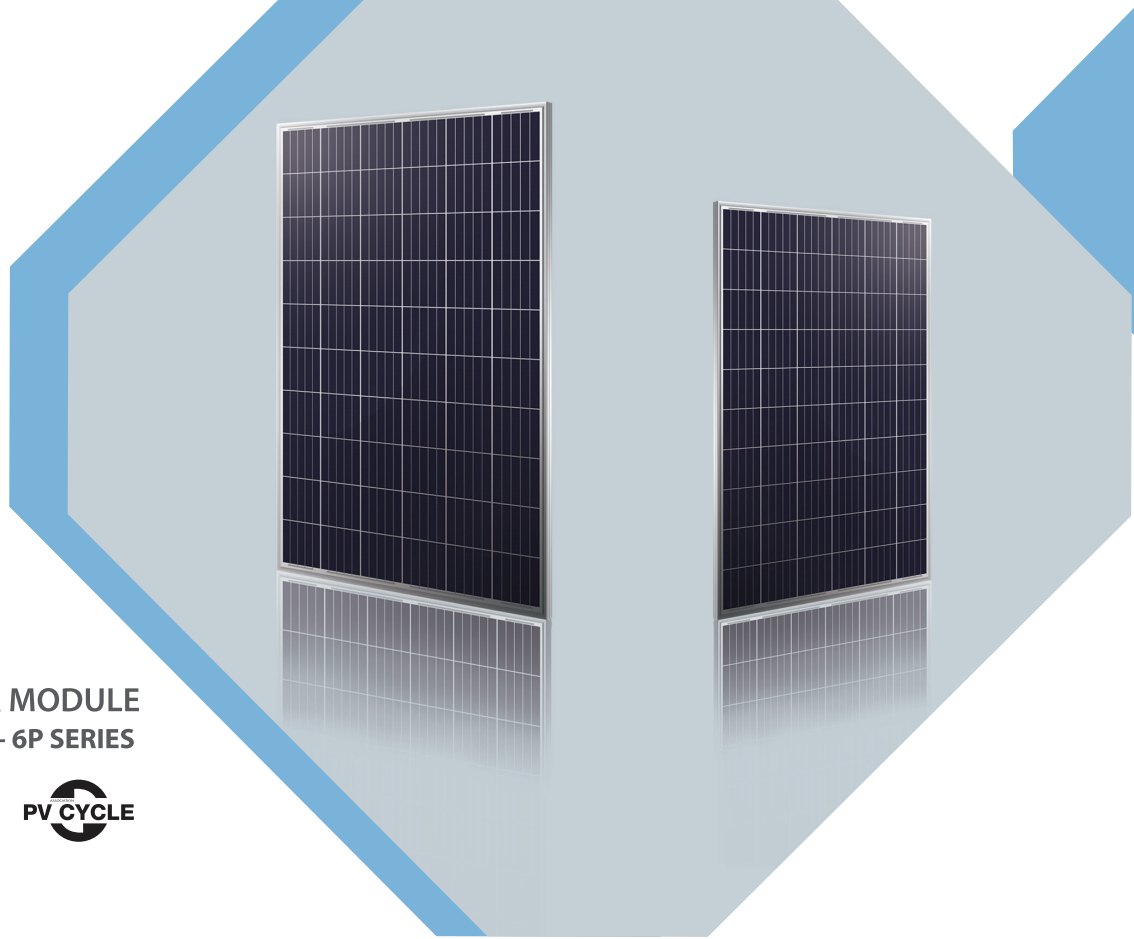
Current-Voltage Curves at Different Temperatures

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



# 255-275Watt

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



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



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



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



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



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



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



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



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



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

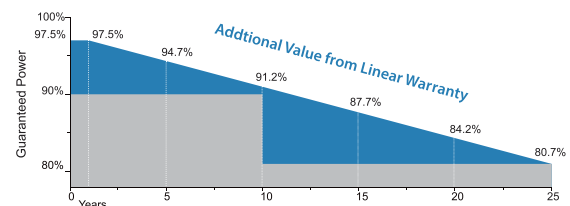


**IP67 Rated Junction Box With 6 Diodes**  
IP67 rated junction box with 6 diodes enhancing output & Supports any orientation installation

## 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



Warranty on Product Material & Workmanship



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 <sub>m</sub> )	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/m<sup>2</sup> module temperature 25°C AM=1.5;

Power measurement tolerance: +/-3%

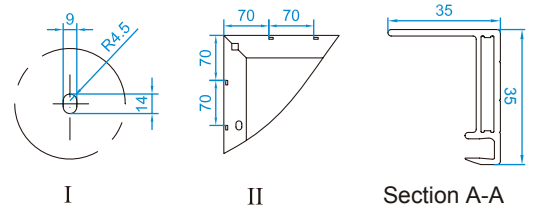
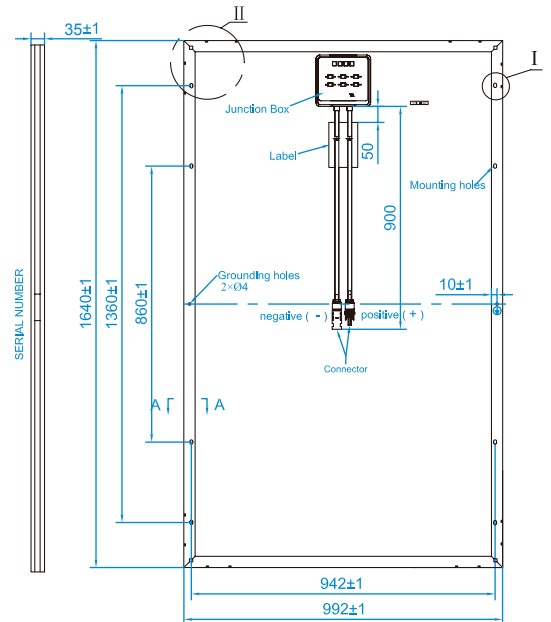
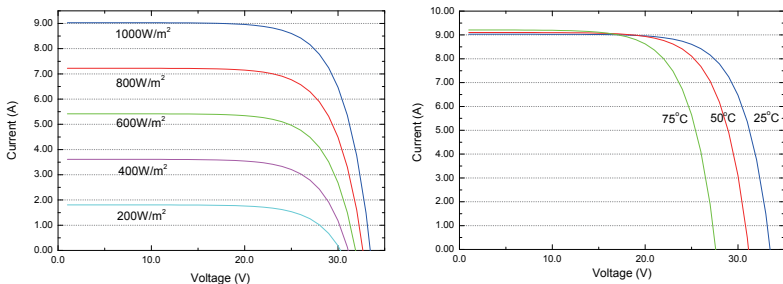
## Temperature Characteristics

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 <sup>2</sup> , symmetrical lengths 900 mm
Connector	MC4 Compatible
Mechanical Load	5400 Pa
Hailstone Impact Test	80 km/h for 25 mm ice ball