

Product Specification Sheet

|                         |                                      |
|-------------------------|--------------------------------------|
| Name of client          | neutral                              |
| Name of product         | Portable energy storage power supply |
| Product Model / Version | G500 V1.2.00                         |
| Product Specifications  | 500/519.48Wh                         |
| Specification Version   | A0                                   |
| Date of issue           | 2022-9-5                             |

Shenzhen zhifu new energy  
resources co., ltd

|           |                   |          |
|-----------|-------------------|----------|
| to copy   | To<br>exam<br>ine | Approval |
| Yang Chao |                   | Gu Jinbo |

Customer signature

|             |                    |              |
|-------------|--------------------|--------------|
| confi<br>rm | To e<br>xamin<br>e | Appro<br>val |
|-------------|--------------------|--------------|

1.

| Revision record |      |                             |       |          |
|-----------------|------|-----------------------------|-------|----------|
| Version number  | date | Revised content explanation | Draft | Approval |
|                 |      |                             |       |          |
|                 |      |                             |       |          |
|                 |      |                             |       |          |
|                 |      |                             |       |          |
|                 |      |                             |       |          |

# catalog

|           |                                                            |           |
|-----------|------------------------------------------------------------|-----------|
| <b>1</b>  | <b>INTRODUCTION</b>                                        | <b>4</b>  |
| 1.1       | About this product                                         | 4         |
| 1.2       | About this specification                                   | 4         |
| 1.3       | Normative reference                                        | 4         |
| <b>2</b>  | <b>Product Overview</b>                                    | <b>4</b>  |
| <b>3</b>  | <b>Schematic diagram of the whole machine</b>              | <b>5</b>  |
| <b>4</b>  | <b>Switches and buttons</b>                                | <b>5</b>  |
| <b>5</b>  | <b>LCD screen display</b>                                  | <b>5</b>  |
| <b>6</b>  | <b>Product function and performance</b>                    | <b>6</b>  |
| 6.1       | Battery pack characteristics                               | 6         |
| 6.2       | DCInput (charge) characteristics                           | 7         |
| 6.3       | ACOutput characteristics                                   | 7         |
| 6.4       | DC5525 + Flare Flare Output Characteristics                | 8         |
| 6.5       | USB-AOutput characteristics                                | 8         |
| 6.6       | USB-COutput characteristics                                | 8         |
| 6.7       | Wireless charging and output characteristics               | 9         |
| 6.8       | Energy saving and environmental protection characteristics | 9         |
| 6.9       | others                                                     | 10        |
| <b>7</b>  | <b>Working environment</b>                                 | <b>10</b> |
| <b>8</b>  | <b>Compliance with certification or testing standards</b>  | <b>10</b> |
| <b>9</b>  | <b>Product physical parameters</b>                         | <b>10</b> |
| <b>10</b> | <b>Packing list</b>                                        | <b>11</b> |
| <b>11</b> | <b>Notes</b>                                               | <b>11</b> |

## 1 Introduction

### 1.1 About this product

Model: G500M (Amer  
ican and Japanese r

egulations) Produc

t version number: V

1.2.00

Customer Name: Neutral

## 1.2 About this specification

This product specification is compiled and released by the company's product center, which is the specification of the product released by the company, and is an important basis for the company to carry out the relevant work of this product (including production, inspection, testing, certification, marketing, etc.).

This product specification is maintained and updated by the company's product center.

## 1.3 Normative reference

Reference standards are as follows:

1)

GB31241-2014 Safety requirements for lithium-ion batteries and batteries for portable electronic products  
(country Home Standard No. 1 No. The amended)

2)

GBT35590 - 2017 "General Standard for Mobile Power Supply for Digital Equipment"

3)

CethTS018-2020 Technical Specification for Portable Li-ion Battery Energy Storage Power Source Certification (for the first time)

## 2 Product Overview

G500MI is a US / Japanese AC power standard, rated AC output power of 500W, adopted 18650 Ternary lithium battery, the battery capacity is 519.48Wh. Portable energy storage power products for the home should be used for emergency electricity, outdoor travel, emergency relief, field work and other occasions.

The product AC total output power is 500 W,Have two ways110VAC output, three-way complianceQC3.0StandardUSB-AOutput, all the way in line withPD60StandardUSB-COutput, two waysDC5525outputWith a flare port output, built in 5 W LEDLighting andSOSAlarm function, support10WWireless charging  
Yes.

This product comes standard with 25 V / 4AofACAdapter Support110V AC charging, but also supports DCphotovoltaic18V/100–200WCharging and DC 12VThe car charger charges the product.

3

Schematic diagram of the whole machine

e



4 Switches and buttons

| Serial numb | Key name | Number | Introduction |
|-------------|----------|--------|--------------|
|-------------|----------|--------|--------------|

| er |                              |                     | S                                                                                                                                                                                                            |
|----|------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Master switch button         | lindi<br>vidua<br>l | Press the master switch, turn on, LCD screen lights up. Touch and press off.<br>Press the master switch to control:DC5525 With the cigarette lighter output, the control USB-A、USB-C, Wireless Charge Output |
| 2. | AC Output Switch             | lindi<br>vidua<br>l | Control the AC output.                                                                                                                                                                                       |
| 3. | DC output switch             | nothing             |                                                                                                                                                                                                              |
| 4. | USB/Wireless charging switch | nothing             |                                                                                                                                                                                                              |
| 5. | Light switch                 | lindi<br>vidua<br>l | Normal: Short Press1Next light, and then short press1Secondary closure<br>SOS: Continuous Short Press2Next Flash, Short Press1Next change light, and then short press 1Secondary closure                     |

## 5 LCD screen display

| Serial number | Information item                   | type            | Introduction                                                                                                                       |
|---------------|------------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------|
| 6.            | Battery power                      | blend           | Displays the current battery charge as an energy column+Percentage presented.                                                      |
|               |                                    |                 | The main switch is turned on, and the battery power is displayed.<br>During charging, the energy column is displayed dynamically.  |
| 7.            | Charging power                     | numerical value | When charging,“POWER IN”The icon lights up and shows the charging power.                                                           |
| 8.            | DC output power                    | numerical value | After the master switch is turned on,“DC OUT”Icon lights up and displays the total DC output of the Use power.                     |
| 9.            | USB/Wireless charging output power | numerical value | After the master switch is turned on,“USB OUT”The icon lights up and displays theUSB-A、USB-CThe total power output of the three wi |

|     |                   |                 |                                                                                                                                                                                                                                           |
|-----|-------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     |                   | value           | reless charging.                                                                                                                                                                                                                          |
| 10. | AC output power   | numerical value | After the AC output switch is turned on, “AC OUT”The icon lights up and displays the communication<br>Total used power output                                                                                                             |
| 11. | Lighting lamp     | icon            | Light on, light bulb icon on                                                                                                                                                                                                              |
| 12. | fan               | icon            | Core $\geq$ detected45 Degree or power $\geq$ 40%After the rated load, the fan starts, Fan icon lights up                                                                                                                                 |
| 13. | Temperature alarm | icon            | The temperature of the cell is detected to reach the set protection value, such as the charging protection temperature value.<br>The exclamation mark icon flashes if the discharge temperature protection value is reachedOf ten bright. |

## 6 Product function and performance

### 6.1 Battery pack characteristics

| project                                            | Minimum | standard           | Maximum | Introductions                                                                                                                                   |
|----------------------------------------------------|---------|--------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Voltage                                            | 16.8V   | 22.2V              | 25.2V   |                                                                                                                                                 |
| capacity                                           | 21.80Ah | 23.4Ah<br>519.48Wh |         | Battery Pack Factory Capacity:0.5CDischarge $\geq$ 21.8Ah(0.2C Charge to25.2V, 0.02CCurrent cutoff,0.5Cdischarge To 16.8 V, resulting capacity) |
| Battery Pack Low Voltage protect                   | 17.8V   | 18.3V              | 18.8V   | When the battery pack voltage is below this value, stop discharging(Through the Lord Control)                                                   |
| Charging high temperature protection               | 45°C    | 50°C               | 55°C    | Battery temperature exceeds this value, stop charging, charging protection diagram<br>Exclamation point flashing;                               |
| Charging high temperature protection Post-recovery | 40°C    | 45°C               | 50°C    | After the high temperature protection stops charging, it returns to this temperature and automatically recovers.<br>Recharging;                 |

|                                                          |      |      |      |                                                                                                                               |
|----------------------------------------------------------|------|------|------|-------------------------------------------------------------------------------------------------------------------------------|
| Low temperature protection for charging                  | -5℃  | 0℃   | 5℃   | Battery temperature below this value, stop charging, charging protection diagram<br>Exclamation point flashing                |
| Low temperature protection for charging<br>Post-recovery | 0℃   | 5℃   | 10℃  | After the low temperature protection stops charging, it returns to this temperature and automatically recovers.<br>Recharging |
| High temperature discharge protection                    | 60℃  | 65℃  | 70℃  | Battery temperature exceeds this value, stop discharge Discharge protection icon<br>Exclamation point                         |
| High temperature discharge protection<br>Post-recovery   | 55℃  | 60℃  | 65℃  | High temperature protection after termination of discharge, return to the temperature, you can press<br>Key recovery          |
| Discharge cryogenic protection                           | -10℃ | -15℃ | -20℃ | Cell temperature below this value, stop discharge, discharge protection diagram<br>Exclamation mark often bright              |
| Discharge cryogenic protection<br>Post-recovery          | -15℃ | -10℃ | -5℃  | Low temperature protection after termination of discharge, return to the temperature, you can press<br>Key recovery           |

## 6.2 DCinput(Charge) Characteristic

| project          | Minimum | standard     | Maximum | Introductions                         |
|------------------|---------|--------------|---------|---------------------------------------|
| DC Charging mode |         |              |         | SupportAC Adapters, car chargers, PV, |
| PV Input port    |         | 1 individual |         |                                       |
| DC Input port    |         | 1 individual |         |                                       |
| DC Input vol     | 12V     | 25V          | 26V     |                                       |

|                                    |     |               |      |                                                                           |
|------------------------------------|-----|---------------|------|---------------------------------------------------------------------------|
| tage                               |     |               |      |                                                                           |
| DC Input current                   |     | 4A            | 8.5A | Standard25V4A adapter                                                     |
| DC Input power                     |     |               | 105W |                                                                           |
| PV Input voltage                   | 12V | 18V           | 26V  |                                                                           |
| PV Input current                   |     | 6A            | 8.5A |                                                                           |
| PV Input power                     |     |               | 105W |                                                                           |
| Car charging input voltage         | 12V |               | 15V  |                                                                           |
| Car charger input current          |     | 8A            | 8.5A |                                                                           |
| Car charger input power            |     | 100W          | 105W |                                                                           |
| Multiple charging at the same time |     | Not supported |      | When charging, only one input mode can be selected to charge the product. |
| Charge and put                     |     | Not supported |      | Allowed when chargingDC,USB, Not AllowedAC discharge                      |

### 6.3 ACOutput characteristics

| project           | Minimum | standard  | Maximum | Intructions                                                |
|-------------------|---------|-----------|---------|------------------------------------------------------------|
| AC Output Jack    |         | 2         |         | Meiji                                                      |
| AC power transfer |         | 500W      | 510W    | Pool Set Voltages 20.4 ~ 25.2V PF 1.0R Load                |
| Output peak power |         | 1000W     |         | Protection Off Output after Maximum Power Continues 200 ms |
| AC Out Wave       |         | sine wave |         | Resistance R load                                          |
| THDV              |         | 5%        |         | Resistive belt                                             |
| AC Frequency      | 59HZ    | 60HZ      | 61HZ    |                                                            |
| No-load outp      | 105V    | 110V      | 115V    |                                                            |

|                                               |       |      |      |                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------|-------|------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ut voltage                                    |       |      |      |                                                                                                                                                                                                                                                                                         |
| Output volta<br>ge with loa<br>d              | 100V  | 110V | 120V |                                                                                                                                                                                                                                                                                         |
| Inverter eff<br>iciency                       | 85%   | 87%  |      | Load current at rated voltage 40%,<br>60%, 80%, 100%<br>The Average Efficiency of Four Poi<br>nts with R Load Plate End                                                                                                                                                                 |
| AC Effective<br>Output Cap<br>acity<br>amount | 400Wh |      |      | Ambient temperature $25 \pm 2$ degree<br>s, rated power test;                                                                                                                                                                                                                           |
| AC Overload<br>Protection                     | 510W  | 550W | 590W | <p>ACThe load power is greater than the5<br/>50WContinued3SPost-trigger overloadProtecti<br/>on, OffAC, Key Recovery</p> <p>DC+USB+ACThe load power is greater th<br/>an the550WPost-trigger overloadProtection<br/>, OffAC, ReservationsDC/USBOutput, key<br/>recovery<br/>complex</p> |
| Inverter ove<br>rtemperature<br>protection    | 85°C  |      |      | Turn off the AC output, button re<br>covery                                                                                                                                                                                                                                             |

## 6.4 DC5525 + Flare Output Characteristics

| project                                   | Minimu<br>m | standa<br>rd | Maximu<br>m | Intr<br>oduc<br>tion<br>s                                |
|-------------------------------------------|-------------|--------------|-------------|----------------------------------------------------------|
| DC5525 Port                               |             | 2            |             |                                                          |
| Cigarette Li<br>ghter Port                |             | 1            |             |                                                          |
| Output volta<br>ge                        | 11.8V       | 12.8V        | 14V         |                                                          |
| Output curre<br>nt                        |             | 10A          |             | Two way 5525 + one way cigarette<br>lighter total output |
| Output curre<br>nt limiting<br>protection | 10.1A       | 11.5A        | 13A         | Turn off output, no damage to cir<br>cuit, key recovery  |

|                                 |  |         |  |                                                     |
|---------------------------------|--|---------|--|-----------------------------------------------------|
| Output short circuit protection |  | Support |  | Turn off output, no damage to circuit, key recovery |
|---------------------------------|--|---------|--|-----------------------------------------------------|

## 6.5 USB-A Output characteristics

| project                            | Minimum | standard | Maximum | Introductions                                                         |
|------------------------------------|---------|----------|---------|-----------------------------------------------------------------------|
| USB A port                         |         | 3        |         |                                                                       |
| QC3.0                              |         | Support  |         |                                                                       |
| Output power                       |         | 18W      |         |                                                                       |
| 5V No-load output                  | 4.7V    | 5V       | 5.5V    |                                                                       |
| 5V Full Load Outputer              | 4.5V    | 5V       | 5.5V    |                                                                       |
| 5V Positive Current                | ---     | 3A       | ---     |                                                                       |
| 9V No-load output                  | 8.7V    | 9V       | 9.6V    |                                                                       |
| 9V Full Load Outputer              | 8.6V    | 9V       | 9.5V    |                                                                       |
| 9V Positive Current                | ---     | 2.0A     | ---     |                                                                       |
| 12V No-load Outputer               | 11.6V   | 12       | 12.6V   |                                                                       |
| 12V Full Load Outputer             | 11.5V   | 12V      | 12.6V   |                                                                       |
| 12V Positive Current               | ---     | 1.5A     | ---     |                                                                       |
| Automatic identification           | ---     | Yes      | ---     | Output voltage and current according to different load                |
| Output current limiting protection | 3.1A    | 3.8A     | 4.5A    | Turn off the output, without damaging the circuit, automatic recovery |
| Output short circuit protection    |         | Support  |         | Turn off the output, without damaging the circuit, automatic recovery |

## 6.6 USB-C Output characteristics

| project | Minimum | standard | Maximum | Introductions |
|---------|---------|----------|---------|---------------|
|---------|---------|----------|---------|---------------|

|                                    |       |         |       | tion<br>s                                                     |
|------------------------------------|-------|---------|-------|---------------------------------------------------------------|
| USBC port                          |       | 1       |       |                                                               |
| PD3,0                              |       | Support |       |                                                               |
| Output power                       |       | 60W     |       |                                                               |
| 5V No-load output                  | 4.6V  | 5V      | 5.5V  |                                                               |
| 5V Full Load Outputer              | 4.5V  | 5V      | 5.5V  |                                                               |
| 5V Positive Current                | ---   | 3A      | ---   |                                                               |
| 9V No-load output                  | 8.6V  | 9V      | 9.5V  |                                                               |
| 9V Full Load Outputer              | 8.5V  | 9V      | 9.5V  |                                                               |
| 9V Positive Current                | ---   | 3A      | ---   |                                                               |
| 12V No-load Outputer               | 11.6V | 12V     | 12.6V |                                                               |
| 12V Full Load Outputer             | 11.5V | 12V     | 12.5V |                                                               |
| 12V Positive Current               | ---   | 3A      | ---   |                                                               |
| 15V No-load output                 | 14.6V | 15V     | 15.6V |                                                               |
| 15V full load output               | 14.5V | 15V     | 15.6V |                                                               |
| 15V Positive Current               | --    | 3A      | ---   |                                                               |
| 20V No-load output                 | 19.7V | 20V     | 21V   |                                                               |
| 20V full load output               | 19V   | 20V     | 20.8V | When the power is $\leq 10\%$ , 20V output is not supported.  |
| 20V Positive Current               | ---   | 3A      | ---   |                                                               |
| Automatic identification           | ---   | Yes     | ---   | Output voltage and current according to different load        |
| Output current limiting protection | 3.1A  | 3.8A    | 4.5A  | Turn off the output, do not damage the circuit, self-recovery |
| Output short c                     |       | Support |       | Turn off the output, do not damage                            |

|                   |  |  |  |                              |
|-------------------|--|--|--|------------------------------|
| ircuit protection |  |  |  | e the circuit, self-recovery |
|-------------------|--|--|--|------------------------------|

## 6.7 Wireless charging and output characteristics

| project                | Minimum | standard | Maximum | Introductions                                                         |
|------------------------|---------|----------|---------|-----------------------------------------------------------------------|
| Wireless charging port |         | 1        |         |                                                                       |
| Output power           |         | 10W      |         |                                                                       |
| Output voltage         | 8.8V    | 9V       | 9.3V    |                                                                       |
| Output current         | 0.8A    | 1.1A     | 1.3A    |                                                                       |
| FOD                    |         | Support  |         |                                                                       |
| Temperature protection | 60℃     | 65℃      | 70℃     | Turn off the output, without damaging the circuit, automatic recovery |

## 6.8

## Energy saving and environmental protection characteristics

| project                                                            | Minimum | standard    | Maximum | Introductions                                                              |
|--------------------------------------------------------------------|---------|-------------|---------|----------------------------------------------------------------------------|
| Automatic shutdown                                                 |         | Support     |         | The load power is $\leq 5$ W; Continuous 8 H Automatic Shut Down           |
| Whole machine working idle<br>Power consumption                    |         | 500mA       | 650mA   | Battery pack output22.2V, OpenDC. USB. ACMeasuring batteryB+<br>End access |
| When the whole machine shuts down since<br>Electricity consumption |         | $\leq 1$ mA |         |                                                                            |
| Runtime noise                                                      |         |             | 75db    | Less than 35db when fan free and less than 75db when fan starts            |

## 6.9 Other

| project | Minimum | standard | Maximum | Intr |
|---------|---------|----------|---------|------|
|---------|---------|----------|---------|------|

|                              | um | rd    | um | oduction<br>s                                                                       |
|------------------------------|----|-------|----|-------------------------------------------------------------------------------------|
| Lighting power               |    | 5W    |    | Surface light source                                                                |
| Illuminant brightness        |    | 600LM |    | Distance 20CM Test                                                                  |
| Illuminant color temperature |    | 3000K |    |                                                                                     |
| Lights dormancy              |    | 8H    |    | After opening, no open DC, USB, AC within 8 H<br>Yes, turn off the lights to sleep; |

## 7 Working environment

| project                                                                                                                                                                              | Minimum | standard | Maximum   | Intr<br>oduction<br>s     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------|-----------|---------------------------|
| Charging operating temperature                                                                                                                                                       | 0°C     | 25°C     | 40°C      | environmental temperature |
| Discharge operating temperature                                                                                                                                                      | -10°C   | 25°C     | 40°C      | environmental temperature |
| Storage temperature                                                                                                                                                                  | -20°C   | ---      | 45°C      |                           |
| Working humidity                                                                                                                                                                     | 10%     | ---      | 75%       |                           |
| Storage humidity                                                                                                                                                                     |         | ---      | 45%       |                           |
| altitude                                                                                                                                                                             |         |          | 2000 rice |                           |
| Test ambient temperature                                                                                                                                                             | 23°C    | 25°C     | 27°C      |                           |
| <p>If the battery is stored for more than three months, please use the charger with the specified parameter range to charge and discharge the product once.</p> <p>Charge to50%;</p> |         |          |           |                           |

## 8

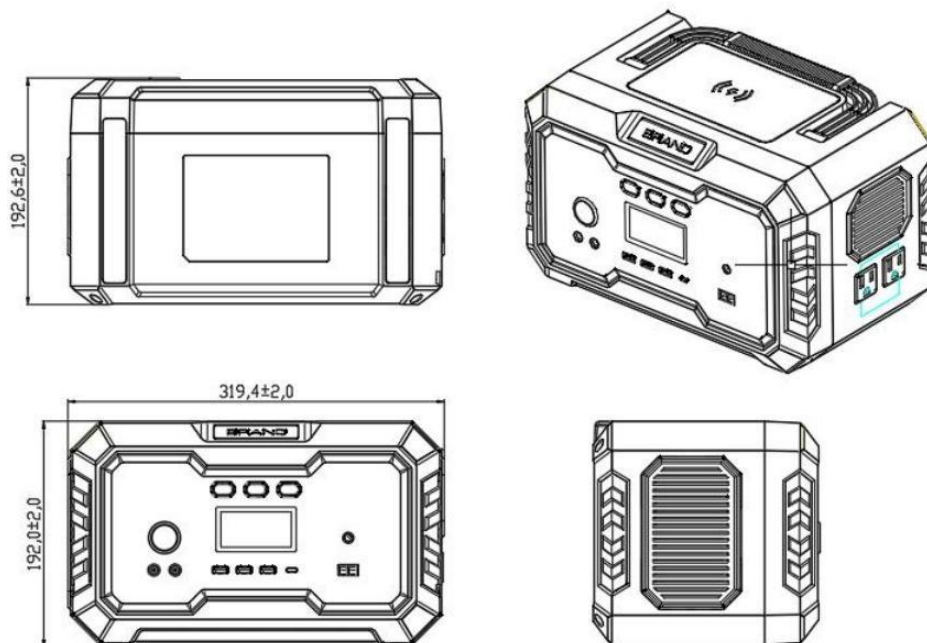
### Compliance with certification or testing standards

According to the needs of customers can do the following certification or record: UL2743 report / FCC-sDOC / FCC-ID / UN 38.3 / MSDS / UN box performance list / dangerous package certificate, the cost is the customer's responsibility.

| Certification Program | Certification Implementation Standards |
|-----------------------|----------------------------------------|
| FCC-sDOC              | FCC 47 CFR Part 15 Subpart B: 2022     |
| FCC-ID                | FCC Part15 Subpart C, Paragraph 15.209 |
| UL2743                | UL 2743. Edition 2. Revision 2020      |
| UN38.3                | ST/SG/AC.10/11/Rev.7/Amend.1           |

## 9 Product physical parameters

The maximum size of the machine appearance:  
319.4 \* 192.6 \* 192mm, 2 mm Body weight:  
6.14KG,



## 10 Packing list

| Serial number | name          | Specifications   | Number |
|---------------|---------------|------------------|--------|
| 1             | G500M         | 500W/519.48Wh    | 1      |
| 2             | User's manual | G500M: 142*210mm | 1      |
| 3             | AC Fit        | Miki 25V4A 100W  | 1      |

## 11 Note

2. Do not put the product into water or rain!
3.  
Do not heat the product or approach the fire source! Do not disassemble or transform the product without authorization! Do not hit the product hard! Otherwise, it may cause the battery to overheat, short circuit, fire or function failure, short life and other hazards.
4.  
Do not use or place this product in high temperatures (in hot sunlight or in very hot cars), otherwise it may cause overheating of the battery, fire or failure of function, short life, and other hazards.
5. Prohibit disassembly and disassembly of power supply
6. Prohibit short circuit of the power battery
7.  
Prohibit the use of non-dedicated charger to charge the power supply, it will be dangerous;
8.  
Do not directly touch the leaking battery, the leakage of electrolyte will cause skin discomfort, in case the electrolyte enters the eyes, rinse with water as soon as possible, do not rub the eyes, and quickly sent to the hospital;

## **FCC STATEMENT :**

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.

**Warning:** 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.

## **FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.