

# TIED BALCONY MICRO GRID-CONNECTED SYSTEM

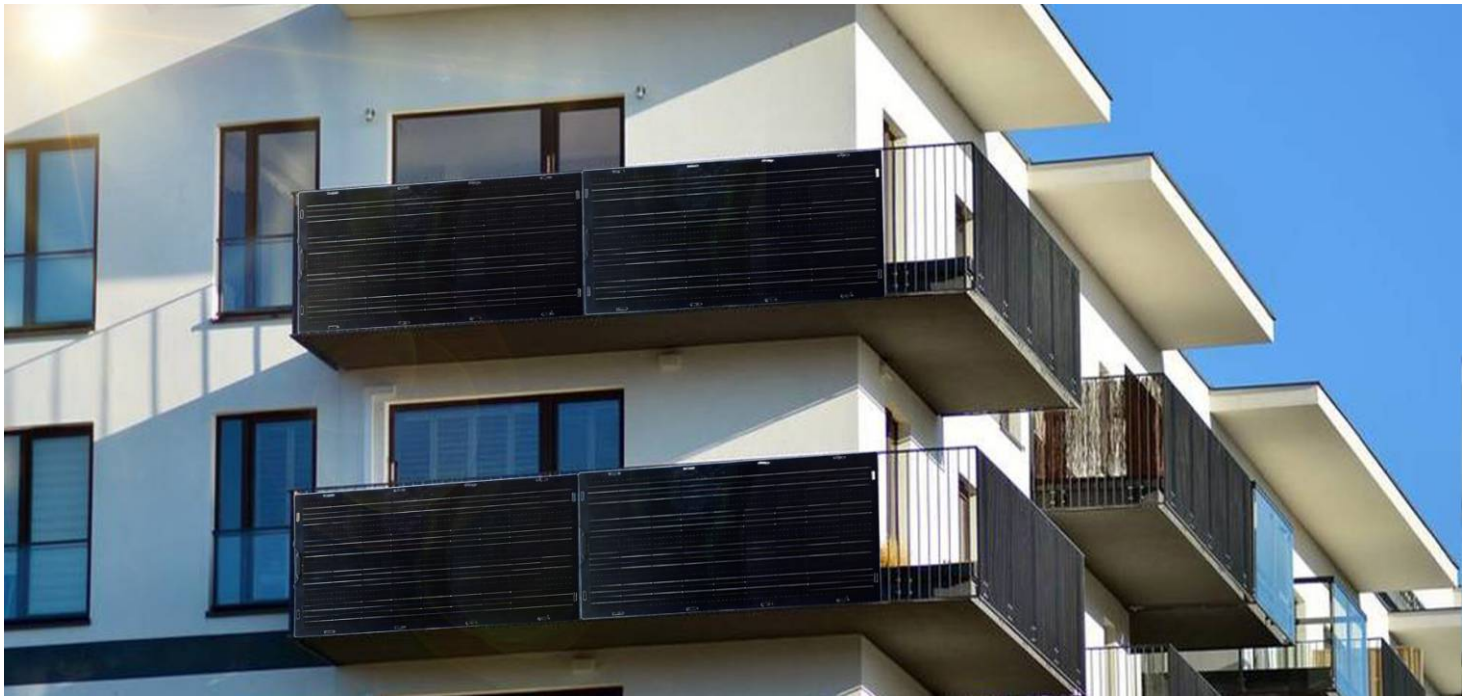
CONVERT LIGHT INTO ELECTRICITY



RANGE FROM 150W to 900W

LOW OPERATION COSTS

IDEAL CLEAN ENERGY



## BALCONY SOLAR PANELS ARE USEFUL IN APARTMENT

For those people who don't have a roof to put solar power system on. Balcony Solar Panels can overcome these difficulties by installing solar panels on balconies.

### Advantages

- 01 Installing solar panels on the balcony can be done on one's own. It doesn't require any help from solar installers.
- 02 People can take the solar PV with them easily when they are moving out of that apartment.
- 03 This system is simple because it is not tied to the apartment's behind-the-meter electrical grid. That means the system is clean and easy to install.
- 04 A solar panel covering in the balcony is capable of powering equipment of about 300w for about 5-6 hours or powering a mid-size house with led bulbs.
- 05 Two 150Watt solar PVs placed in a balcony can provide 10-180 watts output depending on the weather and time of the day.
- 06 It can be used for the consumption of various home devices. If there is no current consumption, the surplus goes to the city power grid.
- 07 With solar panels and a battery on the balcony, one can create a solar-powered charging station for electronics items like laptops, phones, wireless earbuds, a few 12V emergency lights, etc. It just help to meet some basic energy needs of a house.

\* Lightweight/Powerful/Durable.

**BALCONY SOLAR PANEL**

---

# MICRO GRID-CONNECTED SYSTEM

TIED BALCONY MICRO GRID-CONNECTED SYSTEM

A-GRADE MONO SILICON CELLS

## 150W~900W

- 95% LIGHT TRANSMITTANCE
- OVER 23% CONVERSION RATE
- LIGHT-WEIGHT
- LONG DURABILITY
- CUSTOMIZABLE



(1.5m cable)



(5m cable)



### SUPERIOR FEATURE

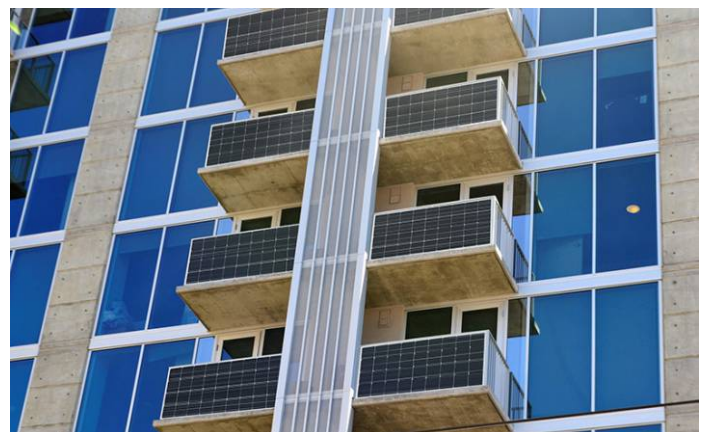
- 2/1 lighter than traditional glass solar panels.
- Featured with heat, fire, corrosion and UV resistance etc.
- High light transmittance & better heat dissipation.
- Applicable for various scenarios.

### PRODUCT CERTIFICATION

ISO 9001:2015: ISO    ISO 14001: 2015: ISO  
IEC 61215 2nd Edition (2005)  
RoHS EBO1909058-V150 (EU)2015/ 863  
EMC 2004/108/EC BCTC-141212557

### GREAT RELIABILITY

- Lower internal current, lower hot spot temperature.
- Minimizes micro-crack impacts
- Enhanced product warranty on materials and workmanship.



\* Lightweight/Powerful/Durable.

**BALCONY SOLAR PANEL**



## APPLICATION SCENARIOS



- Household distributed microgrid: Home roof distributed / home courtyard distributed / home photovoltaic solar room.
- Commercial real estate intelligent microgrid: used for commercial electricity of enterprises.
- Intelligent Microgrid of Public Buildings: Integrated Photovoltaic Wall / High-speed Railway Station / Photovoltaic Building in School / Hospital Exhibition Hall .
- Public facilities system: photovoltaic mobile signal transmission tower / photovoltaic bus stop / photovoltaic sunshade .
- Industrial Park Island Intelligent Microgrid .

**Shenzhen Solarparts Inc.** takes technology as the driving force to empower the traditional manufacturing industry. Our products cover mono solar panels, poly solar panels, household power generation systems, small power supplies and solar chargers, etc. We also provide OEM and ODM services that comprehensively meet the personalized needs of customers.

\* Lightweight/Powerful/Durable.

**BALCONY SOLAR PANEL**

---

## BILL OF MATERIALS

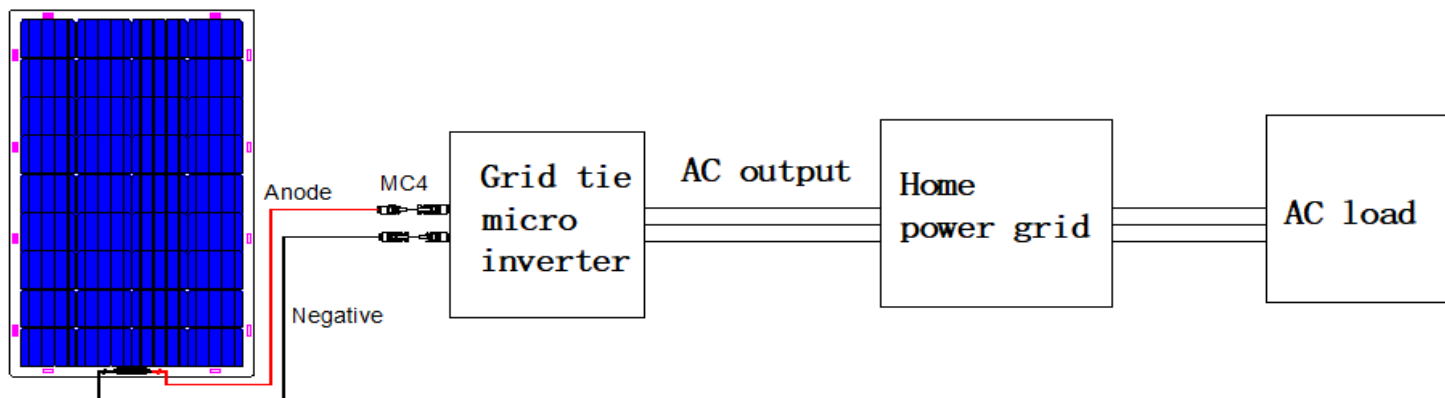
Green: 150W / 300W / 600W

Silver: 300W/ 600W / 1200W

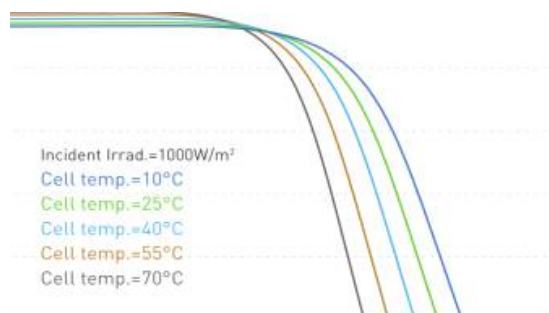
Eg: Green 150W

Type	Specifcation	Quantity
Solar panel	150W/19.8V 1155*715*3mm	1
Grid tie micro inverter	180W/230V	1
Cable	Brown/Blue/Green three colar cable, 3*0.75mm <sup>2</sup> , 5M, with Ohmmeter plug and Waterproof plug	1
bind	The length of the binding tape is X width 500x30mm	12

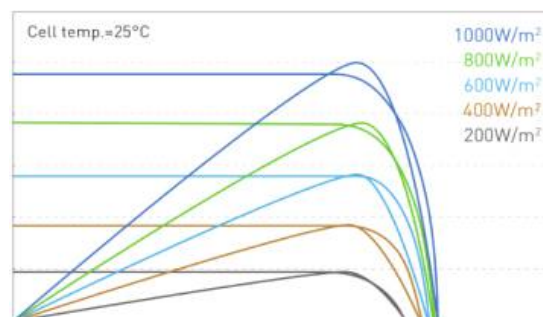
## ELECTRICAL CONNECTION DIAGRAM



Output of different illumination intensity :



Output of different temperature:



\* Standard test conditions measured values (irradiance 1000 W/m<sup>2</sup>, cell temperature 25 ° C, atmospheric mass AM1.5).

**BALCONY SOLAR PANEL**

## BILL OF MATERIALS

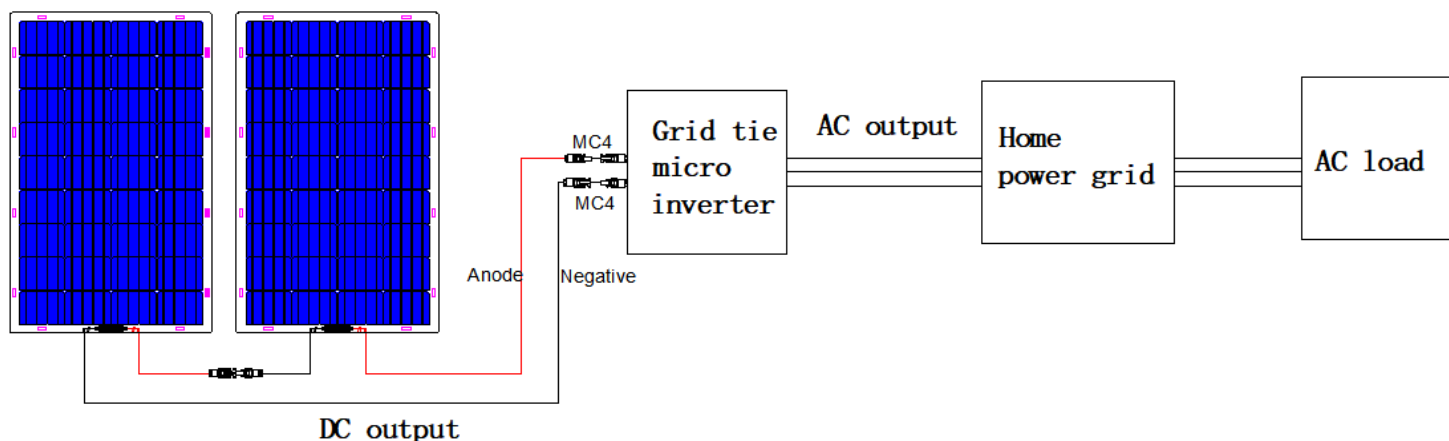
Green: 150W / 300W / 600W

Silver: 300W / 600W / 900W

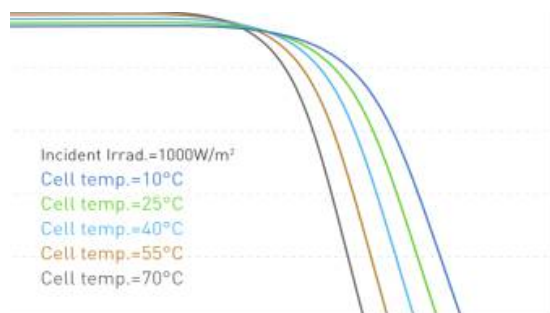
Eg: Green/Silver 300W

Type	Specifcation	Quantity
Solar panel	150W/19.8V 1155*715*3mm	2
Grid tie micro inverter	300W/230V	1
Cable	Brown/Blue/Green three colar cable, 3*0.75mm <sup>2</sup> , (5M/1.5M), with Ohmmeter plug and Waterproof plug	1
bind	The length of the binding tape is X width 500x30mm	24

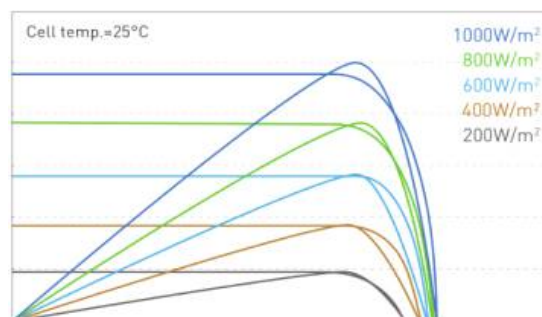
## ELECTRICAL CONNECTION DIAGRAM



Output of different illumination intensity :



Output of different temperature:



\* Standard test conditions measured values (irradiance 1000 W/m<sup>2</sup>, cell temperature 25 ° C, atmospheric mass AM1.5.

**BALCONY SOLAR PANEL**

## BILL OF MATERIALS

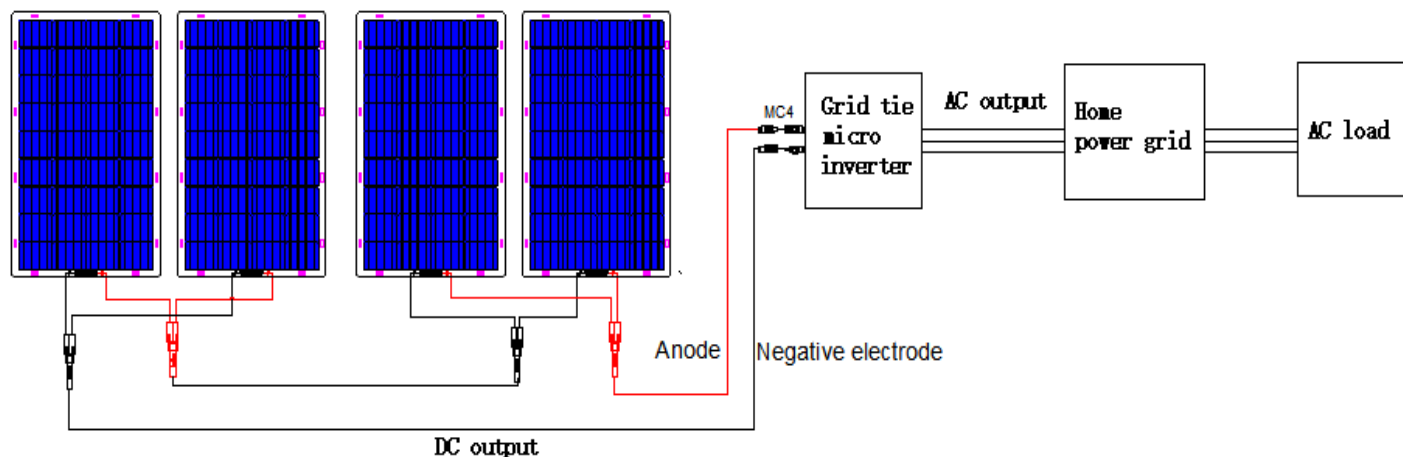
Green: 150W / 300W / 600W

Silver: 300W / 600W / 900W

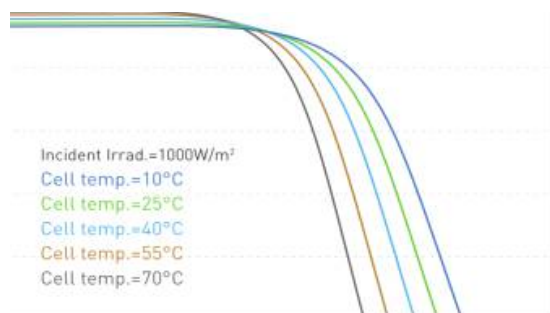
Eg: Green/Silver600W

Type	Specifcation	Quantity
Solar panel	150W/19.8V 1155*715*3mm	4
Grid tie micro inverter	300W/230V	1
Cable	Brown/Blue/Green three colar cable, 3*0.75mm <sup>2</sup> , (5M/1.5M), with Ohmmeter plug and Waterproof plug	1
bind	The length of the binding tape is X width 500x30mm	48

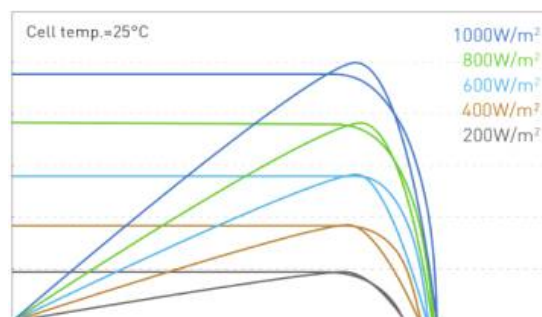
## ELECTRICAL CONNECTION DIAGRAM



Output of different illumination intensity :



Output of different temperature:



\* Standard test conditions measured values (irradiance 1000 W/m<sup>2</sup>, cell temperature 25 ° C, atmospheric mass AM1.5).

**BALCONY SOLAR PANEL**



## BILL OF MATERIALS

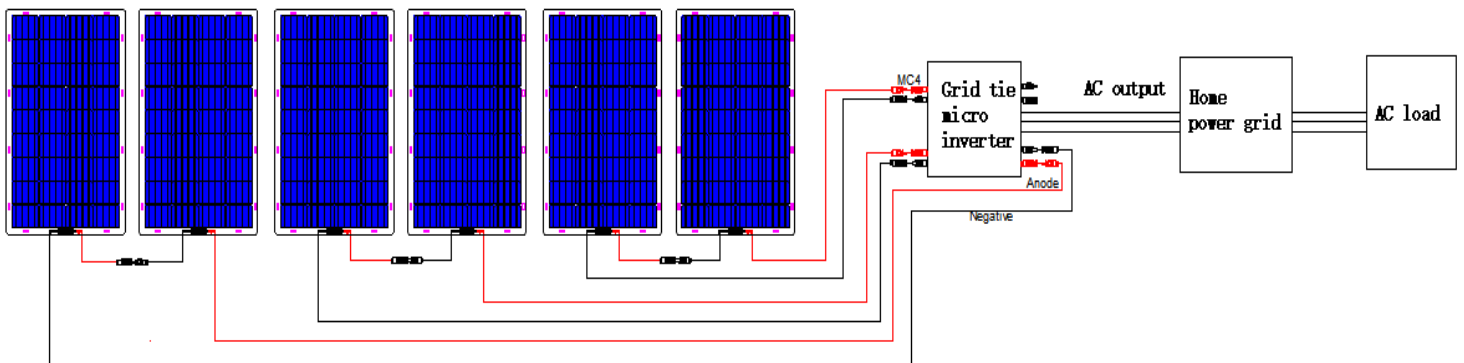
Green: 150W / 300W / 600W

Silver: 300W / 600W / **900W**

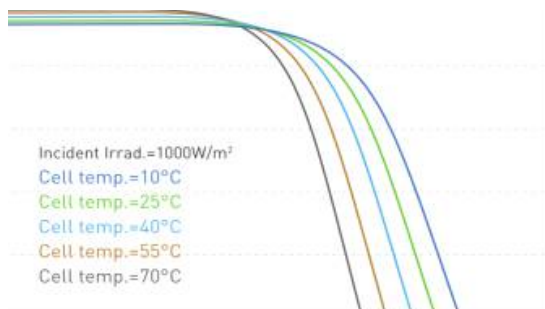
Eg: Silver 900W

Type	Specifcation	Quantity
Solar panel	150W/19.8V 1155*715*3mm	6
Grid tie micro inverter	300W/230V	1
Cable	Brown/Blue/Green three colar cable, 3*0.75mm <sup>2</sup> , 1.5M, with Ohmmeter plug and Waterproof plug	1
bind	The length of the binding tape is X width 500x30mm	72

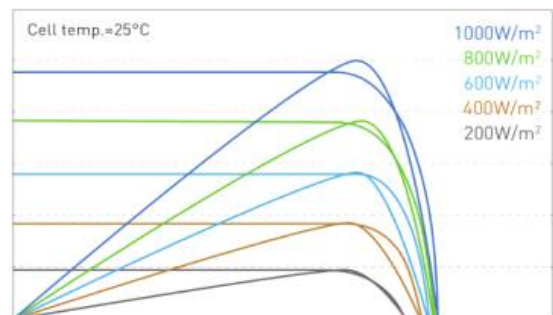
## ELECTRICAL CONNECTION DIAGRAM



Output of different illumination intensity :



Output of different temperature:



\* Standard test conditions measured values (irradiance 1000 W/m<sup>2</sup>, cell temperature 25 ° C, atmospheric mass AM1.5.

**BALCONY SOLAR PANEL**



## Solar panel:

### Electrical parameter) | STC

Rated Power	Pmax(W)	150W
Operating Voltage	Vmp(V)	19.8V
Operating Current	Imp(A)	7.58A
Open Circuit Voltage	Voc(V)	23.76V
Short Circuit Current	Isc(A)	8.33A
Module Efficiency	(%)	18.67%
Performance Tolerance	(%)	±5%

### Structural performance:

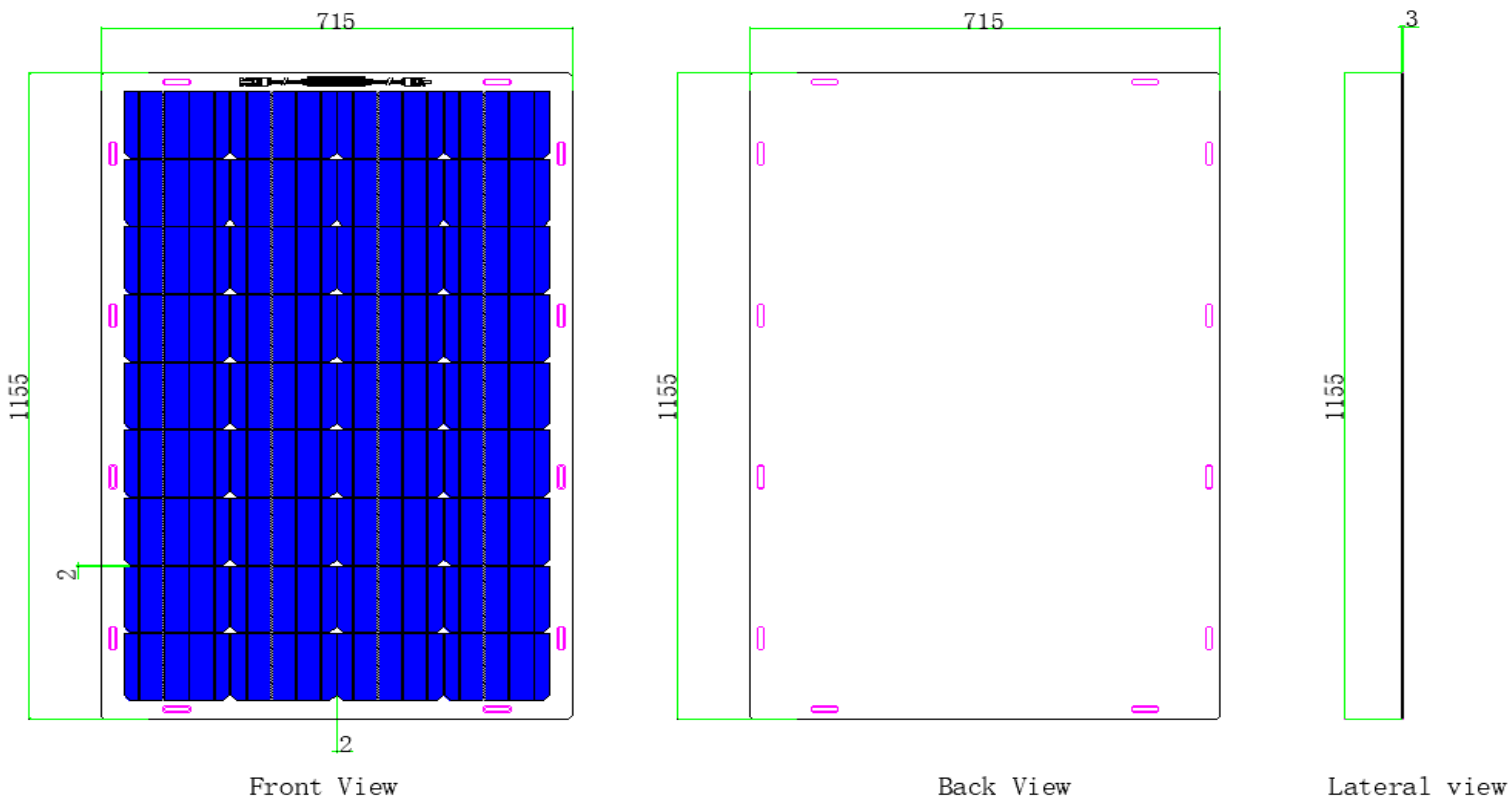
solar cell	166×166 monocrystalline silicon PERCHigh efficiency solar cells
Connections of cells	36 ( 4x9 )
Weight	7.5Kg
Mechanical Dimension	1155*715*3mm
Number of Mounting holes	12
waterproofing grade of Junction Box	IP67
Cable	0.9m 2.5mm <sup>2</sup>
Number of diodes	2 ( bypass diodes )
Connector	MC4

\* Lightweight/Powerful/Durable.

Temperature characteristics:

NOTC(Standard Test Conditions)	45±2℃
(Isc( Short Circuit Current Temp.)	+0.050% /℃
Voc( Open Circuit Voltage Temp.)	-0.30% /℃
Pmax (Max. Power Temp.)	-0.39% /℃
Operating Temperature	-40~+85℃
Max.System Voltage	1000V DC
Maximum diode current	10A

Structural drawing:



\* Lightweight/Powerful/Durable.

GREEN DATASHEET



Grid tie micro inverter:

Rated Power	GMI120-180 L Series	GMI260-350 Series	GMI500-700 Series
Model	GMI180	GMI300	GMI600
Input Data(DC,PV)			
MPPT Voltage Range	12.5V-25V	24V-40V	24V-40V
Operation Voltage Range	10.8V-30V	18V-50V	18V-50V
Maximum Input Voltage	30V	50V	50V
Startup Voltage	10.8V	18V	18V
Maximum Input Power	180W	300W	600W
Maximum Input Current	11.25A	12A	24A
Output Data (AC)			

Single-Phase Grid Type	230V	230V	230V
Rated Output Power	150W	280W	580W
Maximum Output Power	160W	300W	600W
Nominal Output Current	0.65A	1.21A	2.52A
Nominal Output Voltage	230V AC	230V AC	230V AC
Default Output Voltage Range	180V-280V	180V-280V	180V-280V
Nominal Output Frequency	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz
Default Output Frequency Range	@50Hz : 47.5Hz-52.5Hz / @60Hz : 57.5Hz-62.5Hz	@50Hz : 47.5Hz-52.5Hz / @60Hz : 57.5Hz-62.5Hz	@50Hz : 47.5Hz-52.5Hz / @60Hz : 57.5Hz-62.5Hz
Power Factor	>0.99	>0.99	>0.99
Total Harmonic Distortion	THD <5%	THD <5%	THD <5%
Efficiency			
Peak Efficiency	92.5%	92.5%	92.5%

\* Lightweight/Powerful/Durable.



SILVER DATASHEET



Grid tie micro inverter:

Item	WVC-300(Wireless) -230VAC	WVC600-230VAC	WVC-1200-230VAC
Maximum input power	300W	500-600Watt	1200Watt
Recommend the use of PV modules	300W/Vmp>34V/Voc<50V	2*300W/Vmp>34V/Voc<50V	4*300W/Vmp>34V/Voc<50V
Maximum input DC voltage	50V	50V	50V
Peak power tracking voltage	25-40V	25-40V	25-40V
Operating Voltage Range	17-50V	17-50V	17-50V
Min / Max start voltage	22-50V	22-50V	22-50V
Maximum DC short current	20A	40A	80A
Maximum Input Current	15A	25A	54.4A
Output Data	@230VAC	@230VAC	@230VAC

Peak power output	300Watt	600Watt	1200Watt
Rated output power	280Watt	550Watt	1150Watt
Rated output power	1.36A	2.3A	5A
Rated voltage range	180-260VAC	180-260VAC	180-260VAC
Rated frequency range	47-52.5Hz	47-52.5Hz	47-52.5Hz
Power factor	>98%	>96%	>98%
Maximum units per branch circuit	10PCS (Single-phase)	12PCS (Single-phase)	5PCS (Single-phase)
Output Efficiency	@230VAC	@230VAC	@230VAC
Static MPPT efficiency	99.5%	99.5%	99.5%
Maximum output efficiency	93%	92%	92%
The average efficiency	91%		
Night time power consumption	<70mW Max	<70mW Max	<70mW Max
THD	<5%	<5%	<5%

\* Lightweight/Powerful/Durable.

SILVER DATASHEET



Grid tie micro inverter:

Exterior

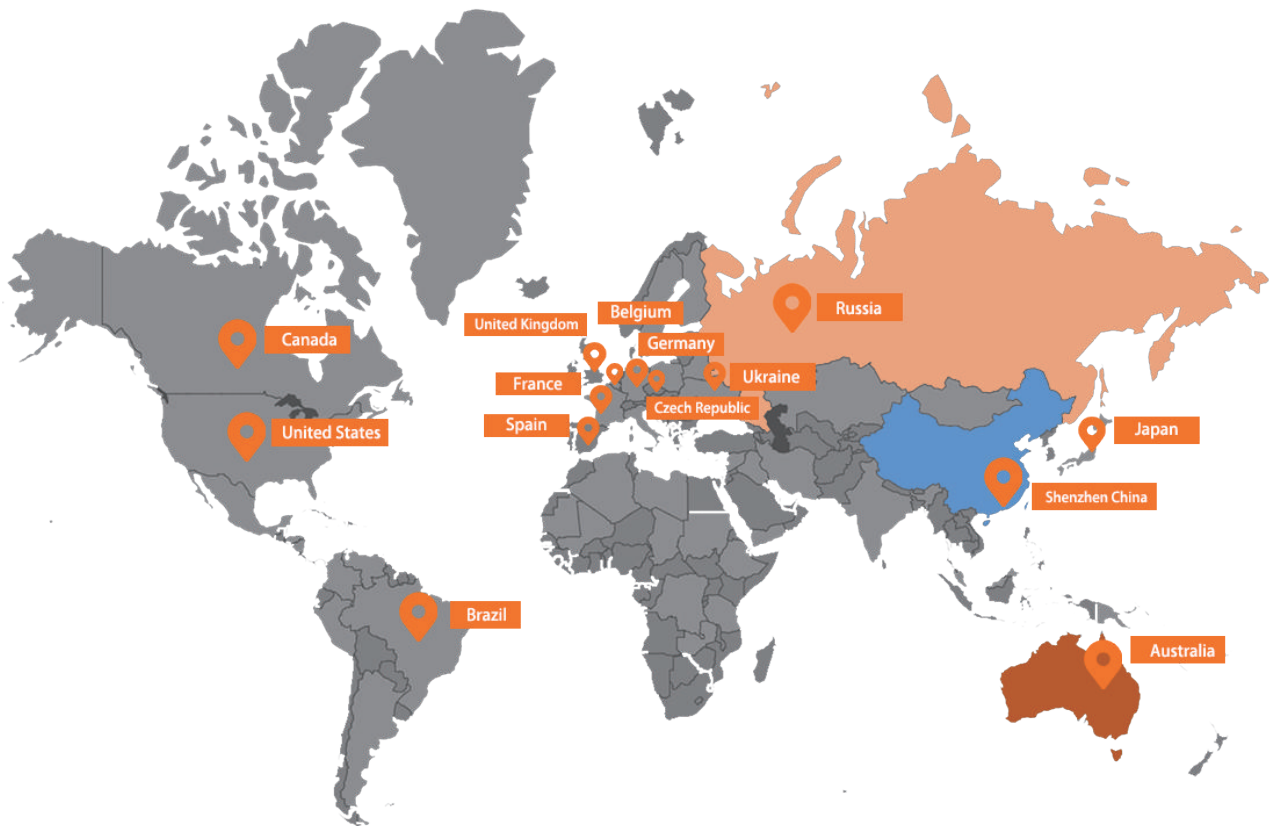
Ambient temperature	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C
Operating temperature range (inverter inside)	-40°C to +82°C	-40°C to +82°C	-40°C to +82°C
Dimensions (WxHxD)	289mm×200mm×38mm	289mm×200mm×38mm	370mm×305mm×38mm
Weight	1.6kg	1.73kg	2.85kg
Waterproof Rating	IP65	IP65	IP65
Cooling	Self-cooling	Self-cooling	Self-cooling

Feature

Communication Mode	Wireless Communication 433/462MHz	Power Line	Power Line
Power transmission mode	Reverse transfer load priority	Reverse transfer load priority	Reverse transfer load priority
Monitoring System	Lifetime free	Lifetime free	Lifetime free
Electromagnetic compatibility	EN50081.part1 EN50082.part1	EN50081.part1 EN50082.part1	EN50081.part1 EN50082.part1
Grid disturbance	EN61000-3-2 Safety EN62109	EN61000-3-2 Safety EN62109	EN61000-3-2 Safety EN62109
Grid detection	DIN VDE 1026 UL1741	DIN VDE 1026 UL1741	DIN VDE 1026 UL1741
Certificate	CEC,CE National patent technology	CEC,CE National patent technology	CEC,CE National patent technology

\* Lightweight/Powerful/Durable.

## Global Markets Distribution



### Contact us:

Company: Shenzhen Solarparts Co.,Ltd.

Address: 401, Bldg B, 3th Road, Xinglian industriaPark, Hehua community, Pinghu Street, Longgang District, Shenzhen City 518111 China

Phone: +86-755-28720791 Fax: +86-755 85233441 Mobile: +86-13923729619

Website: [www.isolarparts.com](http://www.isolarparts.com) Email: [Philip@isolarparts.com](mailto:Philip@isolarparts.com)



QR Code for Official Website  
[www.isolarparts.com](http://www.isolarparts.com)



QR Code for On-line Shopping Sotore  
[www.xinpuguangsolar.com](http://www.xinpuguangsolar.com)