



# PRODUCT SPECIFICATION

Ver:

A

DATE:

2019-08-12

DOC No:  
CR14250L

Bonrex Technology CO., Ltd

深圳市鹏荟科技有限公司

CUSTOMER NO: \_\_\_\_\_

## Specification Approval Sheet

### 规格确认书

**MODEL/型号:CR14250L**

(900mAh 3.0V)

Prepared By/Date 编制/日期	Checked By/Date 审核/日期	Approved By/Date 批准/日期

Customer Approval 客户确认	Signature/签字	Date/日期
	Company Name/公司名称	
	Company Stamp/公司印章	



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### Amendment Records/修正记录

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## 1 Scope/适用范围

This specification is applies to describe the related Battery product in this Specification and the Battery/cell supplied by BonrexTechnology CO., Ltd only.

本说明书只适用于描述本规格书中相关的产品以及深圳市鹏荃有限公司提供的电池。

## 2 Model/型号: CR14250L

## 3 Cell Specification/电芯产品规格

Table 1 (表 1)

No.	Items/项目	Specifications/规格	Remark 备注
1	Nominal Capacity 标称容量	900mAh	Discharge with 0.5mA to 2.0V at 25±5°C 在 25±5°C 环境下, 1mA 连续放电至 2.0V
2	Minimum Capacity 最小容量	850mAh	
3	Nominal Voltage 标称电压	3.0V	/
4	Delivery voltage 交货电压	3.05~3.40V	Open circuit voltage 开路电压
5	Cell Internal resistance 单电芯内阻	≤2.0Ω	Ac impedance 交流阻抗
6	Weight 重量	About 10 g 约 10g	/
7	Maximum discharge current 最大持续放电电流	500mA	Discharge continuously to 2.0v at 25±5°C, and the discharge capacity reaches half of the nominal capacity 在 25±5°C 环境下连续放电至 2.0V, 放电的容量达 到标称容量的 50%
8	Maximum pulse discharge current 最大脉冲放电电流	1000mA	Pulse cycle discharge at 25±5°C, 3s on 27s off, discharge to 2.0V, the output capacity can reach half of the nominal capacity 在 25±5°C 环境下脉冲循环放电, 放 3s 停 27s, 放 电至 2.0V, 放电的容量达到标称容量的 50%
9	Operation Temperature Range 工作温度范围	-40~85°C	The performance of the battery will decrease under low temperature 电池在低温环境下性能会下降
10	Storage life 储存寿命	10 years 10 年	Storage environment: 25±5°C, ≤65%RH 储存环境: 温度 25±5°C, 湿度≤65%RH



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## 4 Battery/Cell performance test Criteria/电池性能标准

### 4.1 Appearance inspection by visual/外观目测

There shall be no such defect as rust, leakage, which may adversely affect commercial value of battery.

电池外观应没有锈渍、污渍、漏液等影响商业价值的缺陷存在。

### 4.2 Environmental test condition/外界环境条件

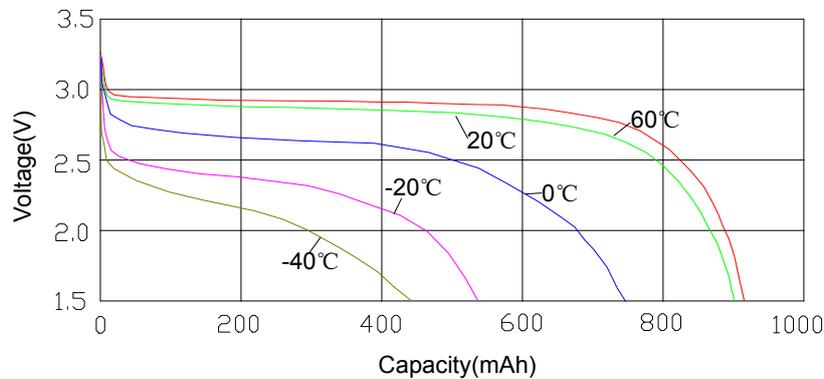
Unless otherwise specified, all test stated in this product specification are conduct at below test condition  
所有测试应按以下环境条件进行，除非特殊指定外。

Temperature:  $20 \pm 5^\circ\text{C}$

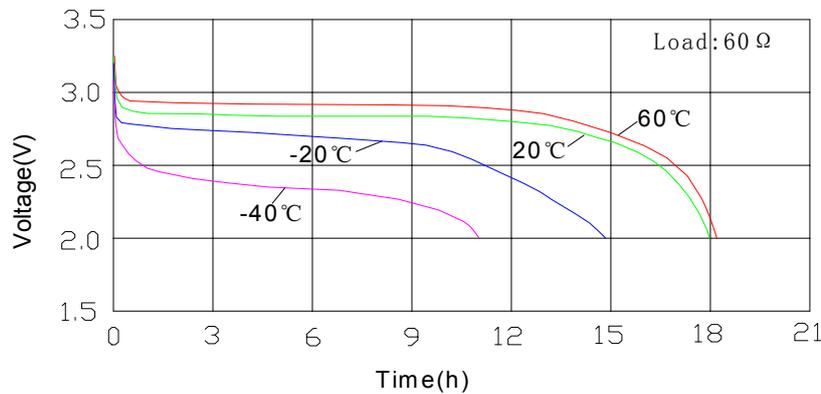
Relative Humidity:  $\leq 65\%$  R.H.

### 4.3 Discharge characteristic/放电特性

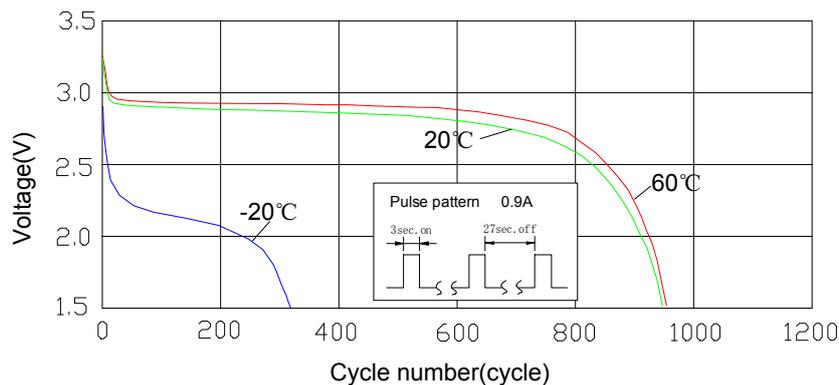
Temperature characteristics(0.5mA)



Discharge characteristics on temperature



Pulse discharge characteristics





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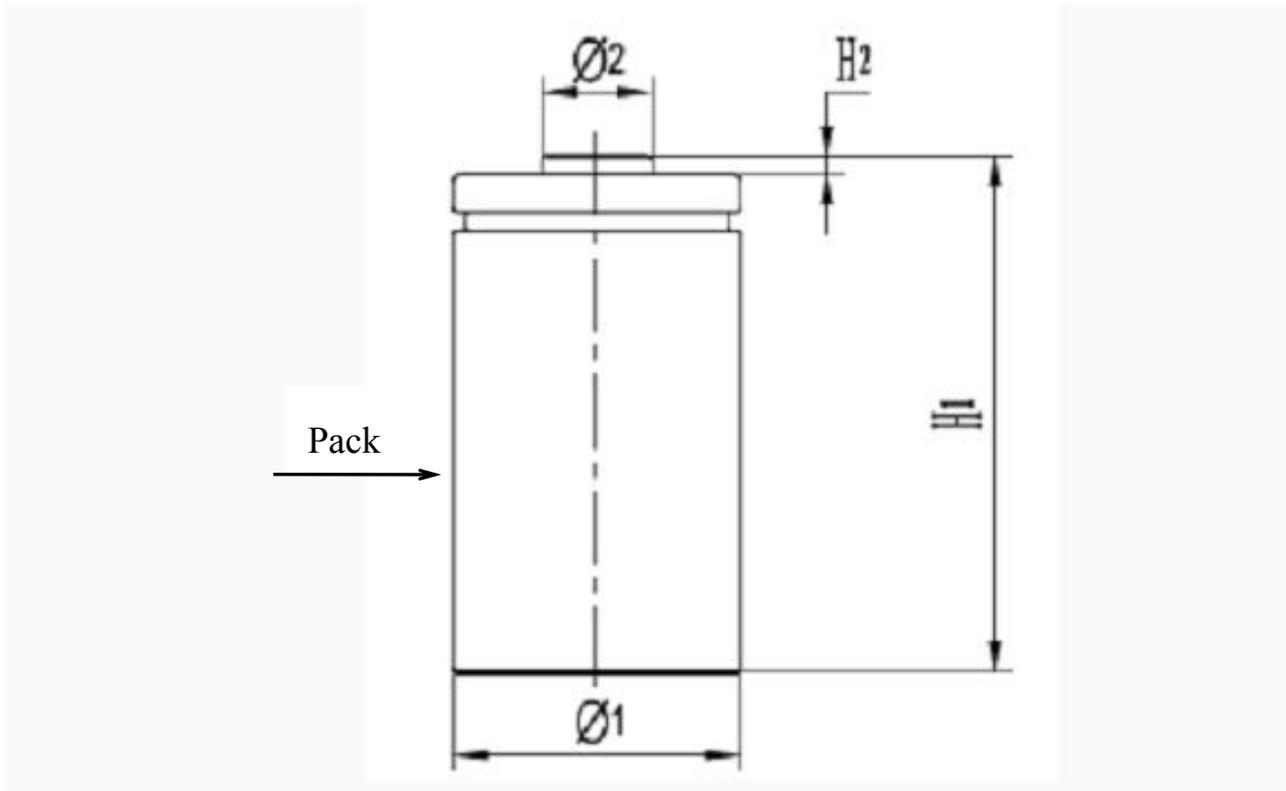
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## 4.4 Reliability test/可靠性测试

No.	Items/项目	Test Method and Condition/测试方法及条件	Criteria/标准
1	Free fall test 自由跌落测试	The battery to be fully charged in accordance with standard charge condition, then drop the battery three times from a height of 1,0 m onto a concrete floor. The batteries are dropped so as to obtain impacts in random orientations. 电池按照标准充电条件充满电, 然后从1m高度跌落电池到一个水泥地面, 随机跌落三次。	No Fire, No explosion 不起火, 不爆炸
2	Vibration test 振动测试	After standard charging, fixed the cell to vibration table and subjected to vibration cycling that the frequency is to be varied at the rate of 1Hz per minute between 10Hz and 55Hz, the excursion of the vibration is 1.6mm. The cell shall be vibrated for 30 minutes per axis of XYZ axes. 将标准充电后的电芯固定在振动台上, 沿 X、Y、Z 三个方向各振动 30 分钟, 振幅 1.6mm, 振动频率为 10Hz~55Hz, 每分钟变化 1Hz。	No leakage, No fire, No explosion 无泄漏, 不起火, 不爆炸
3	Thermal exposure test 高温热冲击测试	Each fully charged cell, stabilized at room temperature, is placed in a circulating air-convection oven. The oven temperature is raised at a rate of 5 °C/min ± 2 °C/min to a temperature of 130 °C ± 2 °C. The cell remains at this temperature for 30 min before the test is discontinued. 充满电的电池温度稳定到常温后, 放置入循环空气烘箱里, 从常温以5 °C/分± 2 °C/分的速率升至130°C后, 在130°C放置30分钟	No Fire, No explosion 无起火, 无爆炸
4	Short test 短路测试 (25 ± 5°C)	The fully charged battery is to be short-circuited by connecting the positive and negative terminals of the battery with resistance load not exceed 100m Ω . Tests are to be conducted at room temperature 25 ± 5°C. 在室温 25 ± 5°C把充满电的电池的正负极用不超过 100m Ω 的负载连接起来, 连接起来使电池外部短路	No Fire, No explosion Surface temperature does not exceed 150 °C 无起火, 无爆炸 表面温度不超过 150°C
5	Forced discharge test 过放电测试	Each test battery shall be discharged to 100% depth of discharge. It shall then be connected in series with three undischarged additional batteries of the same type and the circuit load is lower than 0.1 Ω stop the test when battery temperature come back to The environment temperature 将完全放电的电池与 3 个同型号满电电池串联, 用电阻小于 0.1 Ω 的导线连接短路。电池短路结束条件: 电池起火、爆炸、漏液或电池完全放电至 0.1V 并且电池外壳温度降到环境温度。	No Fire, No explosion 无起火, 无爆炸
6	Over charge test 过充电测试	Charge the battery with full charge and charge it with dc power supply. The charging current is 3 times (5mA 3=15mA) of the specified maximum charging current I <sub>c</sub> =0.004a and keep it for 12 hours 取满电荷电池, 用直流电源对电池充电, 充电电流为规定的最大充电电流 I <sub>c</sub> =0.004A 的 3 倍 (5mA×3=15mA), 保持 12 小时	No Fire, No explosion 无爆炸, 无起火
7	Impact 重物冲击	The cell is to be placed on a flat surface, A 15,8 mm diameter bar is to be placed across the center of the sample, A 9,1kg mass is to be dropped from a height of 61±2,5cm onto the sample 把直径 15.8mm 钢棒放置在平躺的电池上, 用 9.1kg 重物从 61cm 高处跌落在电池上。	No Fire, No explosion 无起火, 无爆炸
8	Crush 挤压	Each fully charged cell is crushed between two surfaces. The force for the crushing is applied by a hydraulic ram exerting a force of 13kN ± 1kN.crushing is performed in a manner that will cause the most adverse result. Once the maximum fore has been applied, or an abrupt voltage drop of one-third of the original voltage has been obtained, the force is released. 将电池平躺在压力机的两平面钢板中间, 开启阀门在电池上施加 13kN±0.78kN 的压力, 此压力一旦达到即可释放压力。	No Fire, No explosion 无爆炸, 无起火

**5 Cell initial Dimensions/电芯初始尺寸**


NO	Items	Units: mm
1	H1	Max25.0
2	H2	Max1.0
3	Φ1	Max14.5
4	Φ2	6.3±0.2



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## 6 CAUTIONS IN USE/谨慎使用

To ensure proper use of the battery please read the manual carefully before using it.

(为确保正确使用电池，使用前请仔细阅读本细则)

### . Handling (电池操作)

- Do not expose to, dispose of the battery in fire. (不要靠近和放置电池于火中)
- Do not put the battery in a charger or equipment with wrong terminals connected (请勿将电池反极放入充电器或设备中)
- Avoid shorting the battery (避免电池短路)
- Avoid excessive physical shock or vibration. (避免电池过多的物理撞击和震动)
- Do not disassemble or deform the battery. (不要解剖和使电池变形)
- Do not immerse in water. (不要把电池浸泡在水中)
- Do not use the battery mixed with other different make, type, or model batteries. (不要和其它不同类型的电池混和使用)
- Keep out of the reach of children. (放置电池于儿童不易接触的地方)

. storage(储存): Store the battery in a cool, dry and well-ventilated area. (应把电池置于凉爽、干燥及通风良好的区域)

### . disposal (电池处理)

- Regulations vary for different countries. Dispose of in accordance with local regulations. (电池处理要符合当地的规定)

## 7 Period of Warranty/保质期

The period of warranty is one year from the date of shipment. Bonrex guarantees to give a replacement in case of cells with defects proven due to manufacturing process instead of the customer abuse and misuse.

电池的保质期从出货之日算起为一年。如果电池的缺陷是在制造过程中形成的而不是由于用户滥用及错误使用造成，本公司负责退换电池。

## 8 Storage of the Batteries/电池的存放

Batteries should be stored in a cool, dry environment, rain proof, sunscreen. Recommended storage environment:  $25 \pm 5^{\circ}\text{C}$ , humidity is less than 65%

电池应存放在凉爽、干燥、防雨、防晒的环境中。建议贮存环境:  $25 \pm 5^{\circ}\text{C}$ ，湿度小于 65%。

## 9 Note/注释

Any other items which are not covered in this specification shall be agreed by both parties.

本说明书未包括事项应由双方协议确定。