

# Li-ion Cylindrical Battery

## Specification

### 锂离子圆柱电池说明书

Model: 14500HE 800

型号: 14500HE 800

Assembled: 1S

组合: 1S

Revision: A0

版本: A0

Date: 2017/10/5

日期: 2017/10/5

Customer Name:

客户名称:

Prepared by 编写: 李明英

Date 日期: 2017/10/5

Checked by 审核:

Date 日期: 2017/10/5

Approved by 批准:

Date 日期: 2017/10/5

Customer Comment:

客户意见:

Customer Approval/Date:

客户批准/日期 :

## 1. Scope

This specification describes the performance, testing method, warning and caution of the Lithium Ion battery.

范围

本标准描述了锂电池的性能、测试方法和注意事项。

## 2. Battery Model: 14500

电池型号：14500

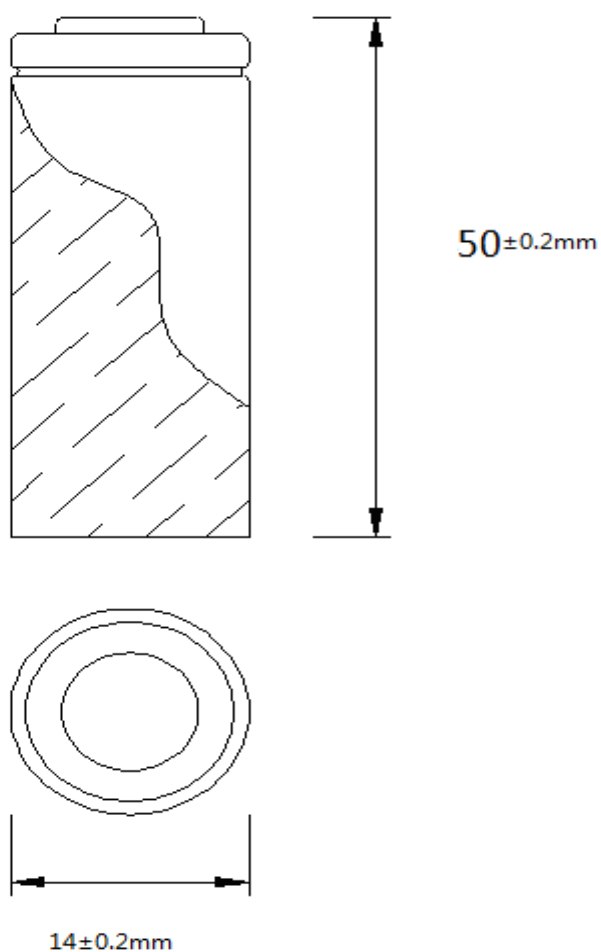


Fig. (1)The Dimension of Battery

|                                                                                   |            |    |    |        |
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图（1）成品电池外形尺寸图

### 3.Performance 基本性能

| NO.<br>序号 | Item<br>项目                             | Specification<br>规格 | Remark<br>备注                                                                                                                                                                |
|-----------|----------------------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1         | Nominal Capacity<br>标称容量               | 800mAh              | 23±3℃, 0.2C discharge, CC 2.75V cut-off<br>23±3℃, 0.2C 恒流放电, 2.75V 截止                                                                                                       |
| 2         | Min Capacity<br>最小容量                   | 700mAh              |                                                                                                                                                                             |
| 3         | Nominal Voltage<br>标称电压                | 3.7V                |                                                                                                                                                                             |
| 4         | Standard Charging Current<br>标准充电电流    | 0.5C                | 0~45℃ 0.5C CC(constant charged to 4.2V, then CV(constant voltage 4.2V)charge till charge current decline to 0.02C<br>0~45℃0.5C CC（恒流）充电至 4.2V, 再 CV（恒压）充电直至充电电流降至 0.02C 时截止 |
| 5         | Max. Charging Current<br>最大充电电流        | 2C                  |                                                                                                                                                                             |
| 6         | Charge Ending Voltage<br>充电截止电压        | 4.2V                |                                                                                                                                                                             |
| 7         | Standard Discharging Current<br>标准放电电流 | 0.5C                | -10~60℃ 0.5C CC(constant current) discharged to 2.75V<br>-10~60℃ 0.5C CC（恒流）放电至 2.75V                                                                                       |
| 8         | Max. Discharging Current<br>最大放电电流     | 2C                  |                                                                                                                                                                             |
| 9         | Discharge Ending Voltage<br>放电截止电压     | 2.75V               |                                                                                                                                                                             |
| 10        | Standard Charging Time<br>标准充电时间       | 3.5~4.0h            |                                                                                                                                                                             |
| 11        | Rapid Charging Time<br>快速充电时间          | 1.5~2h              |                                                                                                                                                                             |
| 12        | Impedance<br>内阻                        | ≤80 mΩ              | AC Impedance 1KHz<br>1KHz AC 测量                                                                                                                                             |
| 13        | Battery Weight<br>电池重量                 | ~21 g               |                                                                                                                                                                             |

|                                                                                   |            |    |    |        |
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#### 4.Performance Data 性能参数表

##### 4.1 Electrochemical Characteristics 电化学性能

| NO.<br>序号 | Item<br>项目                                                    | Criterion<br>标准 |      | Test Method<br>测试方法                                                                                                                                                                                                                             |
|-----------|---------------------------------------------------------------|-----------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1         | C-rate characteristics<br>放电倍率特性                              | 0.2C            | 100% | Test Temperature/测试温度:23±3℃<br>Charge:0.2C CC/CV to 4.2 V, current≤0.02C cut-off<br>Discharge:0.2C/10C,CC,2.75Vcut-off<br>充电：0.2C 恒流恒压充电到 4.2V，电流≤0.02C 截止；放电：0.2C/1C 恒流放电 2.75V 截止                                                             |
|           |                                                               | 1C              | 95%  |                                                                                                                                                                                                                                                 |
| 2         | Cycle Life<br>Characteristics<br>循环寿命特性                       | ≥300 cycles     |      | Charge:1C CC/CV to 4.2V,current≤0.05C cut-off<br>Discharge: 10C CC 3.0V cut-off<br>When the discharge capacity reduced to 80% of initial capacity, Stop testing<br>充电：1C 恒流恒压充电到 4.2V，电流≤0.05C 截止；放电：1C 恒流放电 3.0V 截止；<br>当放电容量降至初始容量的 80%时，停止测试 |
| 3         | Storage Characteristics<br>(Recovery Capacity)<br>储存特性（可恢复容量） | 23℃6 个月         | ≥95% | On a storage, Cell state is 60%~75% charge(≈3.8V)<br>电池充 60%~75%容量(≈3.8V)储存                                                                                                                                                                     |
|           |                                                               | 45℃3 个月         | ≥90% |                                                                                                                                                                                                                                                 |
|           |                                                               | 60℃1 个月         | ≥90% |                                                                                                                                                                                                                                                 |

|                                                                                   |            |    |    |        |
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## 5.Storage and Shipment Requirement 存储及运输要求

| NO.<br>序号 | Item<br>项目          |                                             | Requirement<br>要求                        |
|-----------|---------------------|---------------------------------------------|------------------------------------------|
| 1         | temperature<br>储存温度 | Short period less than 1 month<br>短期少于 1 个月 | -10℃～+45℃ Storage                        |
|           |                     | Long period less than 6month<br>长期不超过 6 个月  | -0℃～+35℃ Storage                         |
| 2         | Humidity 湿度         |                                             | <75%RH                                   |
| 3         | Charged 荷电          |                                             | About60～75% charged state<br>60～75% 荷电状态 |

## 6. 电池使用时危险事项、警告事项及注意事项

### 6.1 危险警告

危险警告：（应在使用说明手册或说明书中，特别注明）为防止电池可能发生泄漏，发热，爆炸，请注意以下预防措施：

- Do not disassemble or reconstruct battery  
禁止拆卸或重组电池！
- Do not short-circuit battery  
禁止短路电池！
- Do not use or leave battery nearby fire, stove or heated place(more than 80 ℃)  
禁止在热源旁使用！
- Do not immerse the battery in water or sea water, or get it wet  
禁止将电池投入水中、海水中或弄湿！
- Do use the specified charger and observe charging requirement  
使用指定充电器，遵照充电要求！
- Do not drive a nail into the battery. Strike it by hammer, or tread it  
禁止将钉子插入电池中、用铁锤敲打或用脚踩！

7. Do not give battery impact or fling it

禁止冲击或投掷！

8. Do not use the battery with conspicuous damage or deformation

禁止严重损害或变形下使用！

9. Do not touch a leaked battery directly

禁止直接接触漏液电池！

10. Do not reverse-charge or reverse-connect

禁止反向充电或反极连接！

## 6.2 警告

1. Do not use Lithium ion battery in mixture

禁止将一、二次锂电池混合使用！

2. Keep the battery away from babies

远离小孩触手可及的地方！

3. Do not get into a microwave or a high pressure container

禁止将电池置于微波或高压容器中！

4. Do not use a leaked battery nearby fire

禁止在近火处使用漏液电池！

5. Do not use an abnormal battery

禁止使用非正常电池！

## 6.3 小心

1. Do not charge the battery out of recommended temperature range of 0℃ and 60℃.

禁止在 0℃ 以下和 60℃ 以上环境充电！

2. When the battery has rust, bad smell or something abnormal at first-time-using, do not use the equipment and go to bring the battery to the shop which it was bought

电池首次使用时，若有腐蚀、难闻气味或不正常现象，禁止使用电器并送回出售点！

3. In case children use the battery, their parents teach how to use batteries according to the manual with care.

小孩要使用电池时，父母须根据手册详细指导其使用方法！

4. If the skin or cloth is smeared with liquid from the battery, wash with fresh water.



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若皮肤或衣服沾上电池里的电液，请用清水冲洗！