

# 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	

# 255-275<sub>W</sub>



## MANAGEMENT SYSTEM

**ISO 9001:** Quality management system  
**ISO 14001:** Standard for environmental management system  
**OHSAS 18001:** International standard for occupational health and safety assessment system

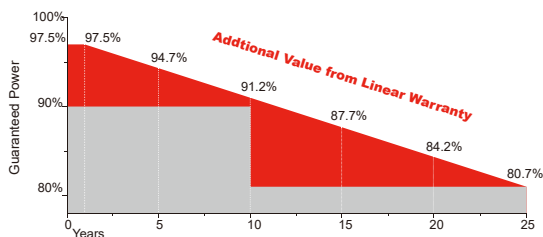
## PRODUCT CERTIFICATES



## INSURANCE



## WARRANTY



**10 YEARS** Guarantee on product material and workmanship  
**25 YEARS** linear power output warranty

## Safety



Safety for salt mist corrosion (IEC61701, tested in TÜV SÜD)



Safety for ammonia corrosion (IEC62716, tested in TÜV SÜD)



Safety for fire risk (Class C, tested in TÜV SÜD and Rheinland)

## Reliability



PID free products, passing TÜV SÜD system voltage durability test



World 1st company to pass "Thresher Test" and "On-site Power Measurement Validation" certificate



Bankable products

## Performance



Outstanding power output capability at low irradiance



Triple 100% Electroluminescence (EL) tests minimize breakage rate



Top rank in Photon yield measurement

# SRP-6PB SERIES 6 INCH 60 CELLS



**DuraFlex™**

\*DURAFLEX™ PRODUCTS ARE AVAILABLE UPON REQUEST  
\*BLACK FRAME / BLACK BACK-SHEET PRODUCTS ARE AVAILABLE UPON REQUEST.

## Electrical Characteristics (STC)

Module Type	SRP-255-6PB	SRP-260-6PB	SRP-265-6PB	SRP-270-6PB	SRP-275-6PB
Maximum Power at STC - $P_{mp}$ (W)	255	260	265	270	275
Open Circuit Voltage - $V_{oc}$ (V)	38.10	38.20	38.30	38.40	38.50
Short Circuit Current - $I_{sc}$ (A)	8.60	8.67	8.73	8.82	8.88
Maximum Power Voltage - $V_{mp}$ (V)	31.90	32.10	32.40	32.70	33.00
Maximum Power Current - $I_{mp}$ (A)	8.00	8.10	8.18	8.28	8.34
Module Efficiency STC- $\eta_m$ (%)	15.67	15.98	16.29	16.59	16.90

STC: Irradiance 1000 W/m<sup>2</sup> module temperature 25°C AM=1.5  
Power measurement tolerance: +/-3%

## Electrical Characteristics (NOCT)

Module Type	SRP-255-6PB	SRP-260-6PB	SRP-265-6PB	SRP-270-6PB	SRP-275-6PB
Maximum Power at STC - $P_{mp}$ (W)	188	192	195	199	203
Open Circuit Voltage - $V_{oc}$ (V)	35.24	35.34	35.42	35.52	35.61
Short Circuit Current - $I_{sc}$ (A)	6.88	6.93	6.98	7.06	7.10
Maximum Power Voltage - $V_{mp}$ (V)	29.67	29.85	30.12	30.41	30.69
Maximum Power Current - $I_{mp}$ (A)	6.34	6.43	6.47	6.54	6.61

NOCT: Irradiance 800 W/m<sup>2</sup> ambient temperature 20°C wind speed :1m/s  
Power measurement tolerance: +/-3%

Power Tolerance (W)	(0,+4.99)
Maximum System Voltage (V)	1000 (TÜV), 1000 (UL)
Maximum Series Fuse Rating (A)	15

## Temperature Characteristics

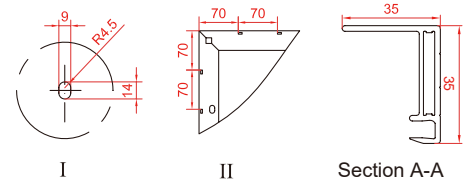
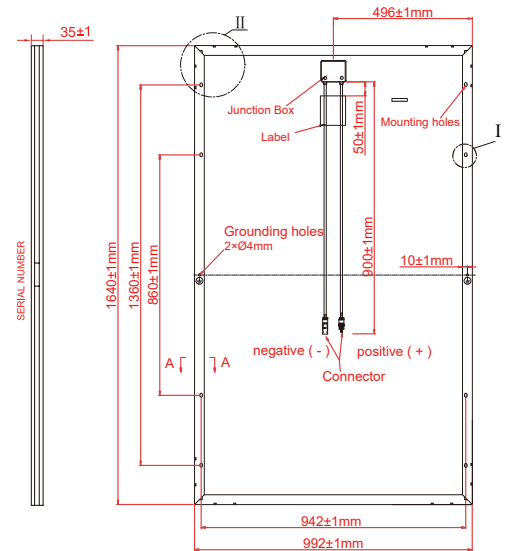
Pmax Temperature Coefficient	-0.42 %/°C
Voc Temperature Coefficient	-0.32 %/°C
Isc Temperature Coefficient	+0.04 %/°C
Operating Temperature	-40~+85 °C
Nominal Operating Cell Temperature (NOCT)	45±2 °C

## Packing Configuration

Container	20'GP	40'GP
Pieces per Pallet	30	30
Pallets per Container	12	28
Pieces per Container	360	840

## Mechanical Specifications

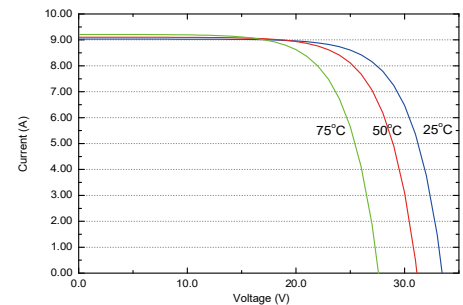
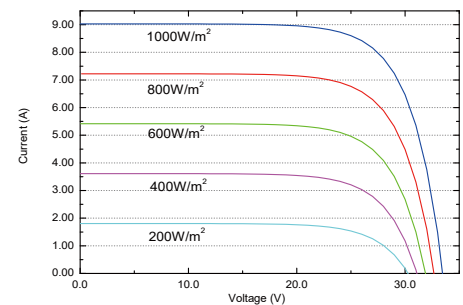
External Dimensions	1640 x 992 x 35 mm
Weight	19.0 kg
Solar Cells	Poly crystalline 156 x 156 mm (60pcs)
Front Glass	3.2 mm tempered glass, low iron
Frame	Anodized aluminium alloy
Junction Box	IP65/IP67
Output Cables	4.0 mm <sup>2</sup> , cable length:900 mm
Connector	MC4 Compatible
Mechanical Load	5400 Pa



\* All Dimensions in mm

\* The above drawing is a graphical representation of the product.  
For engineering quality drawings please contact SERAPHIM.

## I-V&P-V Curve (SRP-260-6PB)



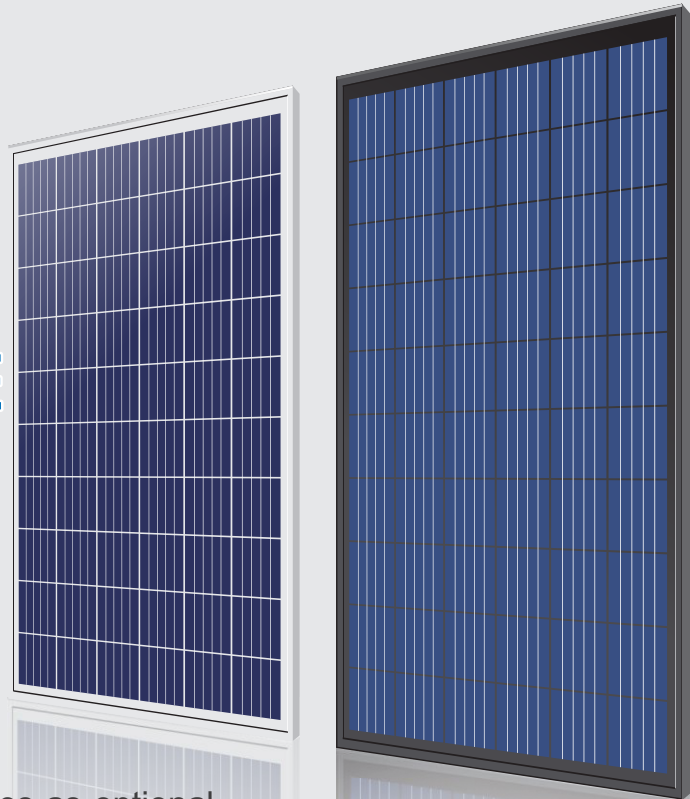


Premium Series

## SUNTELLITE MODULE POLYCRYSTALLINE

ZDNY-260P60	260Wp
ZDNY-265P60	265Wp
ZDNY-270P60	270Wp
ZDNY-275P60	275Wp

ZDNY-\*\*\*P60 All black series as optional



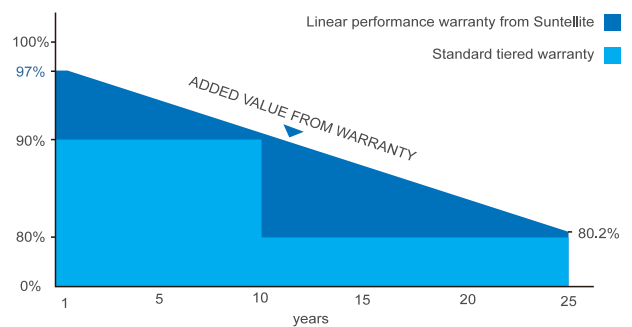
### Key Features

- High-yield modules with high level of efficiency :  
Automatic cell and module production with 100% quality control and product trace-ability.  
0 to +3% of positive power tolerance guaranteed  
PID Free(Potential Induced Degradation)
- Heavy Load mechanical resistance :  
TUV Certified (5400Pa tested against snow and 2400Pa against the wind )
- The production system is ISO9001, ISO14001, OHSAS18001 certified
- Fire Test Approved :  
Application class A, Safety Class II, Fire Rating A
- High Salt mist and ammonia resistance
- Enhanced design for easy installation and long-term reliability.



### Warranty

- 12 years limited workmanship warranty.
- No less than 97% output power in the first year.
- No more than 0.7% annual declination since the second year.
- 25 year warranty at 80.2% power output.
- Product liability and E&O insurance has been covered by Chubb Insurance

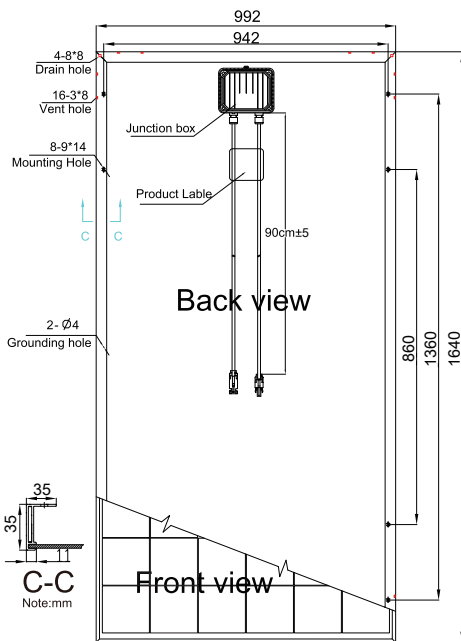




## Typical electrical characteristics

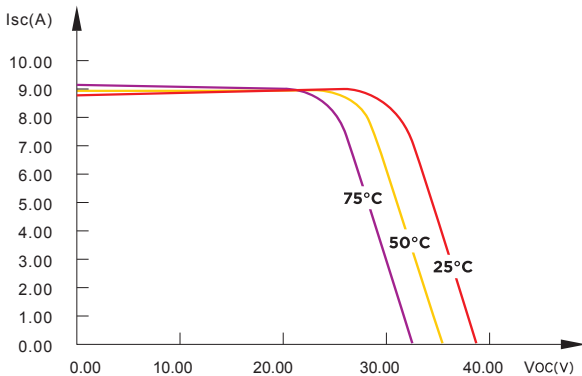
Characteristics	ZDNY-260P60	ZDNY-265P60	ZDNY-270P60	ZDNY-275P60
Max.Power(Pmax)	260Wp	265Wp	270Wp	275Wp
Optimum Operating Voltage(Vm)	31.91V	32.52V	32.87V	33.46V
Optimum Operating Current(Im)	8.15A	8.15A	8.22A	8.22A
Open-circuit Voltage(Voc)	39.10V	39.64V	39.92V <td 40.20V	
Short-circuit Current(Isc)	8.56A	8.56A	8.62A	8.66A
Cell Efficiency	17.80%	18.20%	18.50%	18.83%
Module efficiency	15.98%	16.29%	16.60%	16.90%

- STC (Standard Test Condition): Irradiance 1000W/m<sup>2</sup>, Module Temperature 25°C, AM=1.5
- NOCT: Irradiance 800W/m<sup>2</sup>, ambient Temperature 20°C, wind speed 1m/s



Solar Cell	Poly-crystalline 156*156mm
Output Tolerance(Pmax)	0 ~ +3%
Number of cells	60 cells in series
Module Dimension	1640*992*35mm
Weight	18.80kg
Max.System Voltage	1000V(TUV)/1000V(UL)
Max.Series Fuse Rating	15A
Output Cable	PV 4mm <sup>2</sup>
Cable Length	90cm±5
Number of bypass diodes	3
Temperature cycling range	(-40 ~ 85 °C )
NOCT	47°C ±2°C
Temperature coefficients of Isc	+0.046%/K
Temperature coefficients of Voc	-0.303%/K
Temperature coefficients of Pmax	-0.41%/K
Load Capacity	394pcs/20'GP
	896pcs/40'HQ

I-V Curves of PV module ZDNY-270P60 at various cell temperatures



I-V Curves of PV module ZDNY-270P60 at various solar irradiance

