

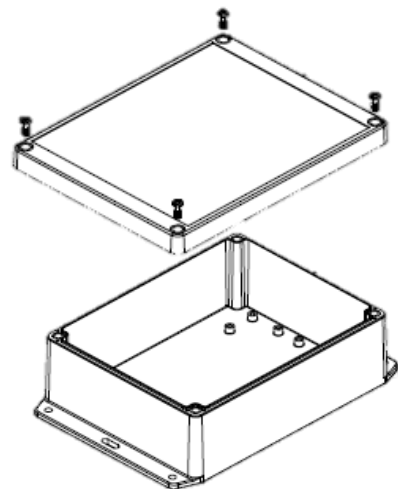
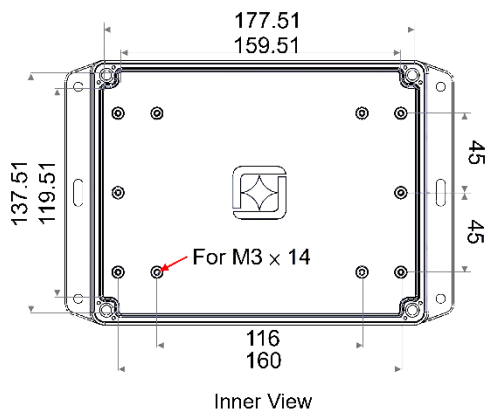
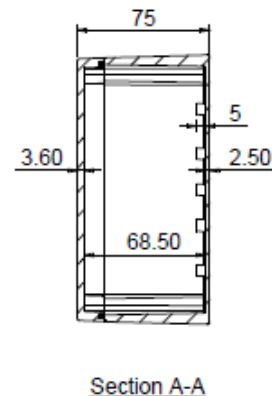
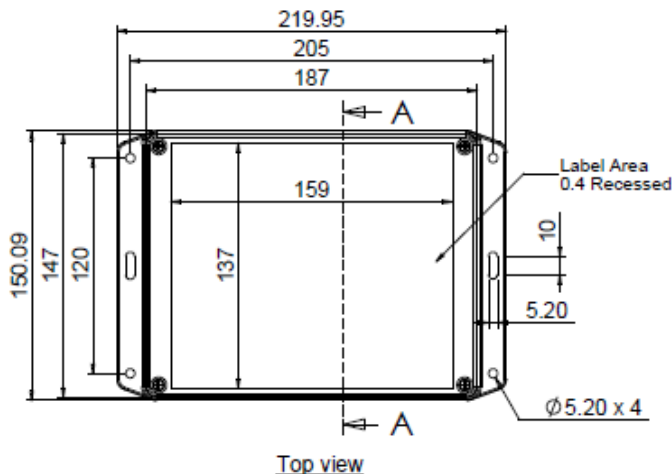
# User Guide

## 1. Product Description

- Series Name : Arc-solar Box P
- Outer Dimension (L×W×H): 219.95×150.09×75 (±0.5) mm ; Weight : 520 g
- PV Module Specification :

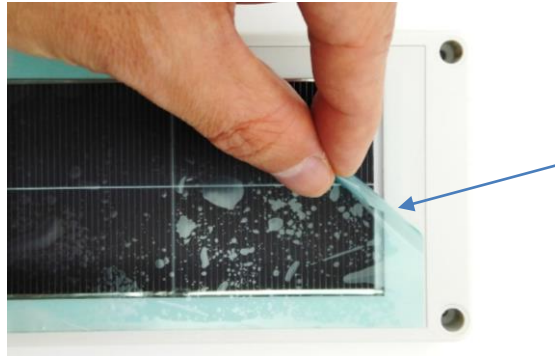
Item	Specification
Open-circuit Voltage ( $V_{oc}$ ; V)*	3.98 (±5%)
Short-circuit Current ( $I_{sc}$ ; mA)*	1,050 (±5%)
Max. Power Output (mW)*	3,180 (±5%)
*: Data measured under 1 Sun Condition (1,000 W/m² with AM1.5 spectrum)	

- Drove by FLEXWAVE's optimize-designed power management.
- The enclosure was made by UL746 F1 Polycarbonate with IP67 degree of protection.

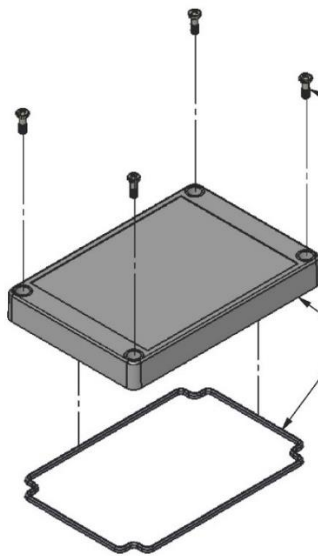


## 2. Installation :

- Remove the protect film from the surface.
- Install fully charged battery before plugging in functional device.
- Place Oring into the groove inside of top cover.
- Recommended Lid Screw Torque: 30 ozf-in (21 cN-m).
- Users can drill sizeable holes to fix waterproof joints for alternative applications.



Remove the protect film.



### M3.5 anti-fall design screws

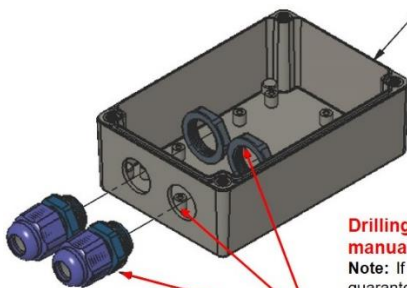
The stainless steel screws are designed to prevent falling. During the initial assembly, they must be tightened into the top cover using a screwdriver. Afterward, when opening the top cover, the screws will remain attached and won't fall off, preventing loss.

### PV Energy Harvesting Cover

### Rubber Oring

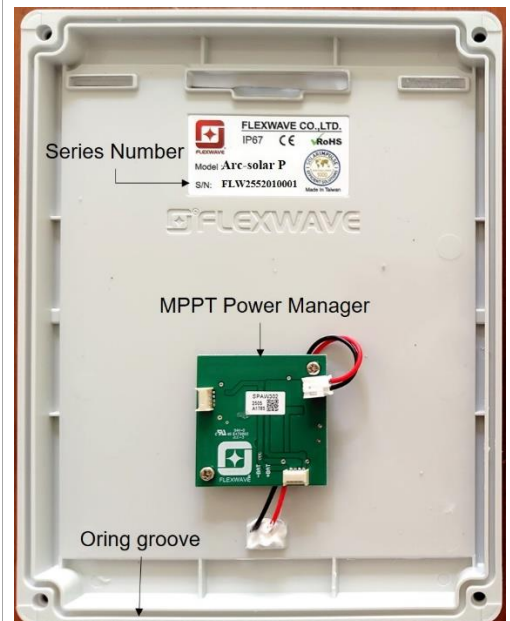
Place the rubber gasket into the groove of the top cover and gently press it along the groove until it is flush with the bottom surface of the cover.

### Arc-solar Box Bottom Housing



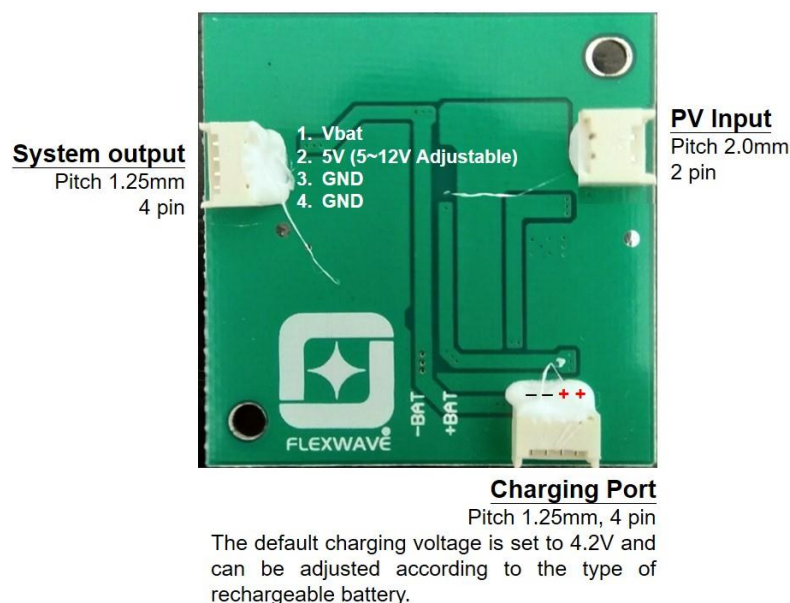
### Drilling for waterproof connector installation can be done manually.

**Note:** If drilling is performed, the IP67 waterproof rating is no longer guaranteed. Appropriate waterproof connectors must be selected and properly installed following suitable procedures to maintain water resistance.

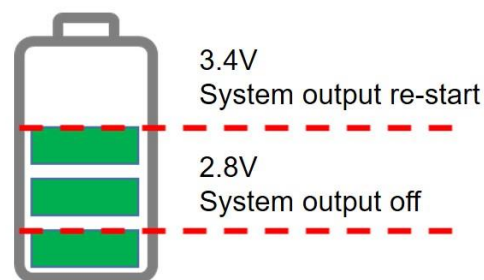


### 3. Function Description

- The charging Voltage of the Max. Power Point Tracking (MPPT) system is 4.2V.
- Storage device is an essential/ necessary component for maintaining output system stable.
- The floating pin provides battery voltage with a limited current.
- Model type of connectors: Molex / JST pitch 1.25 mm (Female).
- The following picture illustrates the functions of the smart power system.



**Prevent over-discharge and maintain the health of storage devices**



- When the battery voltage falls below 2.8V, the system output is disabled while PV charging continues. It will automatically resume once the voltage reaches 3.4V.
- The cut-off and re-start voltages can be adjusted based on the type of battery.

#### The function diagram of MPPT Power Management.

Power Manager		Min.	TYP.	Max.	Unit
Charging voltage of storage port. (V <sub>charge</sub> )			4.2		V
Peak output current of 5V system output.				900	mA
Battery health control	System output disable voltage		2.8		V
	System output recover voltage		3.4		V
Quiescent current.				600	μA
Accuracy		-5		+5	%
Recommended operating ambient condition.		Depends on usage of rechargeable batteries			°C
Optional Features	The 5V system output can be adjusted to 9V or 12V, with corresponding peak currents of 450mA and 380mA.				

**\* Must have battery protection board when adopting rechargeable battery.**

## 4. Warranty and Maintenance

- Please read the following information before using to ensure use products safely/ products safety.



Do not throw Arc-solar box P into the water.



Do not puncture, crush, throw or drop the box.



Do not bring sharp objects to rub against the box, to avoid scratches and damage.



Away from flammable products and petrochemical oil/gas.

- Clean the surface by ethanol or clean water.

## 5. Certificates

- IP67 degrees of protection provided by Arc-solar box manufactured by FLEXWAVE are certified by Great One Global Certification Co., Ltd. according to IEC 60529:1989/AMD2:2013/COR1:2019.
- European Parliament and Council Directive 2011/65/EU with amendment (EU) 2015/863 on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) are certified by Centre Testing International (Taiwan) Co., Ltd..
- CE-EMC are certified by Weishang Certification Co., Ltd.

CE  RoHS IP67



## Suggestion-Screw board / Stainless stand instruction

Assembly instruction :

- Remove screws from stand.
- Screw board and stand together after setting stand's angle.
- Use screw and hex nut to screw board to 4 corners of Arc solar Box. (Red dotted line)

If you don't want to use screw and hex nut, feed locking strap through yellow line area to make it firm.

