

Operation Manual

TICO-V2116-A10/TICO-V2116-A20

Please read this manual carefully before use
Keep it properly for reference

Thanks for choosing us.

The operation manual is edited and published to provide the latest safety information as of the time of publication. The actual AC outlet, AC output voltage and frequency thereof can vary by country or region.

Before using, please read the operation manual carefully. Operate the product until you fully understand the manual. Once you start using this product, you are deemed to have understood, recognized and accepted all terms and contents of this manual. Users shall agree to be responsible for actions and all consequences arising therefrom.

The company reserves the final right to interpret this document and all documents related to the product.



Warning

Please follow the below safety instructions, otherwise it will cause fire, electric shock, damage or other injuries.

1. Safety Guides

Instructions of Waste Electrical and Electronic Products Recycling Management Regulations

In order to better care for and protect the earth, users shall comply with related national laws and regulations on recycling waste electrical and electronic products and hand over waste electrical and electronic products to the local manufacturer with the nationally recognized recycling treatment qualification for recycling treatment when the products are no longer needed or can not be used. Otherwise, improper use or disposal thereof may influence the environment and human health.

Safety Notes

Warning-When using the product, please obey the following basic precautions:

- ★ Only qualified maintenance personnel of the company can carry out maintenance work.
- ★ Do not put your finger, palm or any part of your body into the product.
- ★ If you use accessories not recommended, it may result in fire, electric shock or personal injury.
- ★ Do not place this product near chemicals or the place where chemicals may leak.
- ★ Do not disassemble the power supply by yourself when maintaining or repairing the product. Please hand over the mobile power supply to the qualified service provider of the company. If the power supply is disassembled by mistake, it may cause the fire or electric shock.
- ★ When the product is faulty, to reduce the risk of electric shock, remove the mobile power supply from the socket before performing any maintenance operations instructed.
- ★ Charge the battery in a well-ventilated area to ensure air circulation in the air cooling system of the product.
- ★ Do not place heavy objects onto the product. As the product is heavy, it may fall off due to improper placement and cause injury to you or other persons or serious damage to the product.
- ★ Do not expose the product to the environment with humidity, corrosive gas, ash layer, and open flame.
- ★ To reduce the risk of injury, keep close supervision when using this product near children.

2. Specification Parameters

2.1 2116Wh (Regular Version) Specification Parameters

Basic Parameters

Model:	TICO-V2116-A10	
Capacity:	2116Wh 50.4V	
Size:	365*210*281mm	L*W*H
Weight:	Approx. 17.6Kg	(Net weight of the whole product)

Input Parameters

AC Input Voltage:	240Vac 50Hz
AC Input Power:	1650W Max.
Solar Charging Input:	600W Max.
Car Charger Input:	13.2Vdc 10A

Output Parameters

AC Output(*4):	240Vac 50Hz 2200W Max.
USB-A Output (*2):	5Vdc 2.4A 12W Max. per port
USB-A Fast Charge (*2):	5/9/12Vdc 3A 18W Max. per port
Type-C Fast Charge (*2):	5/9/12/15Vdc 3A,20Vdc 5A 100W Max. (Two ports 200W Max.)
Cigarette Lighter Output (*1):	13.2Vdc 10A

Other Specifications

Cell Form:	Ternary lithium
Service Life:	80% of capacity after 800-time cycle use
Protection Form :	BMS, high-temperature protection, low-temperature protection, over discharge protection, overload protection, short circuit protection, over-current protection, battery failure protection,etc.
Charging Temperature:	0-40°C (32°F-104°F)
Discharging Temperature:	-10-50°C (14°F-122°F)
Product Capacity Expansion:	Support

Other Accessories

List of Accessories	A 2116Wh Host, AC Charging Cable, Charging Cable for Car-mounted Cigarette Lighter, Operation Manual and Maintenance Card
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2.2 2116Wh (Charging Gun Port Version) Specification Parameters

Basic Parameters

Model:	TICO-V2116-A20	
Capacity:	2116Wh 50.4V	
Size:	365*210*281mm	L*W*H
Weight:	Approx. 17.6Kg	(Net weight of the whole product)

Input Parameters

AC Input Voltage:	240Vac 50Hz
AC Input Power:	1650W Max.
Solar Charging Input:	600W Max.
Car Charger Input:	13.2Vdc 10A

Output Parameters

AC Output (×2):	240Vac 50Hz 2200W Max.
Charging Gun Output (×1):	240Vac 50Hz 2200W Max.
USB-A Output (×2):	5Vdc 2.4A 12W Max. per port
USB-A Fast Charge (×2):	5/9/12Vdc 3A 18W Max. per port
Type-C Fast Charge (×2):	5/9/12/15Vdc 3A,20Vdc 5A 100W Max. (Two ports 200W Max.)
Cigarette Lighter Output (×1):	13.2Vdc 10A

Other Specifications

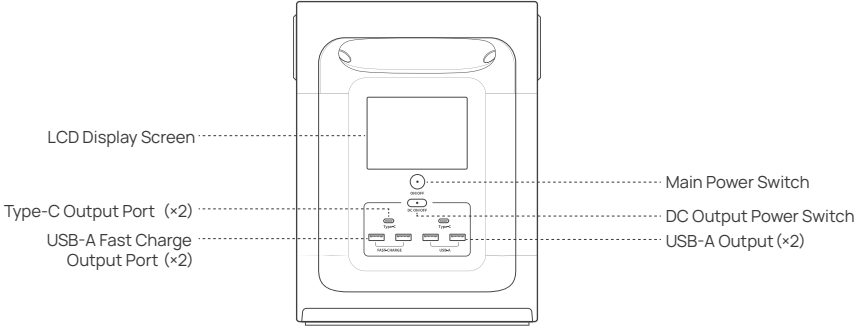
Cell Form:	Ternary lithium
Service Life:	80% of capacity after 800-time cycle use
Protection Form :	BMS, high-temperature protection, low-temperature protection, over discharge protection, overload protection, short circuit protection, over-current protection, battery failure protection, etc.
Charging Temperature:	0-40°C (32°F-104°F)
Discharging Temperature:	-10-50°C (14°F-122°F)
Product Capacity Expansion:	Support

Other Accessories

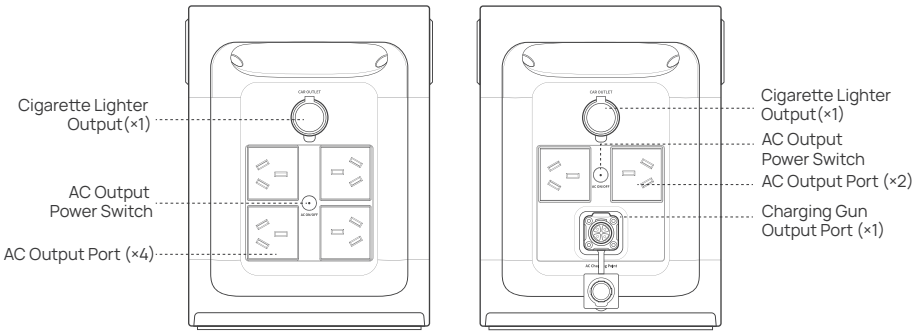
List of Accessories	A 2116Wh Host, AC Charging Cable, Charging Cable for Car-mounted Cigarette Lighter, Operation Manual and Maintenance Card
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3. Operating Instruction of the Product

3.1 Overview of Outlook

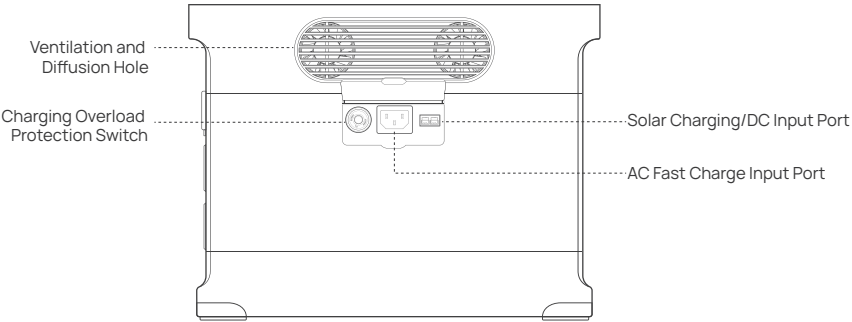


Regular Version/Charging Gun Port Version



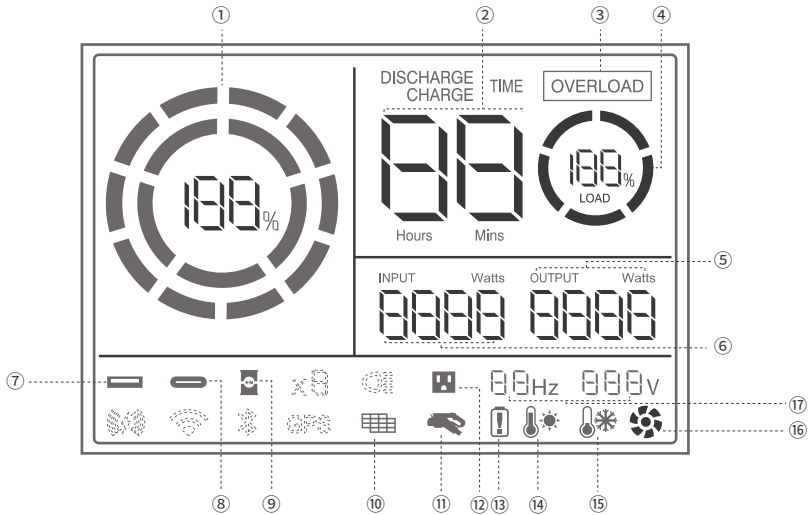
Regular Version

Charging Gun Port Version



Regular Version/Charging Gun Port Version

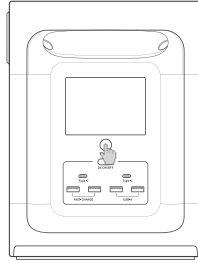
3.2 Introduction of Display Screen



- ① **Power:** Current power.
- ② **Remaining charging and discharging time:** Current remaining charging and discharging time.
- ③ **Overload warning:** Current overloading warning (flashing indicates overloading while normally on state indicates overload protection).
- ④ **Load rate:** Ration of current load and max. load.
- ⑤ **Output power:** Current output power.
- ⑥ **Input power:** Current input power.
- ⑦ **USB-A connected:** A device is connected to USB-A port.
- ⑧ **TYPE-C connected:** A device is connected to USB-C port.
- ⑨ **Group series mode:** Current state of group series mode.
- ⑩ **Photovoltaic input:** There is photovoltaic input (normally on state indicates photovoltaic input, while flashing indicates abnormal photovoltaic input).
- ⑪ **Charging gun:** Current state of the charging gun.
- ⑫ **Inverting:** When the inverting state is on (normally on state indicates that AC is normally operated while flashing indicates AC is operated abnormally).
- ⑬ **Error:** There is an error (Once the icon appears, please record the error code at ② and contact with after-sales service personnel).
- ⑭ **Over-temperature warning:** Current over-temperature warning (flashing indicates over-temperature warning for charging while normally on state indicates over-temperature warning for discharging).
- ⑮ **Low-temperature warning:** Current low-temperature warning (flashing indicates low-temperature warning for charging while normally on state indicates low-temperature warning for discharging).
- ⑯ **Fan:** Current fan state (based on the rotation of wind speed, flashing indicates that fan is faulty).
- ⑰ **AC output frequency and voltage:** Current inverting frequency and inverting voltage.

*For error display and disposal, please refer to Chapter 4 for more information.

3.3 Operation of the Product



(Regular Version/Charging Gun Port Version)

Short Press for Powering on/Long Press for Powering off

Power On, Power Off and Display Screen Lightened Up

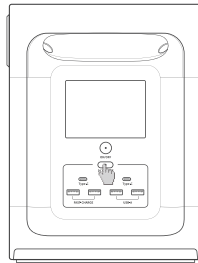
Short press the main power switch for starting the whole machine. Then the display screen will be lightened and the breathing light for main power switch will be on.

If you do not operate the product in consecutive 5 minutes, it will enter sleep mode and the display screen will stay off automatically.

When there are key operation and warning for the product, the display screen will stay lightened.

By long pressing the main power switch, the product will be powered off.

The standby time of the product is 30 minutes by default. If other power switches are not turned on and no loads are connected to the product, the product will be powered off automatically 30 minutes later.



(Regular Version/Charging Gun Port Version)

Short Press DC Output Power Switch

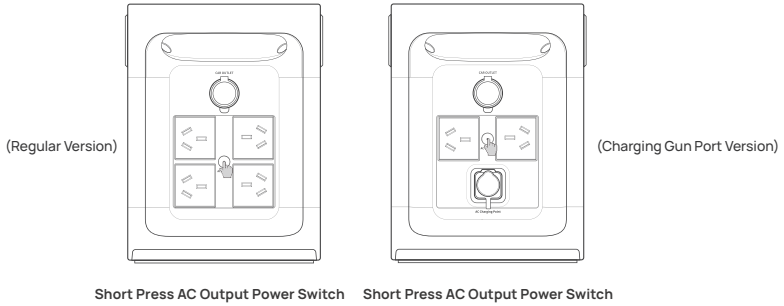
Logic and Function of DC Key

When the main power switch is turned on, USB-A, Type-C and cigarette lighter output ports can be started only by short pressing DC output power switch.

When DC output power switch is turned on, the system will start the display screen by default displaying current power of the product and corresponding fixed symbol.

By short pressing DC output power switch again, DC port output can be closed.

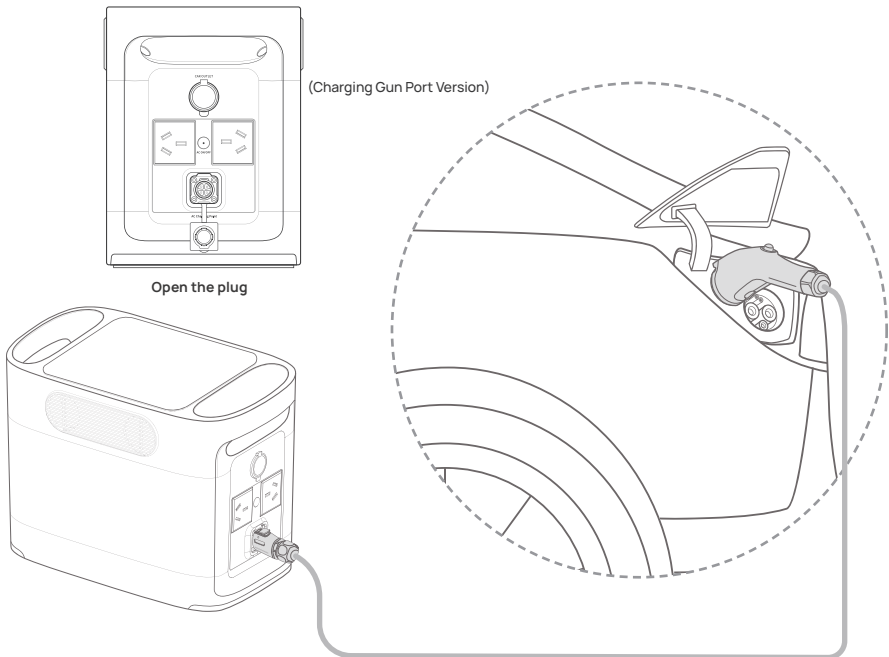
If no power is output, DC output power switch will be off automatically after 5 minutes.



Logic and Function of AC Key

When the main power switch is turned on, AC output port can be started only by short pressing AC output power switch. When AC output power switch is turned on, the system will start the display screen by default displaying current power of the product and corresponding fixed symbol.

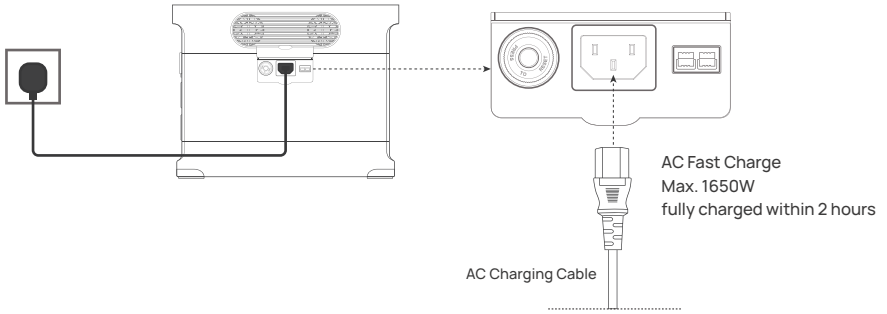
By short pressing AC output power switch again, AC port output can be closed.



Operation of Charging Gun Port

Open the plug on the charging gun output port of the product. Connect one end of the non-charging gun to the charging gun output port of the energy-storing power supply. Then connect the end of the charging gun to the new energy car and turn on AC output power switch for charging.

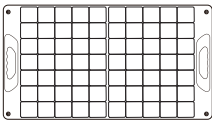
3.4 Instruction for AC Charging



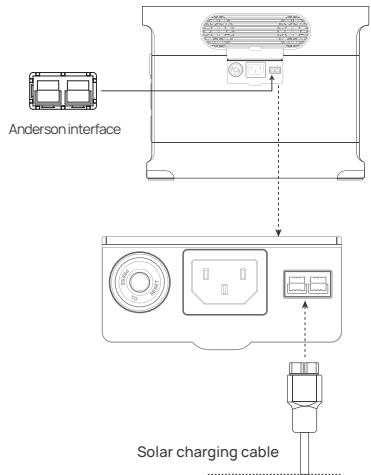
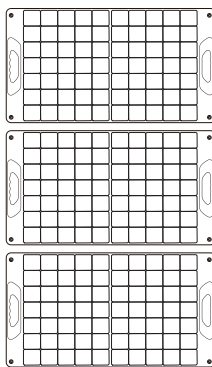
Fast charge technology is adopted in this product during AC charge wherein the max. input power can reach 1650W. When the AC input current continues to be too high, the AC input overload protector key will pop up automatically. After confirming that there is no faults in this product, press AC input overload protector key for recharging.

3.5 Instruction for Solar Charging

① Direct connection

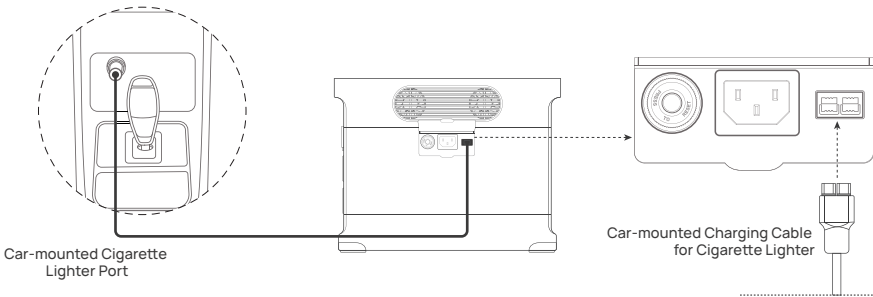


② Series connection



Users can use solar panel to charge the product in direct or series connection as illustrated.

3.6 Instructions for Car Charger



Users can use the car charger to charge the product wherein it is in favor of 12V/24V car chargers and the charging current is 10A by default. Use the car charger to charge after the car is ignited and started. Otherwise, it may cause that the car is under charge and can not be started. In addition, keep the cigarette lighter at the car-mounted cigarette lighter port and car-mounted charging cable for cigarette lighter in good contact. The company shall not assume any responsibility for damage caused from non-standard operation.

3.7 Basic UPS Function

Enable basic UPS mode:

Method 1: During AC charging, press the AC output power switch.

Method 2: Press the AC output power switch and then charge the device.

Disable basic UPS mode:

When basic UPS mode is on, press the AC output power switch.

3.8 Group String Connection

By group string connection, battery capacity can be expanded.

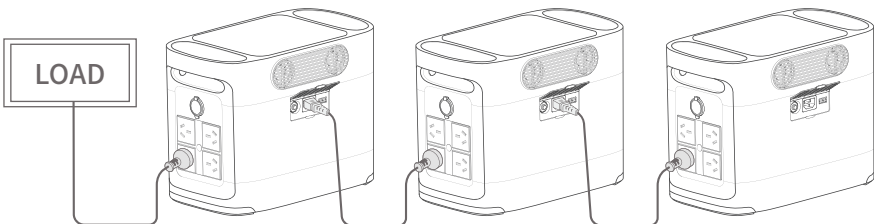
Enable/disable group string mode:

Start: When the device is powered on, press and hold the DC output power switch until the prompt tone and the group string identifier appear. Then the group string mode is started.

Disable: When the device is powered on, press and hold the DC output power switch until the prompt tone is heard and the group string identifier disappears. Then the group string mode is disabled.

Using group string mode:

- (1) Turn on the group string mode for all devices to be stringed.
- (2) By group series connection, AC output port of one device is connected to the AC charging port of another device with AC charging cable.
- (3) Turn on AC output power switch of each device after all devices are stringed.












Supporting a maximum of 10 group strings

Turn off group string mode:

- (1) Keep all devices in group string mode.
- (2) Press AC output power switch of the device at the rear and then turn off the AC output thereof.
- (3) Unplug the cable for connecting the device at the rear.
- (4) Repeat steps (2) and (3).

*Group string connection can greatly reduce the maximum output power of the device. The more the devices to be stringed there are, the greater the maximum output power is reduced.

4. Error Display and Processing

Abnormal Icon Indication	Type of Abnormality	Recovery Method
 Icon flashing Icon normally on	Normally on state indicates discharging at high temperature Flashing state indicates charging at high temperature	It automatically recovers when battery cools down
 Icon flashing Icon normally on	Normally on state indicates discharging at low temperature Flashing state indicates charging at low temperature	It automatically recovers when battery temperature is normal
 Icon flashing	Low battery power	It automatically recovers when the battery is fully charged
 Icon flashing	Fan blockage	Restart the device
 Icon flashing	Photovoltaic overload protection	1.Plug and unplug photovoltaic overload protector 2.Restart the device
 Icon flashing	Inverting fault	1.Press AC output power switch 2.Restart the device
 Icon flashing Sound alerting	Output/inverting overload protection	1.Lower down the output power 2.Press the sound key to stop the sound alert. The flashing icon will not disappear. 3.The inverting overload protector can shut off the inverting output and then the error can be eliminated after 30s.
 Icon flashing Error code appearing	Fault	Record the error code  and then contact the after-sale personnel. <small>DISCHARGE TIME</small> <small>Hours Mins</small>

If an alarm occurs during the use of the product and the alarm icon does not disappear after restarting the machine, please stop using the product immediately (Do not try charging or discharging).

*If you can not solve your problem through the above information, please contact customer service personnel for consultation.

5.FAQ

1.How to use the product upon receiving?

There is approx. 25%-60% power when you receive the product. It is recommended to fully charge the product before using. The product can be fully charged within 2 hours. Please use original charger, solar panel, car-mounted cable and company's other products.

2.What kind of battery does this product use? How long is the battery service life?

This product is equipped with ternary lithium battery. We calculate the service life thereof by times. It can still keep approx. 80% of effective capacity after 800-time cycle use.

3.What kinds of devices can be connected to the interfaces of the product?

There are 7 DC output ports for connecting the mobile phone, unmanned aerial vehicle, computer and other devices. The 4 AC output ports (2 AC output ports for the charging gun version) with rated power 2200W and peak power 4400W can supply power to most of household appliances. Before using, you shall confirm that the power of the appliance is lower than the rated power of the product.

4.How to know the running time of the product?

The product has a display screen and a variety of functions, wherein the endurance time under current stable use can be calculated and displayed.

5.Can the product charge while discharging?

The product can be used while charging wherein the power source is obtained from commercial power.

6.How to store the product?

When storing in short term, charge the product to approx. 50% and place it into the dry and ventilated environment. When storing in long term, it is recommended to carry out a cycle of charging and discharging in no more than 3 months so that the battery power can be kept about 60% and the service life of the product can be prolonged.

7.How long is the warranty period?

The warranty period is two years since you purchase. If there is a quality problem caused by non-human factors during the warranty period, you can send it back for maintenance.

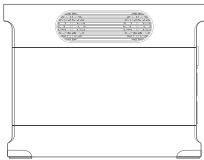
8.Notes for charging and discharging:

- (1)After charging the product for a long time, leave it for about 2 hours and then use the AC output function.
- (2)After discharging the product for a long time, leave it for about 2 hours and then charge it.

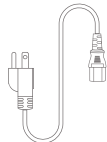
9.Other instructions for this product:

This product is not water proof and can not be taken on the plane. Only professional personnel of the company can disassemble the product for maintenance.

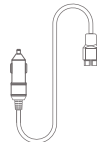
6.List of Package



Host



AC Charging Cable



Car-mounted
Charging Cable
for Cigarette Lighter



Operation Manual
and Maintenance Card

7.Maintenance and Repair

- 1.The optimal temperature for storing the product shall be maintained between 10°C and 35°C.
- 2.When storing in long term, it is recommended to carry out a cycle of charging and discharging in no more than 3 months so that the battery power can be kept about 60% and the service life of the product can be prolonged.
- 3.If the power runs out in long-term storage, the product may not work. After it is connected to the charger, it can resume work.
- 4.Under humid environment, please maintain and repair the product and store it with the product package to separate from high temperature and humidity. Please check the device before using.

8.Customer Service

-  24-month limited warranty