

EGRETECH

Portable Power Station Sonic

SONIC 600W

English

Introduction

Before first unpacking



The service life of this product is 2 years, and its battery is able to support at least 1000 deep charge and discharge. Before first using this product or if you need to store it for a long time, please fully charge this product. For more tips and tricks to keep your battery healthy, see Precautions for battery.

If you need to store this product for a long time, please fully charge it every 3 months and store it in a cool, dry place. If the above steps are not followed and the battery consequently is damaged, the product warranty will be invalid.

When charging this product, the battery segments on the display will flash sequentially, and all battery segments remain on when fully charged.

Product Specification

General parameters

Product name: Portable Power Station Sonic

Product model: Sonic 600W

Output power: 600W

Product volume: 145×152×251mm

Battery capacity: 499.5Wh

Operating temperature: -10~40°C

Net weight: ≈5.1kg

Noise level: 41.0dB Max

Charge mode: PV & car charger input: 5521 PV port (100W Max) and about 6~7 hours for full power. (Solar panel power exceeding 100W may trigger the protection mechanism, please reasonably choose solar panels) AC input: About 1.67 hours for full power with AC input.

LED function: Always on - SOS - off. (3-mode cycle)

HMI display: Power percentage, power state, charge/discharge power, the port indication of remaining charge/discharge operating time, temperature indication, fan state.

Product feature: Bidirectional inverter (Without adapter, over 5 times faster than traditional power sources when charging.)

USB output: 36W (Support protocols: Apple2.4A; QC3.0/2.0; FCP; AFC; DCP; SCP)

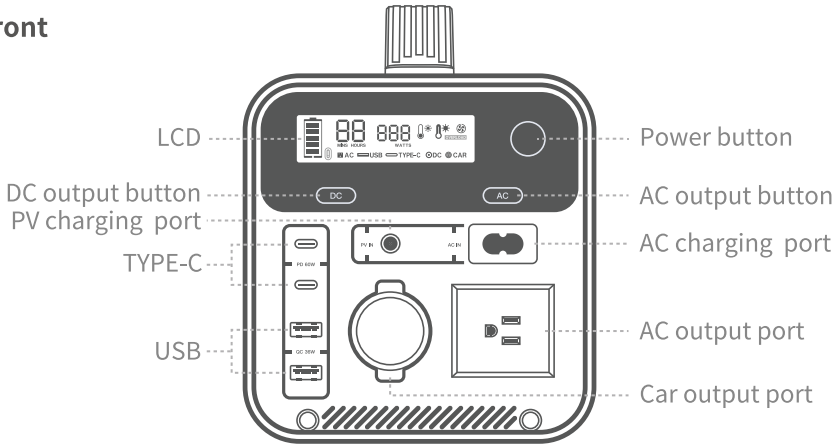
TYPE-C output: 60W (Support protocols: Apple2.4A; PPS; PD3.0/2.0; QC4.0+/4.0/3.0/2.0; AFC; FCP; Low-voltage SCP/high-voltage SCP; PE2.0/1.1; SFCP)

Car output: 120W (12V \rightleftharpoons 10A) output

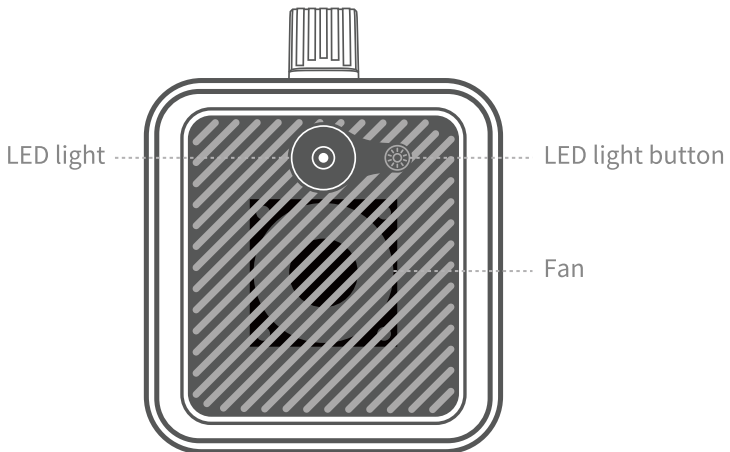
AC output: 120V pure sine wave output (600W)

Port Description

Front

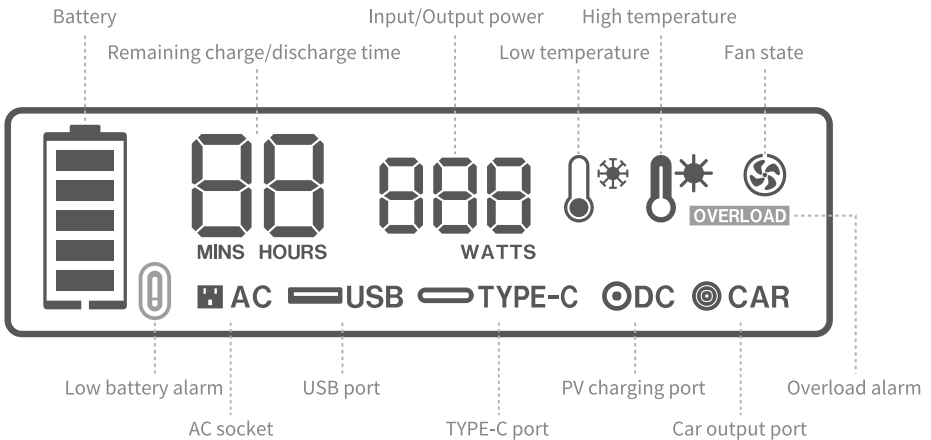


Back



* When using this product to charge a device that supports charge protocols (Such as mobile phones or notebooks), make sure that the device is oneway rechargeable; otherwise this product may not recognize the device to charge it.

LCD Description



1. When charging this product only, the battery icon flashes on the display and the number above the WATTS icon indicates the charging input power.
2. When discharging, the battery icon shows the remaining power, the 2-digit number above the HOURS or MINS icon shows the remaining discharge time, and the number above the WATTS icon shows the output power.
3. There are five battery segments on the battery icon corresponding to 20%, 40%, 60%, 80% and 100% dump power. When discharging, the battery segments gradually disappear to indicate the current dump power. When charging, the battery segments will flash sequentially until all remain on after fully charged. When a DC PV/cigarette lighter charging port is just plugged in, it may take a minute for this product to detect and adjust its charging circuit.

Power saving mode

Front panel display sleeping mechanism: If no operation is done within 3min, the display will be turned off, and you can turn on it again by pressing any button.

AC sleeping mechanism: If the load is continuously below 5W or no load is detected within 60min, the load output will be automatically turned off.

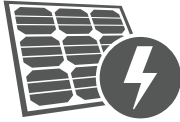
DC sleeping mechanism: If the load is continuously below 2W or no load is detected within 120min, the load output will be automatically turned off.

USB sleeping mechanism: If the load is continuously below 2W or no load is detected within 120min, the load output will be automatically turned off.

General sleeping mechanism: After the outputs are not turned on again within 90min after being turned off, the product will be automatically powered off.

Process Diagram

Charge mode



About 6~7 hours to be fully charged with solar panels



About 6 hours to be fully charged with car charger-cigarette lighter



About 1.67 hours to be fully charged with AC

Discharge available for the following scenarios and devices



Mobile phone
12Wh
≈37.5 times



MacBook
60Wh
≈7.5 times



Switch
15.9Wh
≈28.3 times



iPad
30Wh
≈15.0 times



Refrigerator
120W
≈3.8h



TV
110W
≈4.1h



iMac
143W
≈3.1h



Fan
45W
≈10.0h

Digital accessories

Power failure emergency



Electric rice cooker
280W
≈1.6h



Car refrigerator
40W
≈11.3h



LED light
5W
≈90.0h



Boiler
200W
≈2.3h



Respirator
40W
≈11.3h



Blood pressure gauge
30W
≈15.0h



Oxygenator
150W
≈3.0h



Atomizer
20W
≈22.5h

Self-driving travel

Medical service

* Monitor the battery level and make sure it does not get so low that it affects the operation of medical equipment.



Projector
180W
≈2.5h



Outdoor light
10W
≈45.0h



Electric blanket
60W
≈7.5h



Drone
40Wh
≈11.3 times



Digital camera
16Wh
≈28.1 times



Camera
23Wh
≈19.6 times

Camping

Photography



Inflation pump
40W
≈11.3h



Water suction pump
480W
≈0.9h

Engineering

* The above data is sourced from the laboratory. Different results or errors may be obtained from the test under different environments, and the actual use shall prevail.

Charging This Product

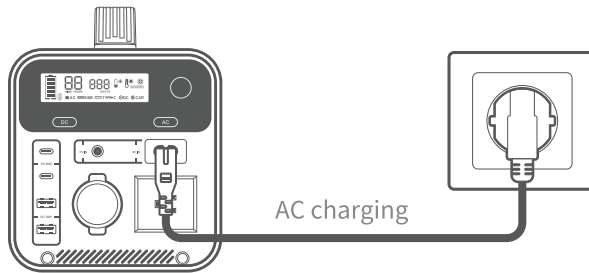


The service life of this product is 2 years, equaling 1000 deep charge and discharge. Before first using this product or if you need to store it for a long time, please fully charge this product and avoid a low battery state for more than three months. For more tips and tricks to keep your battery healthy, see Precautions for battery.

When charging this product, the battery segments on the display will flash sequentially, and all battery segments will remain always on when fully charged.

AC charging

1. When charging this product with the charging cord in accessories, the battery icon will flash to represent protocol identification, and after identification, it will be always on, the battery segments will flash sequentially, and the charging power will be displayed.
2. When fully charged, all battery segments remain always on.
3. When AC charging with the charging cord, it takes 1 hour to charge 80% and about 1.67 hours to 100%.

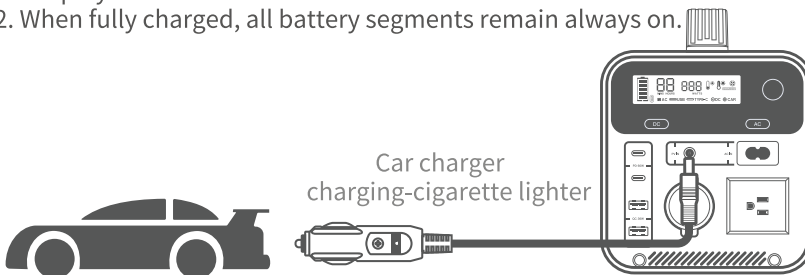


Important: When AC charging, this product does not support AC output.

Car charger charging

The port on the product to connect the car charger is a DC5521 port (PV IN).

1. When cigarette lighter charging with the charging cord in accessories, the battery icon will flash to represent protocol identification, and after identification, it will be always on, the battery segments will flash sequentially, and the charging power will be displayed.
2. When fully charged, all battery segments remain always on.



PV charging

! **Important:** When using solar panels to charge this product, please note that the output voltage in the solar panel specifications is 10~22V DC and the total output power is within 100W. Charging this product with solar panels that do not meet specifications may cause serious damage to it.

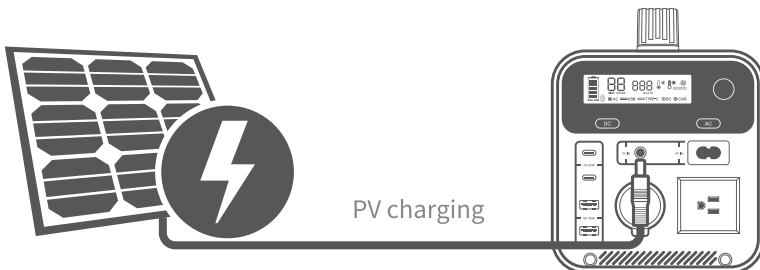
The port on the product to connect the PV charger is also a DC5521 port (PV IN).

1. When charging, please expose solar panels to more direct sunlight.
2. When charging, the battery segments on the display will flash sequentially and the charging power will be displayed. When fully charged, all battery segments remain on.
3. If necessary, low-power solar panels can be connected in series and parallel to charge this product provided that the voltage and total power shall be within right specification ranges (DC 18V/100W).

Warm tip: It is easy to charge this product with solar panels.

Notes for PV charging

1. Solar panels are intended to collect solar power, not to store solar power. That is, solar panels collect solar energy and store it in this product, powering your powered devices anytime and anywhere. When the PV charging is under way, powered devices can be used at the same time, that is, supporting discharging while charging.
2. PV charging time varies. Most solar panel manufacturers calculate the PV charging time with the following formula: device Wh/solar panel watts = PV charging time. Theoretically, a 100-watt solar panel can charge a 200Wh charger in 2 hours ($200/100=2$), and the said data be found in the solar panel instructions manual. In order to standardize the PV charging time from all manufacturers, these tests are done in a laboratory environment. However, only about 50~75% of rated solar panel power can be collected on a sunny day, which is how engineers calculate the PV charging time of this product.
3. Even on cloudy days, solar panels can also receive infrared, ultraviolet and visible light emitted by the sun. Therefore, this product can still be charged by the sun but with reduced efficiency.
4. Solar panels should not be screened by window glasses. When directly exposing solar panels to sunlight, they collect more power. Otherwise, window glasses will reduce collection efficiency. The optimal arrangement is to directly face solar panels toward the sun, thereby dramatically improving solar efficiency.



Button Operation

1. Power on/off

Long press the touch button for 3s to turn on this product. When the blue indicator light is on, this product can enter charge and discharge modes.

Long press the touch button for 3s to turn off this product. When the blue indicator light is off, discharge is not allowed.

Startup self diagnosis

Before this product operates, it will test itself on all links, digital circuits and logic software with preset phasor set, and preset state signals, so as to determine whether this product meets the operating conditions, if not, this product is not allowed to be put into operation.

Test items are as follows

Bus voltage, AC bias voltage, AC current sampling bias voltage, AC voltage effective value, AC current effective value, LLC temperature.

2. AC on/off

Short press once: Turn on AC output, and the blue indicator light of the button lights up.

Short press again: Turn off AC, and the blue indicator light of the button lights off.

3. DC on/off

Short press once: Turn on USB and DC cigarette lighter outputs, and the blue indicator light of the button lights up.

Short press again: Turn off DC/USB output, and the blue indicator light of the button lights off.

4. LED light on/off (ON state of this product)

Short press once: The LED light and the blue indicator light of the button light up.

Short press again: The LED light and the blue indicator light of the button light off.

In addition, short press the LED light button, the LED light can enter a 3-mode cycle of on - SOS - off.

Product feature

1. LCD screen displays the operating state of each port.

2. It can be used in such emergencies as sudden power failure provided that it is connected with an adapter when not in use to keep it fully charged.

Port Input Description

AC port: 120V single-phase input, L/N two-wire system
AC input voltage: 100V~120V/60Hz
Rated input power: 400W

PV port: 5521 port
Input voltage range: DC 10~22V (Rated: 18V)
Input current range: 6.5A Max (Rated: 5.6A)
Rated input power: Rated 100W

Port Output Description

AC port: 120V single-phase output, L/N two-wire system
AC output voltage: 120V/60Hz
Rated output power: Rated 600W
Output no-load test: After the output power is less than 5W for 60min, the AC output is turned off

Car output port: One-way 12V DC output
Output voltage range: 12.5V~13.2V (Rated: 12V)
Max. DC current: 10A
Full-load output power: 120W

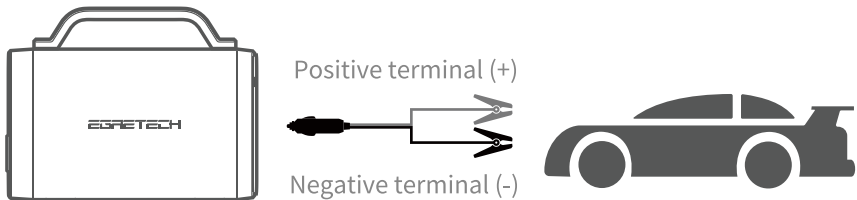
USB port: 36W Max
Output voltage range: 4.75V~5.25V; 8.55V~9.45V; 11.4V~12.6V
Support port protocols: Apple2.4A; QC3.0/2.0; FCP; AFC; DCP; SCP

TYPE-C port: 60W Max
Output voltage range: 4.75V~5.25V; 8.55V~9.45V; 11.4V~12.6V; 14.25V~15.75V;
19V~21V
Support port protocols: Apple2.4A; PPS; PD3.0/2.0; QC4.0+/4.0/3.0/2.0;
AFC; FCP; Low-voltage SCP/high-voltage SCP; PE2.0/1.1; SFCP

Car Emergency Charging Operation

Car emergency start procedure

1. Clip the red clip to the positive terminal (+) of the car battery and the black clip to the negative terminal (-).
2. Plug the other end of the emergency start cord to the cigarette lighter port (CAR) of this product and charge for 10min.
3. Before starting the car, unplug the emergency start cord and remove the red and black clips.
4. Start the car engine as usual.



Precautions

1. Before the car starts, please ensure that the red and black clips are tightly connected to the car battery terminals to prevent them from shaking and falling off after the car is started.
2. Keep a safe distance between the red and black clips to prevent short circuit.
3. Before the car starts, please disconnect this product from the car to prevent damage to this product and any possible accidents.
4. When the car starts, stay away from the engine to avoid possible injuries.
5. Before using this function, please ensure that the dump power of this product is greater than 60%.
6. People unfamiliar with this function are not allowed to use function, especially minors.

Precautions

Optimal use tips

1. When using this product to power other devices, please pay attention to the output power displayed on the screen. When outputting high power for a long time under extreme high temperatures (>56 °C), in order to protect the normal operation of the equipment, the AC output power is limited to 400W.
2. When powering a high-power device (Such as a refrigerator), the battery power will drop very quickly and may not be able to support output. Although this product is equipped with a high-efficiency inverter, there is still some energy lost in inversion, and therefore the battery fails to get the full rated capacity.
3. If this product fails to power other devices, you may need to check the power requirements of other devices, see Troubleshooting for details.

In cold weather

When the temperature is lower than -10°C, it will affect the normal operating state of this product. If you want off-grid power supply at low temperature, it is recommended that you should control the temperature at -10~40°C.

Troubleshooting

If this product fails to charge powered devices, please follow steps below:

1. Check whether the corresponding port icon on the display is always on to ensure that the port is ready for use.
2. Check the battery power on the display, and if the battery power is below 20% (1 battery segment), it may result from insufficient power, please charge this product.
3. Check the other icons on the display:
 - a. If the low battery alarm icon and the battery segment icon flash at one time, please contact the manufacturer's customer service.
 - b. If the over-temperature icon flashes, please check whether the ambient temperature exceeds 40°C and whether the air outlet of this product is blocked by dust.
 - c. If the low-temperature icon flashes, please check whether the ambient temperature is below -10°C.
 - d. If the overload icon is on, please check whether the power of the powered device exceeds the max. rated power of this product.
4. Check whether the powered device is compatible with this product, as all output ports have their own max power. Please carefully read the Product Specification herein to ensure that the powered device is available.
5. If you still encounter other unsolvable problems when you use it, please contact customer service through our website.

FAQ

Q. What type of battery is used in this product?

A. This product adopts the custom-designed lithium-ion battery. Here are some general facts about the lithium-ion battery:

1. Lithium-ion battery is able to store and release large quantity of energy in a short period of time. Equipped with a battery protection panel, it can control current to safely reach each output port through advanced battery management and protection systems

2. What calls for special attention is that the battery shall be away from moisture and water; otherwise, they can bypass the circuit protection into the battery.

Q. How do I check the current battery power of this product?

A. Battery icon on the LCD. When the display lights up, you will see an icon divided into 5 battery segments indicating the current battery power of this product. This product can also be used even if it is not fully charged.

Q. How do I know if it is compatible with my powered device?

A. First of all, you need to determine the rated power of your powered device, so you may need to check the device's manual.

Second, you need to check the max. rated power of output ports in this product.

For example, 600W power supply is available for the port of this product under the control of inverter. If your powered device is above 600W, the inverter of this product will be turned off after a period of time. Although the inverter of this product has an advanced surge management system that maximizes their compatibility with various devices, but there are still some that perform surge management at a higher rate than the device for a longer period of time, in which case the product will automatically turn off the port output.

Q. Why do the USB and cigarette lighter ports exhibit insufficient power output or stop functioning when the device battery level is low?

A. When the device's battery level drops below 30%, the total output power of the product is limited in order to extend the battery life. If the AC output remains at full power, the USB and cigarette lighter ports may be impacted by reducing output load or cessation of output. To use them normally, you can reduce or turn off the AC output, or promptly charge the device. The total output power of the product is restricted based on the battery level as follows:

Remaining battery level	0%~3%	3%~15%	15%~30%	30%~40%	40%~100%
Total power limit value	Stop Output	500W	600W	750W	850W
AC power value	Stop Output	500W	500W	500W	600W

When using the inverter, there are two layers of conversion (12V to high voltage, DC to AC). The least effective way to use the battery is to connect an AC-DC adapter on the AC port, just like using a phone charger to charge your phone at a power socket, because it adds another layer of inversion to the adapter. So, when powering your devices with this product, it is better to study their power consumption. For more quick tips and tricks, please access www.egretech.com.

Basic Battery Description

Precautions for battery

This product uses the latest battery technology, covering various needs in your daily life. We've compiled some useful tips to keep your battery operating at its best.

1. Regular use

Regularly use the battery. Do not store and not use the battery for a long time. But if you plan to store it, make sure it is fully charged. Although this product will sound an alarm when the battery power is less than 3%, do not store the battery for a long time in the state of power loss, and in case that this product can not be charged, charge it once every 3 months during long-term storage, or you will go to the local after-sales service provider for maintenance service.

2. "Battery memory"

For nickel-cadmium batteries, they have to be fully discharged before charged, and it is so-called "deep cycle". However, typical batteries in most devices today, including the advanced lithium battery used in this product, such discharge is no longer required. Actually, you should avoid deep cycle of your battery, which has more harm than good in most cases.

3. "Stadium effect"

When your battery is charged, the stadium effect happens. You'll notice that the battery charging process is fast at first, but slows down noticeably as you try to charge the last few percent. Just like how quickly a stadium is filled up when it first opens – there are hundreds of open seats, so it's easy to get one. When there are only a few empty seats here and there, people have to move around to get one, and it takes longer to fill up those seats hence. Similarly, power easily flows in and occupies empty space at the beginning. As time goes by, less and less space is available, and it takes longer for power to fill left space.

4. Reading this instructions manual

It will take some time to read the manual, but there are precautions for battery of this product. Following use methods stipulated in this manual will extend the service life of the battery.

Warranty and Contact Details

1. Limited warranty

We pledge to original consumers and purchasers that this product will be free from defects in workmanship and materials under normal use during the applicable warranty period set forth in paragraph 2 below, except for the exclusions set out in paragraph 5 below. This warranty statement sets out the total warranty obligations. We do not assume, nor authorize anyone to, assume any other liability for us in connection with the sale of our products.

2. Warranty period

The warranty period with 24 months is calculated from the date of purchase, and in order to determine the start date of the warranty period, consumers are required to provide purchase receipt.

3. Remedy

We will repair or replace (At our option and expense) any faulty product during the applicable warranty period due to defects in workmanship or materials.

4. Limited to original consumers

The service is limited to the warranty of the product purchased by the original consumer and is not transferable to any subsequent owner.

5. Exclusions

This product warranty does not apply:

Any damage to this product due to misuse, abuse, modification, accidents, or non-normal purposes authorized based on product information at that time.

How to get warranty service

If you need further help, please contact the local dealer, who will give you a Return Material Authorizations RMA number and a prepaid return label that you can use to mail your faulty product. You must package the product correctly with clear RMA number on the package, as well as proof of the date you purchased the product. We will handle your returned product and send you the repaired or a new one at our expense. For products purchased or shipped outside of North America, please contact the local dealer for details.

FCC Warning



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

Return Registration Form

EGRETECH

Product model: _____


Consumer name: _____

Order No.: _____

Product name: _____

Contact details: _____

Reason for return: _____

Manufacturer: G-YOUTH TECHNOLOGIES (SHENZHEN) CO., LTD
Address: 6th Floor, Block A, Haina Baichuan Building, Baoxing Road No.6, Haibin
Community, Xin'an Street, Bao'an District, Shenzhen City, Guangdong Province, China
 www.egretech.com

FC **CE** **RoHS**



MADE IN CHINA