

# ROICHT@\_GLSERIES PORTABLE SOLAR FOLDING BOX



## What is portable solar folding box?

Solar folding box is a portable folding solar panel with high-efficiency solar cells can generate maximum power in a fixed area; With aluminum frame and support bracket, it is convenient for users to use and carry, you only need to plug and play; The solar folding box can directly charge the battery, and can also charge various mobile devices such as mobile phones, tablet computers and digital cameras through USB output.





# Roicht@\_GL Series Portable Solar Folding Box

Portable Folding Solar Panel

Highest Efficiency Monocrystalline Solar Kit

## ELECTRICAL PARAMETER

100W (2×50)

200W (2×100)

300W (2×150)



(1.5m cable)



(5m cable)



## MAIN FEATURES

### High efficiency

- ▶ The cell conversion rate is up to 23%, power drop caused by shadow can be greatly reduced.

### Easy transport

- ▶ Equipped with aluminum frame and support bracket that is easy to transport and carry.

### Versatile

- ▶ Can be used as picnic table for outdoor activities like camping, BBQ and fishing, etc.

### Quality warranty

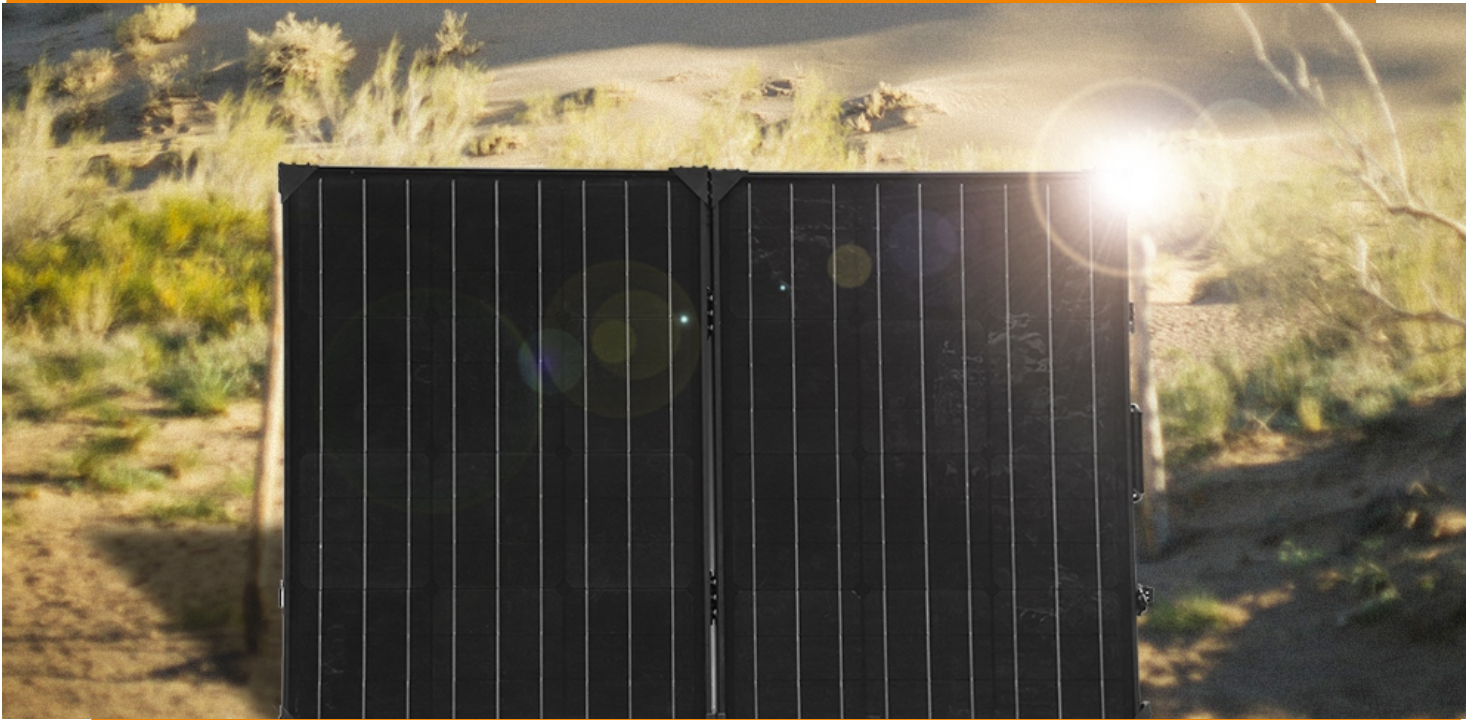
- ▶ Certified by international recognition like FCC, CE and ISO to ensure high quality; the service life up to 25 years.

### Well waterproof

- ▶ With IP65 junction box and corrosion-resistant aluminum frame, can better withstand rainfall.



## APPLICATION SCENARIOS



This solar folding box is a perfect portable solar system, which can be charged anytime and anywhere. It can provide mobile power for vehicles such as RVs, yachts, trucks, golf carts and boats, and small power for mobile devices such as mobile phones and tablet notebooks Especially suitable for camping, picnic, outing and other outdoor activities. Portable design escorts your power supply.

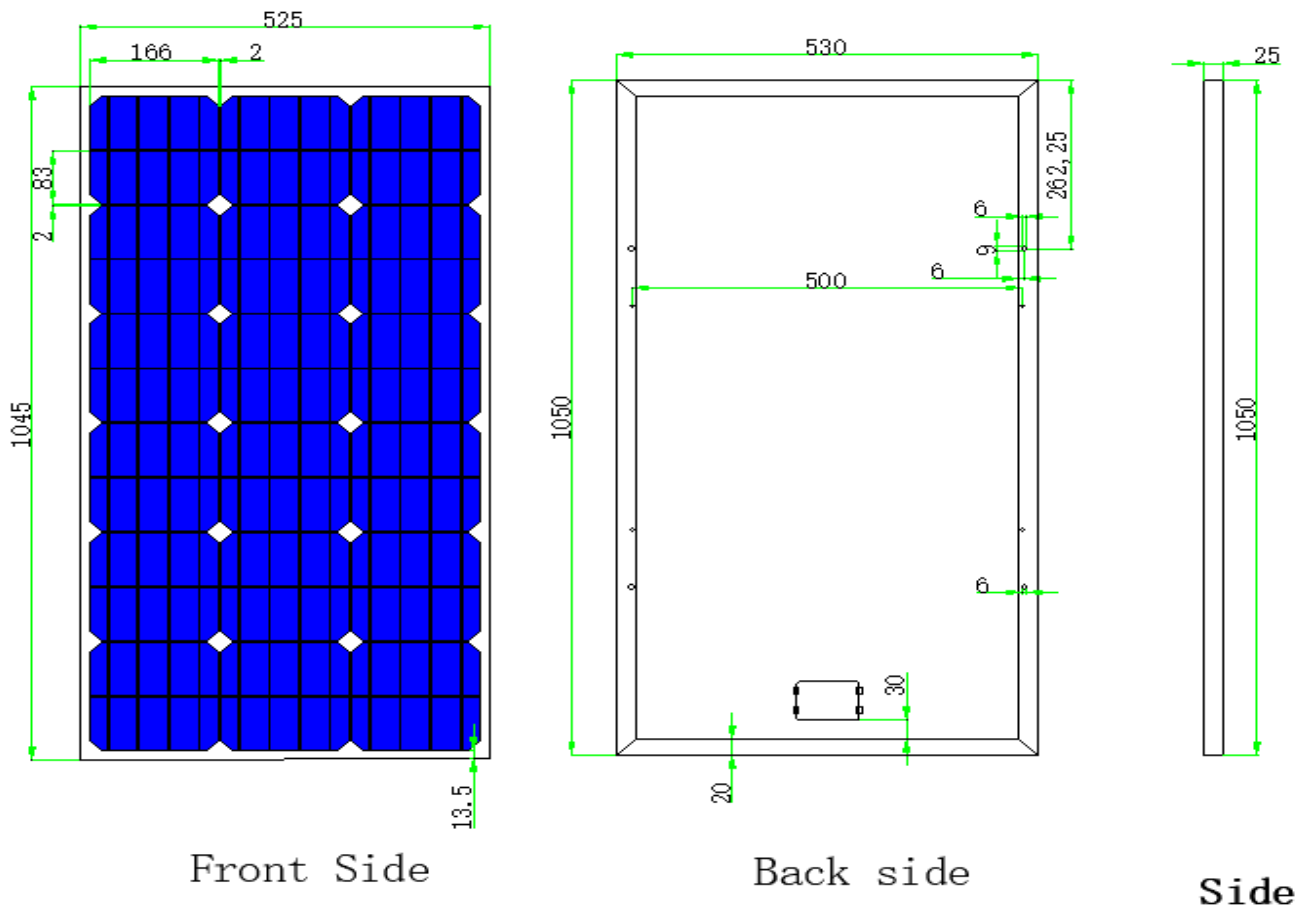
**Shenzhen Solarparts Inc.** takes technology as the driving force to empower the traditional manufacturing industry. Our products cover mono solar panels, poly solar panels, household power generation systems, small power supplies and solar chargers,etc. We also provide OEM and ODM services that comprehensively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

\* Light-weight / Foldable design / customizable.

**PORTABLE SOLAR FOLDING BOX**

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## Structural drawing:



## Electrical parameter:

| Rated Power           | Pmax(W)             | 100 (2×50) | 200 (2×100)  | 300 (2×150) |
|-----------------------|---------------------|------------|--------------|-------------|
| Color                 | /                   | black      | Black/silver | black       |
| Operating Voltage     | Vmp(V)              | 18         | 19.8         | 19.8        |
| Operating Current     | I <sub>mp</sub> (A) | 5.56       | 10.1         | 15.15       |
| Open Circuit Voltage  | Voc(V)              | 20.6       | 23.76        | 23.76       |
| Short Circuit Current | I <sub>sc</sub> (A) | 6.11       | 11.1         | 16.67       |
| Boundary dimension    | mm                  | 680×510×25 | 1050×530×25  | 1140×700×25 |

\* Light-weight / Foldable design / customizable.

**PORTABLE SOLAR FOLDING BOX**

## BILL OF MATERIALS

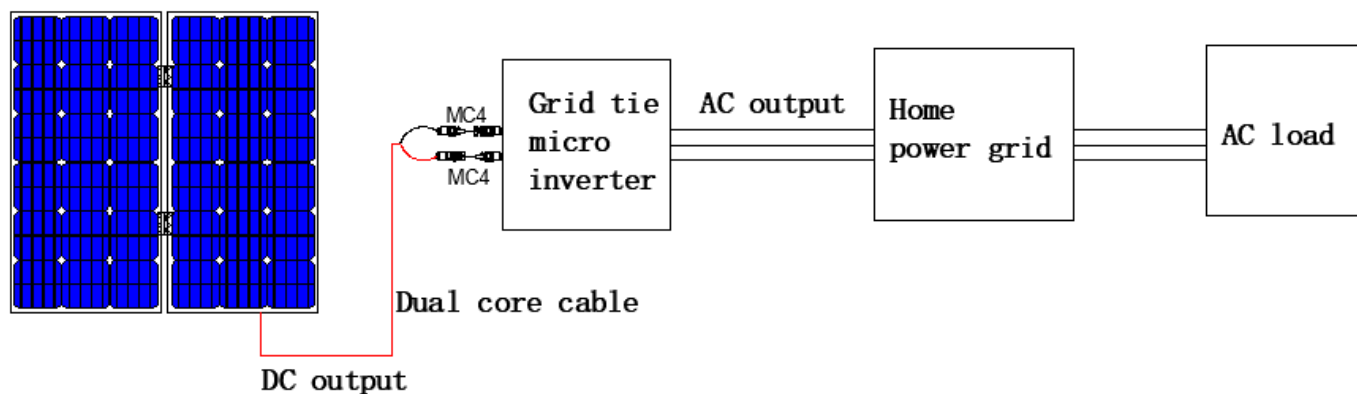
Green: 150W / 300W

Silver: 300W

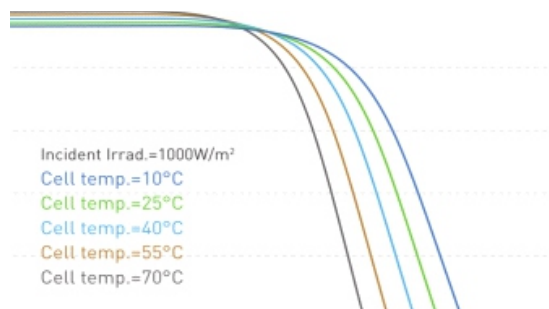
Eg: Black frame 2 × 50W

| Type                    | Specifcation                                                                                           | Quantity |
|-------------------------|--------------------------------------------------------------------------------------------------------|----------|
| Solar panel             | 50W/18V 680*510*25mm                                                                                   | 2        |
| Grid tie micro inverter | 180W/230V                                                                                              | 1        |
| stents                  | Black aluminum alloy frame                                                                             | 1        |
| Cable                   | Brown/Blue/Green three colar cable, 3*0.75mm <sup>2</sup> , 5M, with Ohmmeter plug and Waterproof plug | 1        |

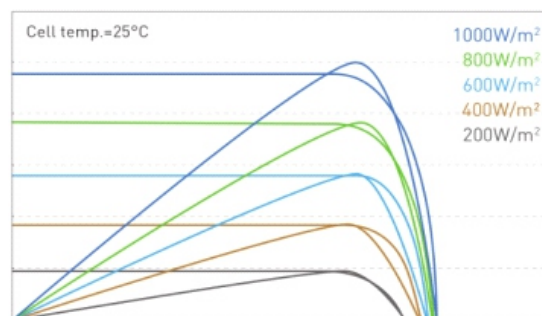
## ELECTRICAL CONNECTION DIAGRAM



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).

**PORTABLE SOLAR FOLDING BOX**



## 50W Solar panel:

Electrical parameter) | STC

|                       |         |        |
|-----------------------|---------|--------|
| Rated Power           | Pmax(W) | 50W    |
| Operating Voltage     | Vmp(V)  | 18V    |
| Operating Current     | Imp(A)  | 2.78A  |
| Open Circuit Voltage  | Voc(V)  | 20.6V  |
| Short Circuit Current | Isc(A)  | 3.06A  |
| Module Efficiency     | (%)     | 18.67% |
| Performance Tolerance | (%)     | ±5%    |

Structural performance:

|                                     |                                                                    |
|-------------------------------------|--------------------------------------------------------------------|
| solar cell                          | 156*52 monocrystalline silicon PERC<br>High efficiency solar cells |
| Connections of cells                | 13 (3x4 )                                                          |
| Weight                              | 7.5Kg                                                              |
| Mechanical Dimension                | 680*510*25*20mm                                                    |
| Number of Mounting holes            | 4                                                                  |
| waterproofing grade of Junction Box | IP67                                                               |
| Cable                               | 16AWG red and black double core cabl                               |
| Connector                           | MC4                                                                |

Temperature characteristics:

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

\* Light-weight / Foldable design / customizable.

**PORTABLE SOLAR FOLDING BOX**

## BILL OF MATERIALS

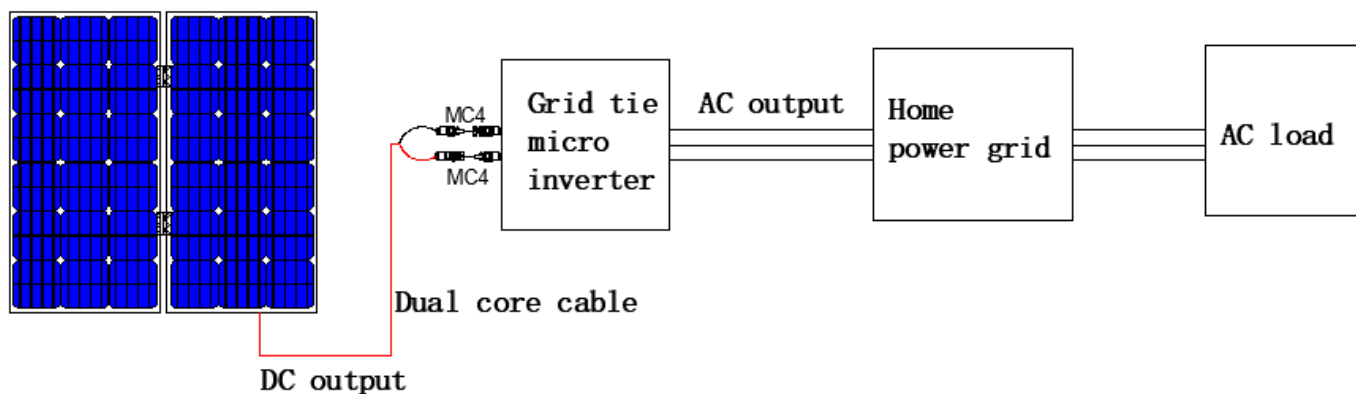
Green: 150W / 300W

Silver: 300W

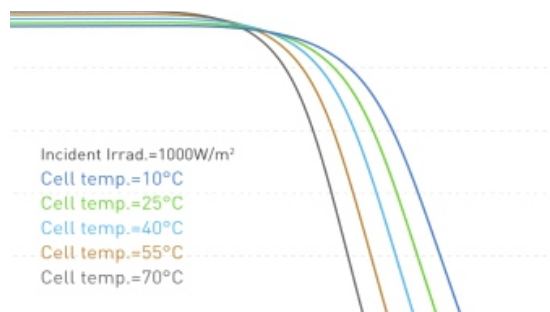
Eg: Black frame 2 × 100W

| Type                    | Specifcation                                                                                                 | Quantity |
|-------------------------|--------------------------------------------------------------------------------------------------------------|----------|
| Solar panel             | 100W/19.8V 1050*530*25mm                                                                                     | 2        |
| Grid tie micro inverter | 300W/230V                                                                                                    | 1        |
| stents                  | Black aluminum alloy frame                                                                                   | 1        |
| Cable                   | Brown/Blue/Green three colar cable, 3*0.75mm <sup>2</sup> , (5/1.5M), with Ohmmeter plug and Waterproof plug | 1        |

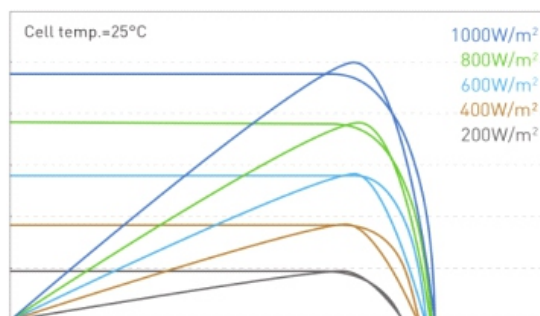
## ELECTRICAL CONNECTION DIAGRAM



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).

**PORTABLE SOLAR FOLDING BOX**

## 100W Solar panel:

Electrical parameter) | STC

|                       |         |        |
|-----------------------|---------|--------|
| Rated Power           | Pmax(W) | 100W   |
| Operating Voltage     | Vmp(V)  | 19.8V  |
| Operating Current     | Imp(A)  | 5.05A  |
| Open Circuit Voltage  | Voc(V)  | 23.76V |
| Short Circuit Current | Isc(A)  | 5.56A  |
| Module Efficiency     | (%)     | 18.67% |
| Performance Tolerance | (%)     | ±5%    |

Structural performance:

|                                     |                                                                    |
|-------------------------------------|--------------------------------------------------------------------|
| solar cell                          | 166×83 monocrystalline silicon PERC<br>High efficiency solar cells |
| Connections of cells                | 18 (3x6 )                                                          |
| Weight                              | 7.5Kg                                                              |
| Mechanical Dimension                | 1050*530*25*20mm                                                   |
| Number of Mounting holes            | 4                                                                  |
| waterproofing grade of Junction Box | IP67                                                               |
| Cable                               | 12AWG/16AWG red and black double core cabl                         |
| Connector                           | MC4                                                                |

Temperature characteristics:

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

\* Light-weight / Foldable design / customizable.

**PORTABLE SOLAR FOLDING BOX**



## BILL OF MATERIALS

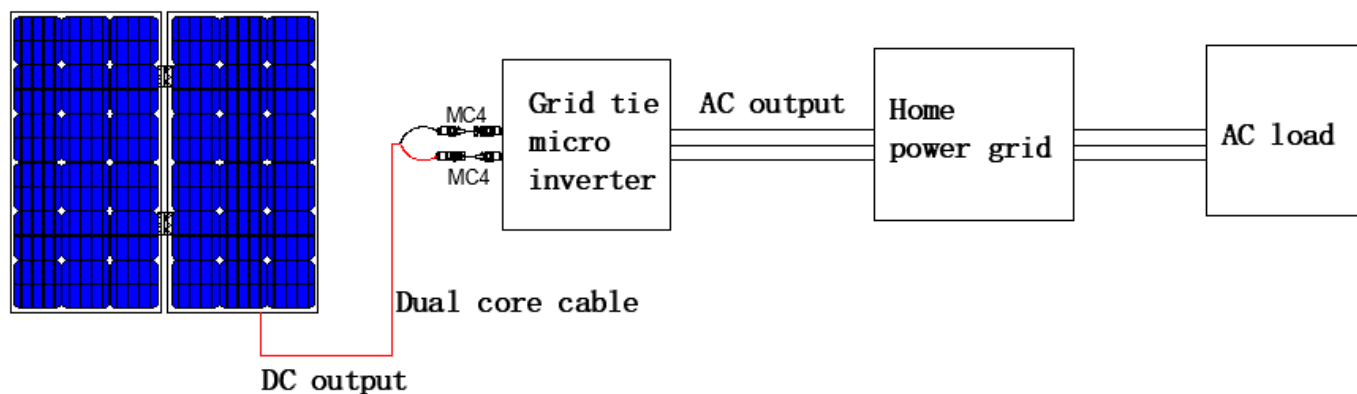
Green: 150W / 300W

Silver: 300W

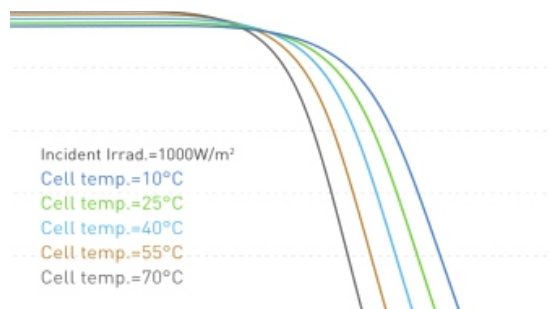
Eg: Black frame 2 × 150W

| Type                    | Specifcation                                                                                                 | Quantity |
|-------------------------|--------------------------------------------------------------------------------------------------------------|----------|
| Solar panel             | 150W/19.8V 1140*700*25mm                                                                                     | 2        |
| Grid tie micro inverter | 300W/230V                                                                                                    | 1        |
| stents                  | Black aluminum alloy frame                                                                                   | 1        |
| Cable                   | Brown/Blue/Green three colar cable, 3*0.75mm <sup>2</sup> , (5/1.5M), with Ohmmeter plug and Waterproof plug | 1        |

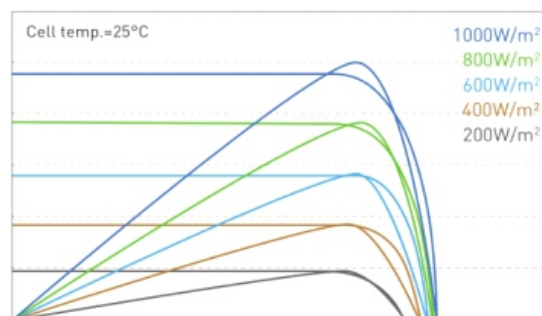
## ELECTRICAL CONNECTION DIAGRAM



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).

**PORTABLE SOLAR FOLDING BOX**

## 150W 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*120.8 monocrystalline silicon PERC<br>High efficiency solar cells |
| Connections of cells                | 36(4x9 )                                                              |
| Weight                              | 7.5Kg                                                                 |
| Mechanical Dimension                | 1140*700*25*20mm                                                      |
| Number of Mounting holes            | 4                                                                     |
| waterproofing grade of Junction Box | IP67                                                                  |
| Cable                               | 11AWG/14AWG red and black double core cabl                            |
| Connector                           | MC4                                                                   |

Temperature characteristics:

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

\* Light-weight / Foldable design / customizable.

**PORTABLE SOLAR FOLDING BOX**

## BILL OF MATERIALS

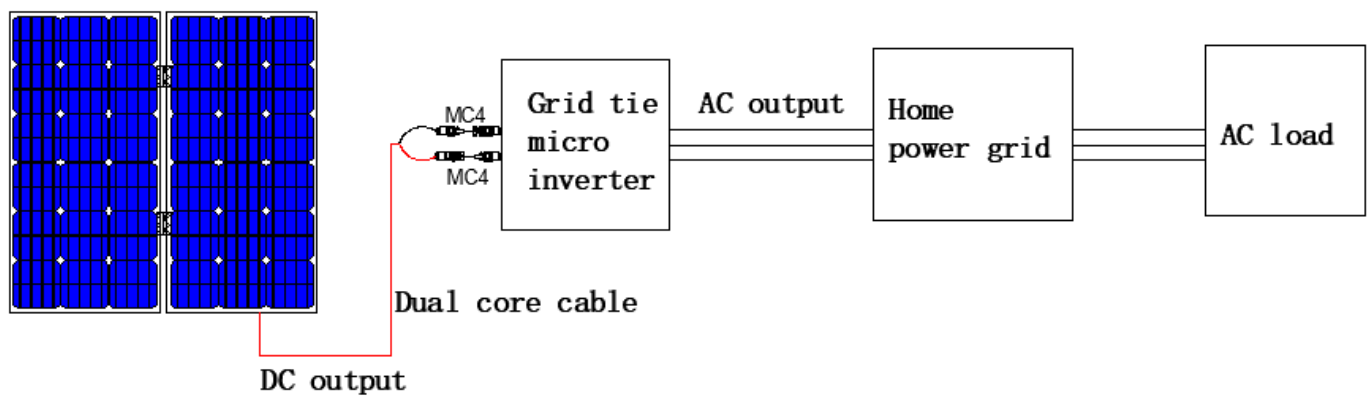
Green: 150W / 300W

Silver: 300W

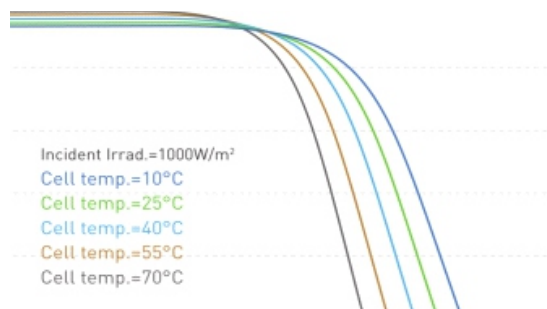
Eg: Silver frame 2×100W

| Type                    | Specifcation                                                                                                 | Quantity |
|-------------------------|--------------------------------------------------------------------------------------------------------------|----------|
| Solar panel             | 100W/19.8V 1050*530*25mm                                                                                     | 2        |
| Grid tie micro inverter | 300W/230V                                                                                                    | 1        |
| stents                  | Silver aluminum alloy frame                                                                                  | 1        |
| Cable                   | Brown/Blue/Green three colar cable, 3*0.75mm <sup>2</sup> , (5/1.5M), with Ohmmeter plug and Waterproof plug | 1        |

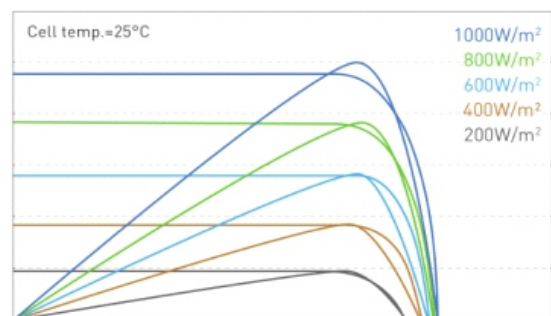
## ELECTRICAL CONNECTION DIAGRAM



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).

**PORTABLE SOLAR FOLDING BOX**

## 100W Solar panel:

Electrical parameter) | STC

|                       |         |        |
|-----------------------|---------|--------|
| Rated Power           | Pmax(W) | 100W   |
| Operating Voltage     | Vmp(V)  | 19.8V  |
| Operating Current     | Imp(A)  | 5.05A  |
| Open Circuit Voltage  | Voc(V)  | 23.76V |
| Short Circuit Current | Isc(A)  | 5.56A  |
| Module Efficiency     | (%)     | 18.67% |
| Performance Tolerance | (%)     | ±5%    |

Structural performance:

|                                     |                                                                    |
|-------------------------------------|--------------------------------------------------------------------|
| solar cell                          | 166×83 monocrystalline silicon PERC<br>High efficiency solar cells |
| Connections of cells                | 18 (3x6 )                                                          |
| Weight                              | 7.5Kg                                                              |
| Mechanical Dimension                | 1050*530*25*20mm                                                   |
| Number of Mounting holes            | 4                                                                  |
| waterproofing grade of Junction Box | IP67                                                               |
| Cable                               | 12AWG/16AWG red and black double core cabl                         |
| Connector                           | MC4                                                                |

Temperature characteristics:

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

\* Light-weight / Foldable design / customizable.

**PORTABLE SOLAR FOLDING BOX**



# GREEN DATASHEET



Grid tie micro inverter:

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

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

\* Light-weight / Foldable design / customizable.

**PORTABLE SOLAR FOLDING BOX**

# SILVER DATASHEET



Grid tie micro inverter:

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

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

\* Light-weight / Foldable design / customizable.

**PORTABLE SOLAR FOLDING BOX**

# SILVER DATASHEET



Grid tie micro inverter:

## Exterior

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

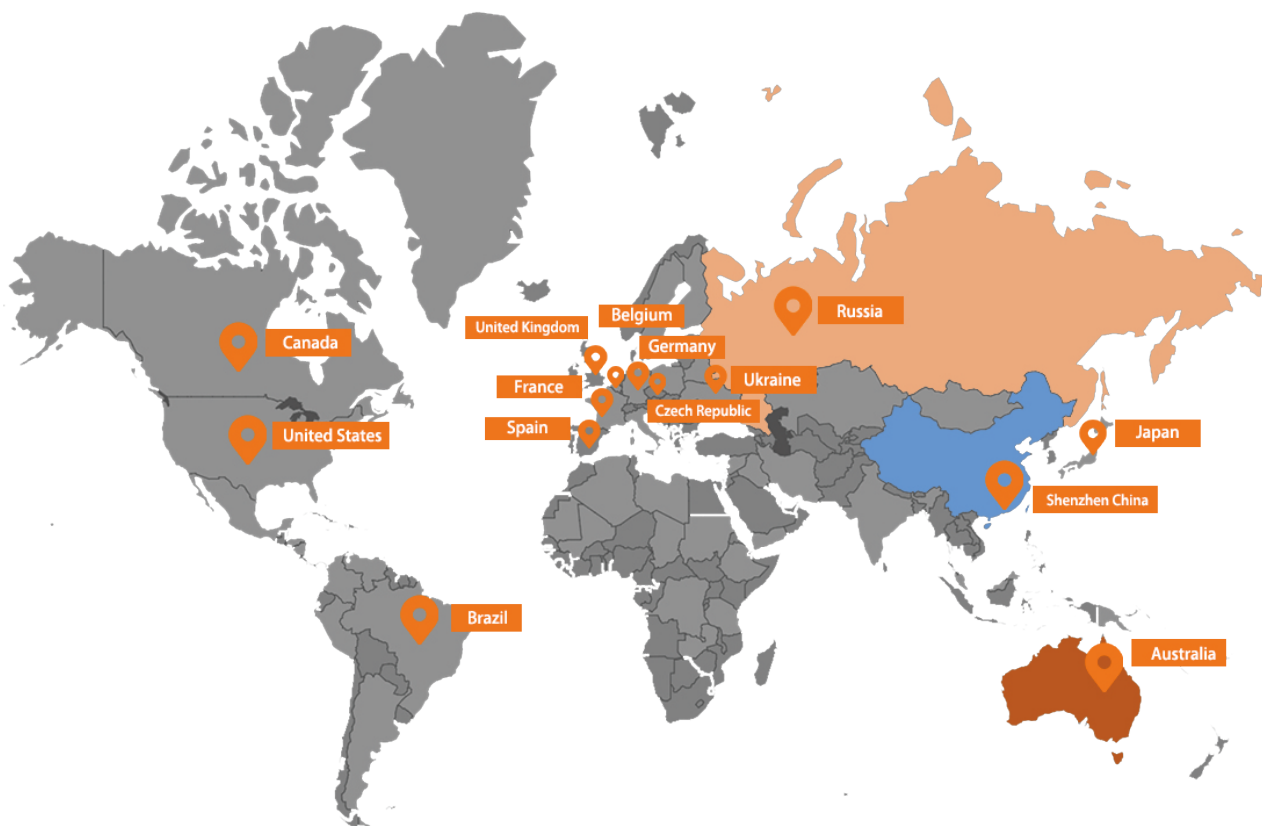
## Feature

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

\* Light-weight / Foldable design / customizable.

**PORTABLE SOLAR FOLDING BOX**

## Global Markets Distribution



Contact us:

Company: Shenzhen Solarparts Inc.

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



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