Description

Model: CP042345

型号：

Assembly Way

single cell the inflexed fold and solder

单电芯内折点焊

Specification

Assembled cell parameters

No.	Item	Spec	Note
1	**Model** 型号	CP042345/35mAh	1S1P
2	**Nominal Voltage** 标称电压	3.0V	When shipping, the voltage without load is between 3.05V and 3.23V. 出货时，电芯开路电压在 3.05V~3 V
3	**Nominal Capacity** 额定容量	Typ:35mAh@0.5mA Discharge(放电)	Nominal Capacity refer to the capacity of 0.5mA discharge to 2.0V cut-off voltage at 23℃.

4	**Max.Discharge Current** 最大持续放电电流	2mA	At 25±2℃ the battery can discharge at least the max continuous discharge value which rated capacity 50% can permit。 在 23±2℃的 至
5	**Max. Discharg Current** 最大脉冲放电电流	4mA	At 23 2 ,battery discharge duration for 3 seconds and stand 27 seconds, it can discharge at least the max pulse discharge value which rated capacity 50% can permit 在 23±2 的环境下， 定
6	**Discharge Cut-off Voltage** 放电截止电压	2.0V	
7	**Operating Temperature** 工作温度	-20℃~ +60℃	Exceed the operating temperature range could lead to battery operating voltage reduction or even a security risk 超过使用温度范围可能导致电池容量减
8	**storage temperature** 储存温度	-5 ℃~+35℃	电芯应在 3.05V ~ 3.23V 状态下储存。
9	**Storage life** 储存寿命	8years（年）	Relative humidity 相对湿度: 45~75%RH Temperature -5 ℃~+35℃
10	**Cell Weight** 电芯重量	Approx:0.8g 约: 0.8g	
11	**Self Discharge Rate** 年自放电率	2%	Out of the recommended condition, the self-discharge rate 2% may increase 当电池的储存条件不在推荐范围时，电池
12	**Assemblage Dimension** 装配尺寸	Length：23.5mm Max Width：45.5mm Max Thickness：0.45mm Max	Measured weight of 300gf at 25 ± 1 ℃.No includin battery drawing line

4. Battery Cell Performance Criteria

4.1 Standard testing environment

Unless specifically stated otherwise, tests must be done within one month of delivery and

the number of charging-recharging cycles is fewer than 5. The following is test conditions:
Test conditions:
Ambient Temperature： 25ºC ±
1ºC Ambient Humidity：
45~75%RH
非另有说明，测试应在电

4.2 The requirement of measure instrument

(1) The measurement instrument has been certified by a qualified source.
(2) The accuracy of the measuring instrument is less than 0.01mm.
(3) The accuracy of multimeter is at least 0.5%.
(4) The current accuracy of the battery test system is at least ±0.1%, isobarically accuracy is ±0.5%, and timer accuracy is not less than ±0.1%.
(5) The accuracy of the thermometer is at least ±0.5ºC.
(1) 测量设备、仪器需经检定机构检验合格。

4.3 Visual inspection

外观检查

Not allowing any visual defects which will affect the electronic characteristics, such as leakage and damage.
不允许有影响电芯性能的外观缺陷，

4.4 Mechanical Characteristics 机械特性

No. 序号	Item 项目	Testing Conditions and Method 测试方法及条件	Standard 标准
1	**Vibration Test** 振动测试	After standard charging, the cell is secured to a vibration table and subjected to vibration cycling in which the frequency is varied at the rate of 1Hz per minute between 10Hz and 55Hz; the excursion of the vibration is 0.38mm. The cell shall be vibrated for 30 minutes on each of X, Y, and Z axis. 将标准充电后的电芯固定在振动台上 ,并沿 X、 、	UL1642 No explosion, no fire 无爆炸、无起火

2	**Drop Test** 跌落测试	A battery is dropped from a height of 1 meter two times onto a concrete surface. 标准充电后，将电芯 2 次从 1 米的高度跌落至混凝土地面。	UL1642 No explosion, no fire 无爆炸、无起火

4.5 Safety Test 安全测试

No. 序号	Item 项目	Testing Conditions and Method 测试方法及条件	Standard 标准
1	**Short-circuit** 短　路	A battery is short-circuited for 1 hour at 0.04Ω. 将标准充电后的电芯， 1h。	UL1642 No explosion, no fire 无爆炸、无起火
2	**Heat shock** 热冲击	The cell is placed in a thermal chamber. Temperature is raised to 130±2ºC at the rate of (5±2ºC)/min and held for 10 minutes, then cooled to room temperature at the rate of 5±2ºC/min. 电池置于热 率升至 130	UL1642 No explosion, no fire 无爆炸、无起火
3	**Humidity and heat test** 湿度和热度测试	A battery is placed in a box for 48 hours where the temperature is 40ºC±2ºC and the relative humidity is 90% ~ 95% 将电芯放入温度为 40℃±2℃，	UL1642 No explosion, no fire 无爆炸、无起火

4.6 High and low temperature test 高低温性能测试

No. 序号	Item 项目	Testing Conditions and Method 测试方法及条件	Standard 标准
1	**High Temperature** 高温性能	A battery is placed in an oven for 2 hours at 55ºC±2ºC, then discharged at a 1mA current to the termination voltage. 在 55℃±2℃条件下，将电芯放入高温箱中 2h 后，再以 1mA 电流放电至终止电压。	Discharge 90 percent of the original capacity. 可放出初始容量的 90%.
2	**Low Temperature** 低温性能	A battery is placed in a thermal chamber for 2 hours at -10ºC±2ºC; then discharged at 1mA to the termination voltage. 在-10℃±2℃条件下，将标准充电后的电芯放止	Discharge more than 45 percent of the original capacity. 可放出初始容量的 45% (

5. Storage and others

5.1 Longterm Storage

长期贮存

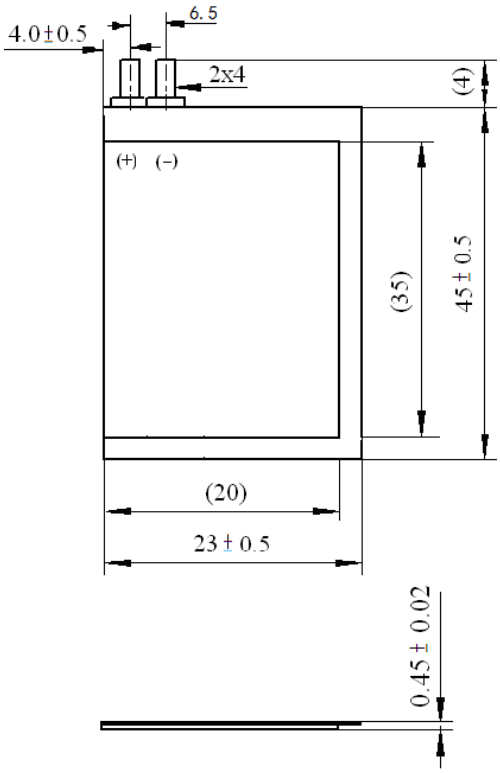
If the cell is to be stored for 3 months or longer it should be held in a dry and cool environment. Voltage during storage needs to me maintained between 3.05V~3.23V and the storage

6 months from the data that the batteries are shipped out

7.Drawing

7.1 Assembly diagram（not to scale）

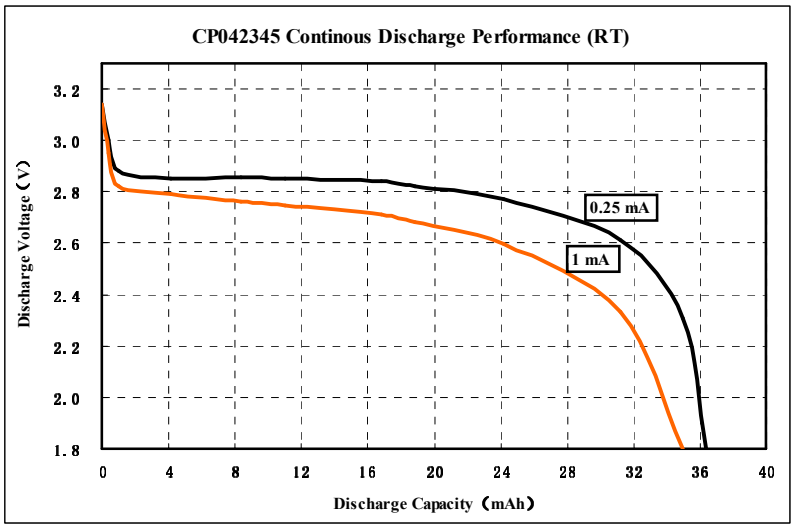
Model：CP042345
Unit：mm



8、Discharge curve

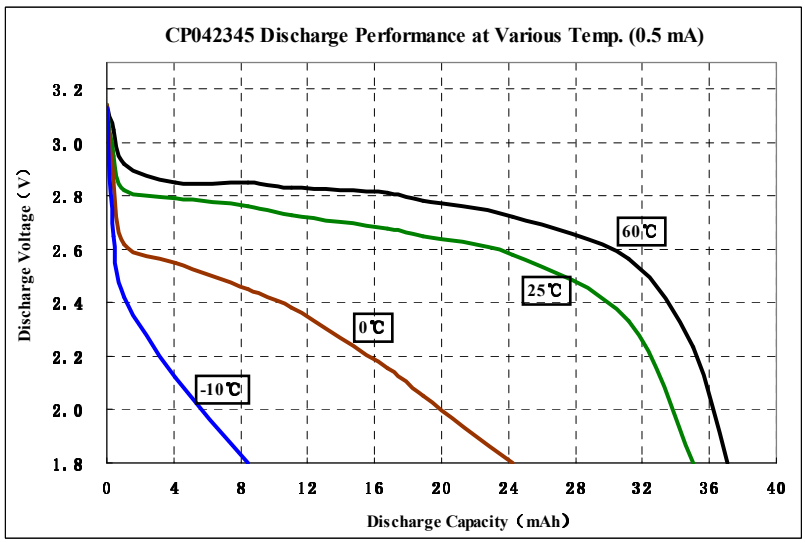
8.1 Different current discharge curve at 23℃

CP042345



8.2 Different temperature discharge curve at 0.5mA

CP042345



Handling Precaution and Guideline

For CP batteries Preface

Note (1): The customer is requested to contact GMB in advance if and when the customer needs variations of the operating conditions described in this document. Additional experimentation may be required to verify performance and safety under such conditions.
注

Note (2): GMB will take no responsibility for any accident when the cell is used under conditions outside of this specification.
注 (

Note (3): GMB will inform the customer in writing of improvement(s) regarding proper use and handling of the cell if it is deemed necessary.

GMB Energy reserves the right to revise this specification before the customer signs the datasheet. If a revision is required, GMB will notify the customer.

1. Discharging Current:

放电电流

The cell shall be discharged at less than the maximum discharge current specified in the Specification Approval Sheet. A high discharging current may reduce the discharge capacity significantly or cause overheating.

放电电流不得超过本规格书规定的最大放电电流，

2. Discharging Temperature

放电温度

The Discharging Temperature must be within the range specified in this Specification Approval Sheet.

3. Over-Discharge

过放电

Over-discharging will cause cell degradation and functional losses. The cell can degrade into an over-discharge state through self discharging. In order to prevent over-discharging, the cell should retain the open voltage between 3.05V and 3.22V.

过放电会导致电芯性能及功能的丧失，要避免过放电。电芯长期未使用期间

4. Storage

贮存

Cells should be stored at the proper temperature that is identified in the Specification

5. Notice

5.1 Handling of cells:

Avoid any short-circuit. It will cause the leads to get hot and lose electronic functions.

★ Soft package is easily damaged by sharp objects such as needles and knives. Avoid touching the cells with sharp objects when handling and storing.

★ Next to the leads is the sealed edge. Don't bend or fold the sealing edge as it is sensitive to movement.

★ Don't open the folded edge on the sides of the cell.

★ Don't bend the tabs as the tabs are sensitive.

★ Avoid mechanical shock to the cells.

★ Don't put the cells into an oven, washing machine or any high-voltage container.

★ Don't use a charger without a safety certification. Use only a recommended charger.

★ You should immediately stop charging if the cell overheats, emits an odor, changes color, changes shape, etc.

★ Adults should supervise the use of batteries by children.

★ Before using batteries, please carefully read and understand the handling guidelines.

★ Avoid electro-static discharge when using, charging, and storing cells.

★ Avoid putting the battery in contact with metal conductors such as neck chains, barrettes, or bolts, etc.

★ Don't use metal conductors to connect the positive and negative leads together.

★ Avoid errors during assembly by contacting the positive lead with the negative lead.

5.2 Notice for Designing Battery Pack

5.2.1 Package Design

外壳设计

① The battery pack should have sufficient strength and the battery should be protected from mechanical shock

〇 No sharp objects should be inside the pac containing the battery.

5.3 Notice for Assembling Battery Pack

电池外壳组装注意事项

5.3.1 Tab connection

电芯的连接

① Ultrasonic welding or spot welding is recommended to connect the battery with the PCM or other parts.

② If the tab is to be soldered to the PCM, the instructions below are very important to ensure battery performance.

a) The solder iron should be temperature controlled and ESD safe.
b) Soldering temperature should not exceed 350±10℃.
c) Soldering time should not be longer than 3 seconds.
d) Soldering times should not be fewer than 5.
e) Let the battery tab cool down before soldering again.
f) Direct heat to the cell body is strictly prohibited. The battery will be damaged by heat above approx 60ºC

5.3.2 Cell fixing

电芯的安装

① The cell should be fixed to the battery pack by its large surface area.
② There should be no sharp edges at the assembly contact area.
③ Cells must be held firmly in the battery pack; movement is not allowed.
④ The total thickness (the cell thickness plus the thickness of auxiliary materials,e.g. sponge pad, insulate pad, tape and so on) can't exceed the interior room of the plastic case, in order to prevent the cell from the damage and safe issue.

6. Others

其它注意事项

6.1 Disassembly may cause an internal short circuit to the cell, which may cause out-gassing, fire, or other problems.
在任何情况下不得拆卸或解

6.2 LIP battery should not have liquid flowing, but in case the electrolyte come into contact wit the skin o eyes, physicians, we recommend as below:
电芯内容物理论上不存在流动的电解液 但万一电池密封不严

a. The electrolyte touch eyes: Flush the electrolyte immediately with fresh water for 15min. and medical advice is to be sought.
b. The electrolyte touch skin: Flush the electrolyte immediately with a great deal of fresh water.
c. Breath the released gas: Go outside to breath flash air.
d. Mis-eaten: Go to take some medical advice.

6.3 Prohibition of dumping of cells into fire

Never incinerate or dispose the cells in fire, for these may cause firing of the cells.
严禁将电芯投入火中

6.4 The cells should never be soaked with liquids such as water, drinks or oil.

严禁将电芯浸入液体中, 如水, 饮料, 汽油等。

6.5 Prohibit using the cells mixed with different manufactories. Prohibit using new cells mixed with old ones.
禁止和不同厂家的电芯混用, 禁止新旧电芯混用。

6.6 Prohibit using damaged cells.
禁止使用已损坏的电芯。

7. Recommended Notice:
推荐使用事项

7.1 Using cells on specified facilities only.
仅在指定的设备上使用电池。

7.2 Using cells in normal ambition temperature. Temperature: -10 ~ 35℃ , Relative Humidity : 45~75%.
请在正常

7.3 Using the cells, away from heat source. Don’ let childre play with cells.
在使用过程中，应远离热源，避免儿童玩弄电池。切勿摔打电池。

7.4 Avoid the positive pole shortcutting with the negative one. Avoid the cells affected with damp.
切勿将电池正

7.5 Useless cells shoul be deal with in a safety way. Don’t drop them into the water or fire
废弃电池请安全妥当处理，不要投入火中或水中。