



深圳科华鑫电子有限公司  
SHENZHEN KEHUAXIN ELECTRONICS CO., LTD.

锂离子电池  
Polymer Li-ion battery

产品承认书(Pack)  
Product Specification

型号 Model : QZ01 样品数量 NO. OF SAMPLES: PCS  
容量 Cap : 2800mAh 送样日期 DATE OF SENDING SAMPLE : 2019-12-18  
版本 REV : A/0 客户代码 CUSTOMER CODE: \_\_\_\_\_  
承认书编号 NO. OF CONFIRMATION: \_\_\_\_\_

批准 Approved by	审核 Checked by	拟定 Prepared by

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## 版本履历表

### Revision History

版本号 Rev No.	内容描述 Description	修改人 Modify	审批人 Approval	生效日期 Date
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## 目 录 Content

1.目的 Scope	4
2.依据标准 Performance	4
3.电池基本参数 Parameter	4
4.电池使用环境 The battery environment	5
5.技术指标 Technical indicators	5-9
5.1 电池常规性能 Conventional performance	5-6
5.2 电池环境适应性能 Cell environment adaptability	6-7
5.3 安全性能 Safety performance	8-9
6.保护板规格与特性 PCM Specification and Characteristic	10-11
6.1 保护板元件图 PCM Diagram	10
6.2 保护板性能参数 PCM Electrical Characteristics	10
6.3 保护板原理图 PCM Schematic diagram	11
6.4 保护板 BOM PCM BOM	11
7.装配结构 Mounting structure	12-13
7.1 电池 BOM Battery materials	12
7.2 电池尺寸结构 Dimension	12
7.3 标贴 label	13
8.包装说明 Packing Instruction	13
9.安全警示 Safety warning	14
10.注意事项 Matters needing attention	15



## 1. 目的 Scope

本规格书描述本公司设计开发的电池，它是产品设计、生产和检验的依据。其作用是让顾客了解产品的质量及正确使用方法。

This specification describes the design and development of the company's battery, it is the product of design, production and inspection basis. Its role is to understand the quality of the product and using the correct method for customers.

## 2. 依据标准 Performance

中华人民共和国国家标准 ‘GB/T18287-2000’ 《蜂窝电话用锂离子电池总规范》

Issued by ‘GB/T18287-2000’ national standard of the People's Republic of China 《Li-ion battery general principle》

## 3. 电池基本参数 Parameter

序号 NO.	项目 Description	规格 Specification	备注 Remark
1	电芯型号 Battery Model	406072P	
2	最小容量 Rated Capacity	2800mAh	
3	典型容量 Type Capacity	2820mAh	
4	标称电压 Nominal Voltage	3.8V	
5	过充保护电压 Overcharge protect voltage	4.375±0.025V	
6	过放保护电压 Over discharge protect voltage	2.5V±0.1V	
7	过流保护电流 Over current protection	2~4A	
8	短路保护功能 Short circuit protection	有短路保护 Short circuit protection	
9	短路保护恢复方式 SCP Release condition	自恢复或瞬间充电 Since the recovery or transient charging	
10	贮存温度 Storage Temperature	-5~35℃	1年(1 year)
11	内阻 Inner Impedance	≤160mΩ	电芯内阻≤60mΩ
12	最大持续放电电流 Max continue discharge current	0.5C	
13	最大充电电流 Max charge current	0.5C	



#### 4. 电池使用环境 (The battery environment)

4.1 电池充电温度范围: 5~45℃;

Battery charging temperature range: 5~45 °C.

4.2 电池放电温度范围: -10~55℃.

the battery discharge temperature range: -10~55 °C.

#### 5. 技术指标 (Technical indicators)

##### 5.1 常规性能 (Conventional performance)

序号 No.	内容 Item	条件 Testing Method	达到要求 Requirements
1	充电截止电压 Charging voltage	4.35±0.05V/Cell	
2	放电终止电压 The end of discharge voltage	3.0±0.05V/Cell	
3	标准充电模式 Standard charging mode	以0.2C电流恒流充电至4.35V/cell, 转4.35V恒压充电, 直到充电电流小于等于0.02C电流。 Using 0.2C constant current charge to 4.35V/cell, to 4.35V constant voltage charging, the charging current is less than or equal to 0.02C until the current.	充电时间不大于8小时 The charging time is not more than 8 hours
4	快速充电模式 Fast charge mode	以1C电流恒流充电至4.35V/cell, 转4.35V恒压充电, 直到充电电流小于等于0.02C电流。 Using 1C constant current charge to 4.35V/cell, to 4.35V constant voltage charging, the charging current is less than or equal to 0.02C until the current	充电时间不大于2.5小时 The charging time is not more than 2.5 hours
5	标准放电性能 Discharge performance standard	以标准充电模式满充后, 搁置1小时, 以0.2C电流恒流放电至3.0V/cell。 The standard charge model filled, set aside for 1 hours, the 0.2C constant current discharge to 3.0V/cell.	放电时间大于等于300Min Discharge time is greater than or equal to 300Min
6	倍率放电性能 Rate discharge performance	以标准充电模式满充后, 搁置1小时, 以1C电流恒流放电至3.0V/cell。 The standard charge model filled, set aside for 1 hours, the 1C constant current discharge to 3.0V/cell.	放电时间大于等于54Min Discharge time is greater than or equal to 54Min
7	高温性能 High temperature performance	电芯满充后在60℃±2℃度的环境下搁置2小时, 然后以1C电流放电至3.0V/cell。 The electric core filled at 60±2 °C OC use 2 hours, and then to 1C discharge current to 3.0V/cell.	放电时间大于等于54Min, 电芯外观无变形、无爆裂。 Discharge time is greater than or equal to 54Min, the electric core appearance without deformation, no burst.



8	低温性能 Low temperature performance	以标准模式充电, 将电芯放入 $(-10 \pm 2)^\circ\text{C}$ 的低温箱中恒温 16~24h 后, 0.2C 电流恒流放电至 3.0V/cell。 Charging in standard mode, the electric core into $(-10 \pm 2)^\circ\text{C}$ low temperature box with constant temperature in 16 ~ 24h, 0.2C constant current discharge to 3.0V/cell.	放电时间大于等于 210Min, 电芯外观无变形、无爆裂。 Discharge time is greater than or equal to 210Min, the electric core appearance without deformation, no burst.
9	荷电保持能力 Charge retention	以标准模式充电后, 在环境温度 $20^\circ\text{C} \pm 5^\circ\text{C}$ 的条件下, 将电芯开路搁置 28d, 再以 0.2C 电流进行放电至 3.0V/cell。 Charging in standard mode, the ambient temperature of $20^\circ\text{C} \pm 5^\circ\text{C}$ , the electrical core circuit using 28d, then 0.2C current discharge to 3.0V/cell.	放电时间大于等于 255Min Discharge time is greater than or equal to 255Min
10	循环寿命 Life cycle	以 0.5C 电流恒流放电至 3.0V/cell, 再以 0.5C 电流恒流充电至 4.35V/cell, 然后恒压 4.35V/cell 充至电流小于 0.01C, 静止 10Min, 以 0.5C 电流恒流放电至 3.0V/cell, 放电结束后, 静止 10Min, 再进行下一充放电循环, 直至连续三次放电容量小于 80% 的 0.5C 首次放电容量。 Using 0.5C constant current discharge to 3.0V/cell, then 0.5C constant current charge to 4.35V/cell, then 4.35V/cell of constant pressure charged to the current less than 0.01C, static 10Min, 0.5C constant current discharge to 3.0V/cell, after discharge, static 10Min, then the next charge discharge cycle, continuous three times until the discharge capacity of less than 80% the first discharge capacity of 0.5 C.	循环次数大于等于 300 次 Cycle number greater than or equal to 300
11	贮存性能 The storage performance	以标准模式充电给电芯充入 40%~50% 的容量, 然后在环境温度 $20^\circ\text{C} \pm 5^\circ\text{C}$ , 相对湿度 45%~85% 的环境中贮存。贮存 12 个月后以 0.2C 电流放电至终止电压。 In standard mode for charging electric core filling capacity of 40% ~ 50%, and then in the ambient temperature $20 \pm 5^\circ\text{C}$ , relative humidity of storage environment in 45% ~ 85%. After 12 months of storage in 0.2C discharge current to the termination voltage.	放电时间大于等于 240Min Discharge time is greater than or equal to 240Min
12	出货电压 Voltage of shipment	出货时电池电压 When the battery voltage	3.80-4.00V

## 5.2 环境适应性能 Environmental adaptability

序号 No.	内容 Item	条件 Testing Method	达到要求 Requirements
1	恒定湿热性能 Constant damp heat performance	电芯按标准充电模式充电后, 将电芯放入 $40^\circ\text{C} \pm 2^\circ\text{C}$ , 相对湿度为 90%~95% 的恒温恒湿箱中搁置 48h 后, 将电芯取出在环境温度 $20^\circ\text{C} \pm 5^\circ\text{C}$ 的条件下搁置 2h, 再以 1C 电流放电至终止电压。 The electric core according to the standard charge mode after charging, the electric core into $40^\circ\text{C} \pm 2^\circ\text{C}$ , relative humidity 90% ~ 95% constant temperature and humidity box in use 48h, the electric core removal at ambient temperature $20 \pm 5^\circ\text{C}$ conditions using 2H, then 1C discharge current to the termination voltage.	放电时间大于等于 36Min, 电芯无明显变形、锈蚀、冒烟或爆炸。 Discharge time is greater than or equal to 36Min, the electric core no significant deformation, corrosion, smoke or explosion.



2	振动实验 Vibration experiment	<p>电芯按标准充电模式充电后，将电芯直接安装或通过夹具安装在振动台的台面上，按下面的振动频率和对应的振幅调整好试验设备，X、Y、Z三个方向上从10Hz~55Hz循环扫频振动30min，扫频频率为1oct/min；          振动频率：10Hz~30Hz 位移幅值(单振幅)：0.38mm          振动频率：30Hz~55Hz 位移幅值(单振幅)：0.19mm.</p> <p>The electric core according to the standard charge mode after charging, the electric core installed directly or through the fixture mounted on vibration table, adjust good test equipment according to the amplitude of vibration frequency and the corresponding to the following, X, Y, Z three direction from 10Hz to 55Hz circular sweep vibration 30min, sweep frequency is 1oct/min;          Frequency: 10Hz ~ 30Hz displacement amplitude (:0.38mm Amplitude)          Frequency: 30Hz ~ 55Hz displacement amplitude (:0.19mm. Amplitude).</p>	<p>电芯无明显损伤、漏液、冒烟或爆炸，电芯电压不低于 <math>n \times 3.6V</math>。</p> <p>No obvious damage, electric core leakage, smoking or explosion, voltage is not less than <math>n * 3.6V</math>.</p>
3	碰撞试验 Impact test.	<p>电芯按标准充电模式充电后，将电芯平均按X、Y、Z三个互相垂直轴向直接或通过夹具坚固在台面上，按下述要求调整好加速度、脉冲持续时间，进行碰撞试验。</p> <p>脉冲峰值加速度 100m/s<sup>2</sup>          每分钟碰撞次数 40~80          脉冲持续时间 16ms          碰撞次数 1000±10。</p> <p>The electric core according to the standard charge mode after charging, the electric core according to the average X, Y, Z three mutually vertical axial directly or through a fixture in the solid surface, according to the following requirements adjust good acceleration, pulse duration, collision test.</p> <p>The peak acceleration of 100m/s<sup>2</sup>          40 to 80 times per minute collision          16ms pulse duration          The collision frequency of 1000 ± 10</p>	<p>电芯无明显损伤、漏液、冒烟或爆炸，电芯电压不低于 <math>n \times 3.6V</math>。</p> <p>No obvious damage, electric core leakage, smoking or explosion, voltage is not less than <math>n * 3.6V</math>.</p>
4	电芯跌落试验 The electric core drop test	<p>电芯按标准充电模式充电后，将电芯样品从高度(最低点高度)为1000mm的位置自由跌落到置于水泥地面上的18mm~20mm厚的硬木版上，从X、Y、Z正负方向(六个方向)每个方向自由跌落1次。自由跌落结束后，将电芯以1C电流放电至终止电压。然后按1C电流进行充放电循环，充放电循环次数应不多于3次。三次循环中有一次达到即可。</p> <p>The electric core according to the standard charge mode after charging, the electric core samples from the height (lowest height) for the position of free 1000mm fell to the ground in the cement of 18mm ~ 20mm thick hardwood version, from X, Y, and Z positive and negative direction (six directions) in each direction, free fall 1. Free fall after the end of the electric core, with 1C discharge current to the termination voltage. Then press the 1C current charge discharge cycles, charge discharge cycles should be no more than 3 times. Three cycles once can be achieved.</p>	<p>电芯不漏液、不冒烟、不爆炸；放电时间不低于51min。</p> <p>The electric core no leakage, no smoke, no explosion; discharge time of not less than 51min.</p>



## 5.3 安全性能 Safety performance

序号 No.	内容 Item	条件 Testing Method	达到要求 Requirements
1	过充保护性能 The overcharge protection performance	<p>电池按标准充电模式充电后,用恒流恒压源持续给电池加载8h,恒流恒压源电压设定为2倍标称电压,电流设定为2C电流的外接电流。</p> <p>According to the standard charge battery charging mode, with constant current and constant voltage source to the battery load 8h, constant current and constant voltage source voltage is set to 2 times the nominal voltage, current setting for the 2C current of the external current.</p>	<p>电池不爆炸、不起火、不冒烟或漏液。</p> <p>The battery is not explosive, no fire, no smoke or liquid leakage.</p>
2	过放保护性能 Over discharge protection performance	<p>电池按标准充电模式充电后,以0.2C放电至终止电压后,外接30Ω负载放电24h。</p> <p>According to the standard charge battery charging mode, the 0.2C discharge to the termination voltage, an external 30 ohm load discharge 24h.</p>	<p>电池不爆炸、不起火、不冒烟或漏液。</p> <p>The battery is not explosive, no fire, no smoke or liquid leakage</p>
3	短路保护性能 Short circuit protection performance	<p>电池按标准充电模式充电后,将正负极用0.1Ω电阻器短路1h。将正负极断开,电池以1C电流瞬间充电5s后用电压表测量电池电压。</p> <p>According to the standard charge battery charging mode, the positive and the negative poles of 0.1 Ω resistor circuit 1h. The positive and negative pole disconnection, instantaneous current charging battery with 1C 5S after the voltmeter to measure the voltage of the battery.</p>	<p>电池不爆炸、不起火、不冒烟或漏液;瞬时充电后,电池电压≥3.6V</p> <p>The battery is not explosive, no fire, no smoke or liquid leakage; instantaneous after charging, the battery voltage is greater than or equal to 3.6 V</p>
4	挤压测试 The squeeze test	<p>电芯按标准充电模式充电后,将电芯的最大面积面放置于挤压平台上,通过给平面施加最大气压为17.2Mpa,最大作用力为13KN的力量,当挤压达到最大值时停止挤压。</p> <p>The electric core according to the standard charging models, the maximum area plane electric core positioned on the extrusion platform, by applying the maximum pressure to the plane is 17.2Mpa, the maximum force is the power of 13KN, when the extrusion reached the maximum value when the stop pressing.</p>	<p>电芯不起火、不爆炸</p> <p>No fire, no explosion electric core</p>
5	热冲击 Thermal shock	<p>电芯按标准充电模式充电后,电芯放置于热箱中,温度以(5℃±2℃)/min的速率升到130℃±2℃并保持30min。</p> <p>The electric core according to the standard charge mode after charging, batteries placed in the hot box, temperature of (5 ± 2 °C) /min rate rise to 130 ± 2 °C and maintain 30min.</p>	<p>电芯不起火、不爆炸</p> <p>No fire, no explosion electric core</p>





6	过充电 Over charging	<p>电芯按标准充电模式充电后，接有热电偶的电芯置于通风橱中，连接正负极于恒流电源，调节电流至 3C 电流，为 <math>n \times 4.8V</math>，然后对电芯以 3C 电流充电，直到电芯电压为 <math>n \times 4.8V</math>，电流将到接近 0A。试验过程中监视电芯温度变化，当电芯温度下降到比峰值低约 <math>10^\circ C</math>，结束试验。(本实验是在无电芯外保护线路的情况下进行的)</p> <p>Batteries according to the standard charge mode after charging the batteries take a thermocouple placed in a fume hood, connect the positive and negative in the constant current source, adjust the current to 3C current, as <math>n \times 4.8V</math>, then the current batteries to 3C charge until the cell voltage is <math>n \times 4.8V</math>, current will be close to 0A. Monitored during the test temperature change batteries, when the batteries when the temperature dropped to lower than the peak of about <math>10^\circ C</math>, the end of the trial. (This experiment is no batteries in the case of the external protection circuit carried)</p>	电芯不起火、不爆炸 No fire, no explosion electric core
7	短路 Short circuit	<p>将接有热电偶的电芯置于通风橱中，短路其正负极(线路总电阻不大于 <math>50m\Omega</math>)。试验过程中监视电芯温度变化，当电芯温度下降到比峰值低约 <math>10^\circ C</math>，结束试验。(本实验是在无电芯外保护线路的情况下进行的)。</p> <p>The electric core is arranged in a fume hood. In short, the positive and negative poles (the line resistance of less than <math>50m\Omega</math>). Monitoring the electric core temperature variation during the experiment, when the electric core temperature drops to about <math>10^\circ C</math> lower than the peak, the end of the trial.</p>	电芯不起火、不爆炸，电芯的外部温度不得高于 $150^\circ C$ The electric core without fire, no explosion, electric core external temperature not higher than $150^\circ C$

以上技术性能标准测试环境.

The above technical standards of performance test environment.

温度 (Temperature):  $25 \pm 2^\circ C$

相对湿度 (Relative humidity):  $45 \pm 20\%$

测试条件 (Test conditions):

1.对于带保护装置的电池，除电池安全性能中的 6 和 7 两项为不带保护装置的情况下，其他测试是在带保护装置的情况下进行的。

The protection device of battery, in addition to battery safety performance in the 6 and 7 for the two without a protection device, other tests were carried out in the case of belt protection device.

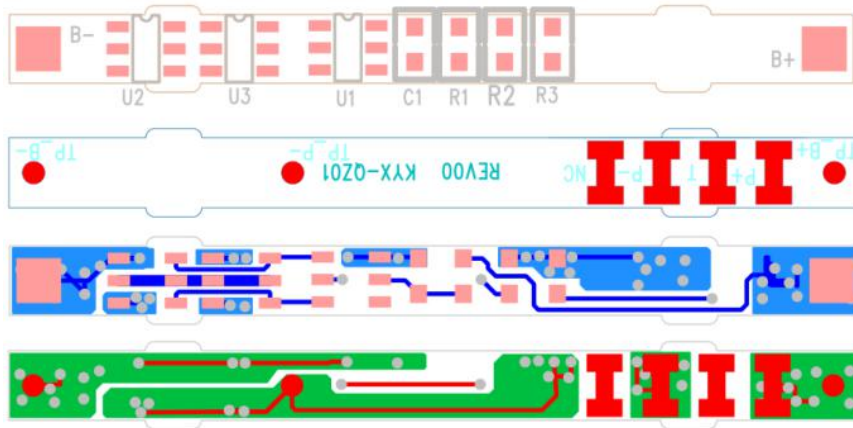
2.对于不带保护装置的电池，所有测试均是在不带保护装置的情况下进行的。

For the device with no protection of the battery, all test are carried out by the device with no protective case.

## 6. 保护板规格与特性 PCM Specification and Characteristic

### 6.1 保护板元件图

PCM Diagram



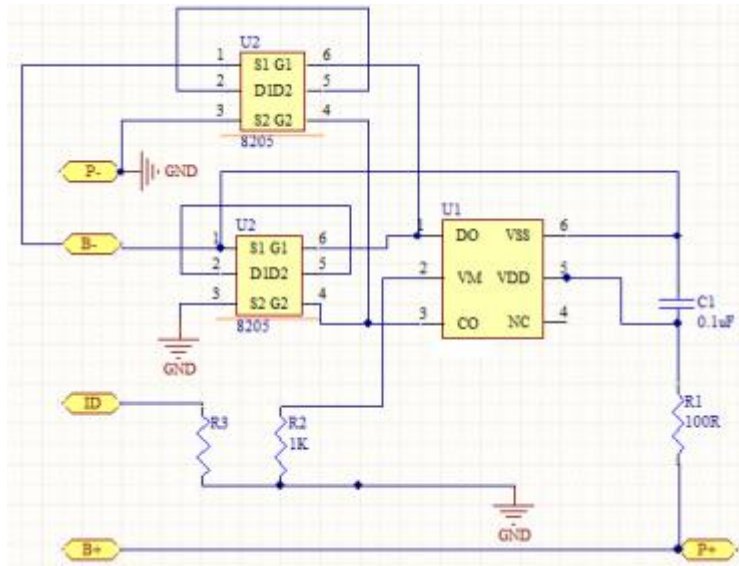
### 6.2 保护板性能参数

PCM Electrical Characteristics

NO:	项目 Item	参数 Specifications	单位 Unit
1	过充检测电压 Over charge Protection voltage	$4.375 \pm 0.025$	V
2	过充复位电压 Over charge release voltage	$4.20 \pm 0.05$	V
3	过充延迟时间 Over charge detection delay time	80~200	ms
4	过放检测电压 Over discharge protection voltage	$2.5 \pm 0.1$	V
5	过放复位电压 Over discharge release voltage	$3.0 \pm 0.1$	V
6	过放延迟时间 Over discharge detection delay time	40~100	ms
7	过流检测电压 Over current detection voltage	$0.15 \pm 0.03$	V
8	过流延迟时间 Over current detection delay time	10~20	ms
9	短路保护延迟时间 Short circuit protection delay time	5~50	us
10	自耗电流 Current consumption (Operation)	6.0 max	uA

### 6.3 保护板原理图

PCM Schematic diagram



### 6.4 保护板 BOM

PCM BOM

序号	物料代码	物料名称	规格型号	数量	备注
1	U1	控制 IC	7071 SOT-23-6	1	
2	U2	MOSFET	8205A SOT-23-6	2	
3	R1	贴片电阻	100Ω, ±5%, SMD-0603	1	
4	R2	贴片电阻	1KΩ, ±5%, SMD-0603	1	
5	C1	贴片电容	0.1μF, -20%/+80%, 16V,SMD-0603	1	
6	R3	贴片电阻	NTC 3KΩ, ±5%, SMD-0603	1	
8	B- B+	镍片	6.0*3.0*0.3MM	2	
9		PCB	KYX-QZ01	1	0.6-0.7MM



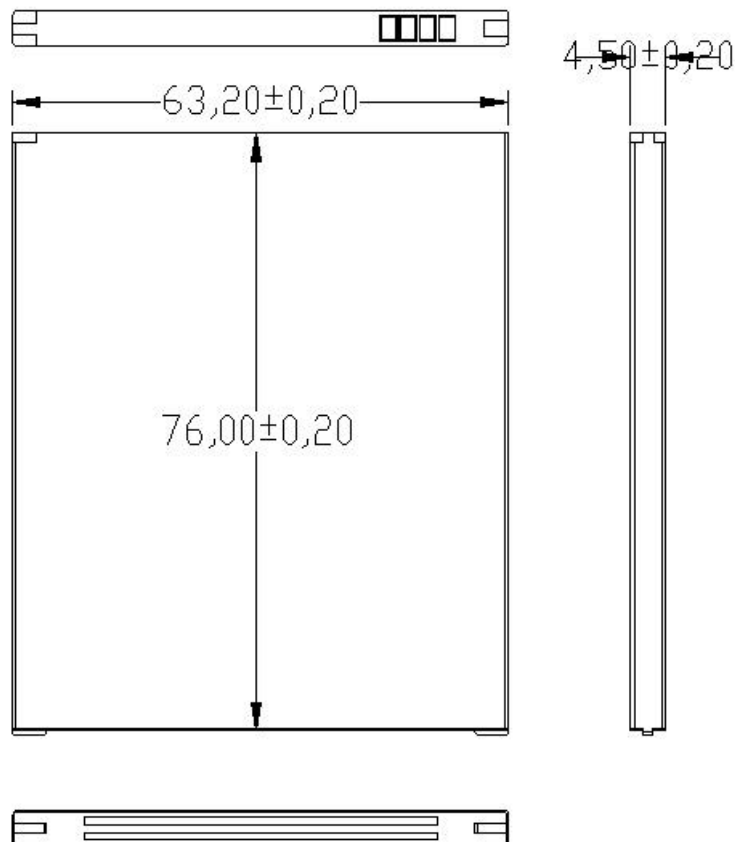
## 7. 装配结构 Mounting structure

### 7.1 电池主要物料 Battery materials

序号	物料名称	物料规格	单位	用量
1	电芯	406072P 2800mAh	PCS	1
2	保护板	KYX-QZ01 7071/8205*2/贴片五金//NTC	PCS	1
3	框架壳	QZ01 框架	PCS	1
4	钢片	尺寸: H0.15±0.02*W61.0±0.2*L70.5±0.2mm	PCS	1
5	标贴	(见图纸)	PCS	1

### 7.2 电池尺寸结构 (单位 mm)

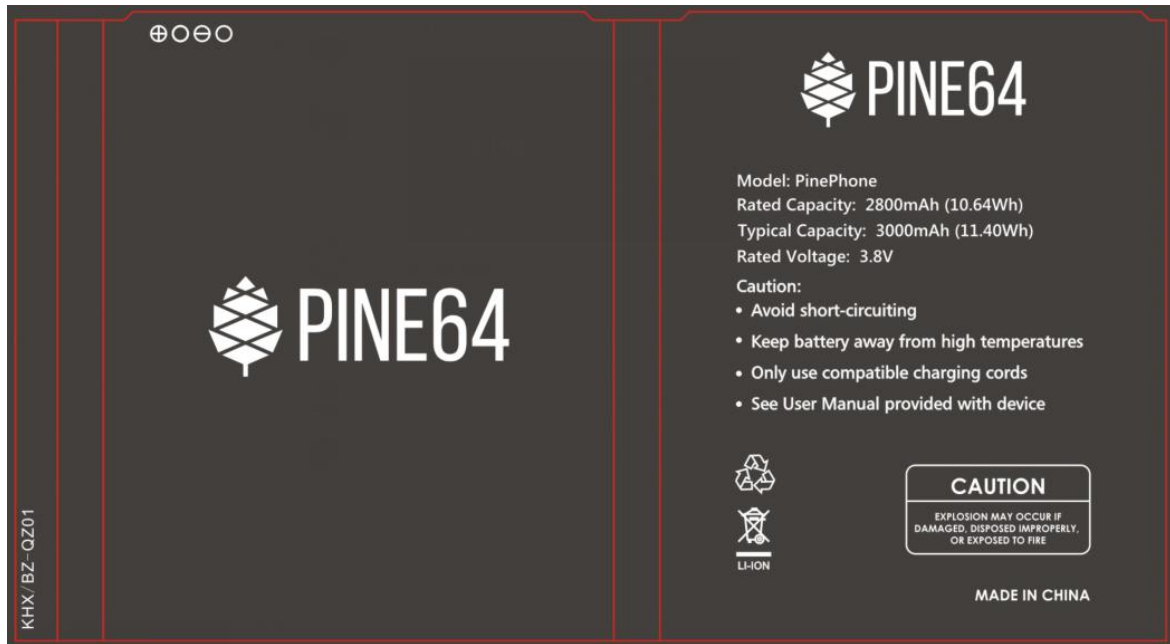
Dimension (Unit: mm)





### 7.3 标贴

标贴为单面背胶，粘性好，表面覆哑膜



## 8、包装说明 Packing Instruction

标志的图形、尺寸、颜色应符合 GP/T 191-2000 的要求

The photo, size and color of the mark are all comply with the requirement of GP/T 191-2000.



## 9、安全警示 Safety warning

### 危 险 Danger

为了防止电池泄漏、发热、爆炸，请遵守以下防范事项：

In order to prevent battery leakage, explosion, fever, please observe the following precautions:

1. 请不要将电池浸入水或海水中，注意防潮。

Please don't put the battery into water or seawater, pay attention to moisture.

2. 请不要将电池接近热源，如火或发热器。

Please do not use the battery near the heat source, fire or heater.

3. 在充电时，请用特定的充电器。

When charging, please use the charger.

4. 请不要颠倒电池的正 (+) 负 (-) 极。

Please don't reverse battery positive (+) and negative (-) polar.

5. 请不要将电池连接在电源的出口、车辆自动点灯处。

Please do not use the battery connected to the power outlet, automatic vehicle lighting.

6. 请不要将电池弃置于火里或热的物体上。

Please do not use the battery disposal at the fire or heat objects.

7. 请不要将电池的正 (+) 负 (-) 极用导体短路、不要把电池和金属导体，如项链、发夹等一起运输或存储。

Please do not use the battery positive (+) and negative (-) polar conductor short-circuit, don't put the battery and metal conductor, such as necklaces, hair clips, together with the transport or storage.

8. 请不要敲打或丢抛电池。

Please don't knock or throw throw battery.

9. 请不要用针或其它锋利物刺穿电池，不要用锤击打或者踩在上面。

Please do not use needles or other sharp objects piercing battery, struck by a hammer or step on it don't.

10. 请不要直接焊接电池。

Please do not direct welding battery.

11. 电池内有安全装置，为了保证其固有的安全功能，请不要将电池分解开或改变任何的部份。

A safety device in the battery, in order to guarantee the safety of its inherent function of the battery, please don't break down or alter any part.

12. 请不要在接近火源或在酷热的环境中充电。

Please don't close to the fire or charging in hot environments.

13. 废弃之电池应用绝缘纸包住电极，以防起火、爆炸。

Waste battery application of insulation paper wrap electrode, in case of fire, explosion.

14. 如电池泄露，电解液进入眼睛，请不要揉擦，用清水冲洗眼睛，立即送医治疗，否则会伤害眼睛。

If the battery electrolyte leakage, into the eyes, do not rub the eyes, rinse with water, immediately to the hospital, otherwise it will damage the eyes.

15. 请不要将电池放于高温处(如阳光直射或热天下汽车里)，否则会导致电池过热着火，性能降低和寿命缩短。

Please do not put the battery in high temperature (such as direct sunlight or heat the car), otherwise cause the battery overheating can fire, reduced performance and life.



## 10. 注意事项 Matters needing attention

1. 为确保安全，电池应安装安全装置，在静电强于制造时所要求的静电时请勿使用，否则，安全装置会失效，导致电池过热、破裂、爆炸及着火。

To ensure safety, the battery must be provided with safety devices, use, do not in the static electricity is stronger than manufacturing required otherwise, safety device failure, leading to overheating of the battery, rupture, explosion and fire.

2. 如果儿童使用电池，应指定他们按使用说明书进行使用，且保证电池在任何时候都必须是正常使用；

If you use the battery for children, should designate them according to the instructions for use, and ensure the battery at any time must be normal use;

3. 若电池泄露，电解质粘于皮肤或衣服上，请用水冲洗掉或用流水洗衣服，否则将会腐蚀皮肤。

If the battery electrolyte leakage, stick to the skin or clothes, please wash with water or use water to wash clothes, otherwise it will corrode the skin Die.

4. 为了不装错或损耗电池，请认真阅读使用说明书，并按照指导进行安装与拆卸(从装置上)

In order not to install the wrong or loss of the battery, please carefully read the instruction manual, and installation and disassembly (in accordance with the guidance from the device)

5. 若电池不长期使用，请把电池拿出并放于干燥的地方，否则电器将会被腐蚀电池降低性能和减少寿命。

If the battery is not used for a long time, please take the batteries out and placed in a dry place, or the appliance will be corroded battery performance and reduce life expectancy.

6. 若被污染了电池终端，请在使用之前用干布擦干净，否则将导致与装置接触不良，功率不足或充电失败。

If the contaminated the battery terminals before use, please clean with a dry cloth, otherwise it will result in poor contact with the device, power shortage or charger failure.

7. 如果规格书、原材料、生产过程或生产控制系统发生改变，改变的信息将会随质量和可靠性数据以书面形式通知消费者。

If the specification, raw materials, production processor production control system to change, to change the information will be increased with the quality and reliability of the data written notice to the consumer.

8. 保质期 Shelf life

保质期是从出厂日期(喷码)开始起 12 个月。

Shelf life is from the ex factory date (printing) began in 12 months.

9. 产品责任 Product liability

您必须严格遵守深圳科华鑫电子有限公司规格书和文件后面的注释使用电池，由于误用会引起电池过热，发生火灾或爆炸。对于没有按照规格书进行操作所造成的任何以外事故，深圳科华鑫电子有限公司不负担任何责任。

You must obey the following Shenzhen KEHUAXIN EIELECTRONICS Co., Ltd. specification and file comments using the battery, due to misuse and will cause the battery overheating, fire or explosion. For not caused by the operation of any accident in accordance with the specification, Shenzhen KEHUAXIN EIELECTRONICS Co., Ltd. is not responsible.