



国研新能

MD: GY1154S2B301

Product Specification

产品规格书

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1、Scope 概述

1.1 This document describes the specification of rechargeable Li-ion battery pack which is designed and manufactured by **GUOYAN XINNENG (SHENZHEN) TECHNOLOGY CO., LTD.**

这份文件描述由国研新能（深圳）技术有限公司设计制造的可充电锂离子电池成品的规格。

1.2 The specification shall be applied to Li-ion coin rechargeable battery pack manufactured by GUOYAN XINNENG (SHENZHEN) TECHNOLOGY CO., LTD. It is the basis for product design, assembly and inspection. Its purpose is to let the customer know the quality standard and the appropriate instruction.

本产品承认书描述国研新能（深圳）技术有限公司设计制造的可充电扣式电池，它是产品设计、生产和检验的依据，其作用是让客户了解产品的质量标准和正确使用方法。

2、Production Description 产品描述

2.1 Classification 分类: Rechargeable lithium battery 可充电锂离子电池

2.2 Application 应用: Consumer electronic 消费电子产品

2.3 Model name 型号: **GY1154S2B301**

3、Battery specification 电池规格（temperature温度:25±3°C，UOS除非另有规定）

| No. 序号 | Item 项目 | Parameters 参数 |
|-----------|--|---|
| 1 | Battery pack model 电池成品型号 | GY1154S2B301 |
| 2 | Minimum capacity 最小容量 (0.2C discharge current 放电电流) | 65mAh |
| 3 | Typical capacity 典型容量 (0.2C discharge current 放电电流) | 67mAh |
| 4 | Nominal voltage 标称电压 | 3.80V |
| 5 | Shipment voltage 出货电压 | 3.9 ~ 4.2V |
| 6 | Charge ending voltage 充电限制电压 | 4.35V |
| 7 | Discharge ending voltage 放电终止电压 | 3.00V |
| 8 | Max battery pack dimension 电池成品最大尺寸 (If the customer has any requirements, they can adjust according to the actual requirements.) | D:11.3mm H1: 5.5mm H2: 6.4mm (若客户有要求, 可按实际要求进行调整) |
| 9 | Pack Impedance内阻 (V=3.7~3.9V) | ≤500mΩ |

Elevation view
背面图

Top view
正面图

Note: The battery delivery time is less than 6 months, and the number of cycles is less than 30 T = 25°C



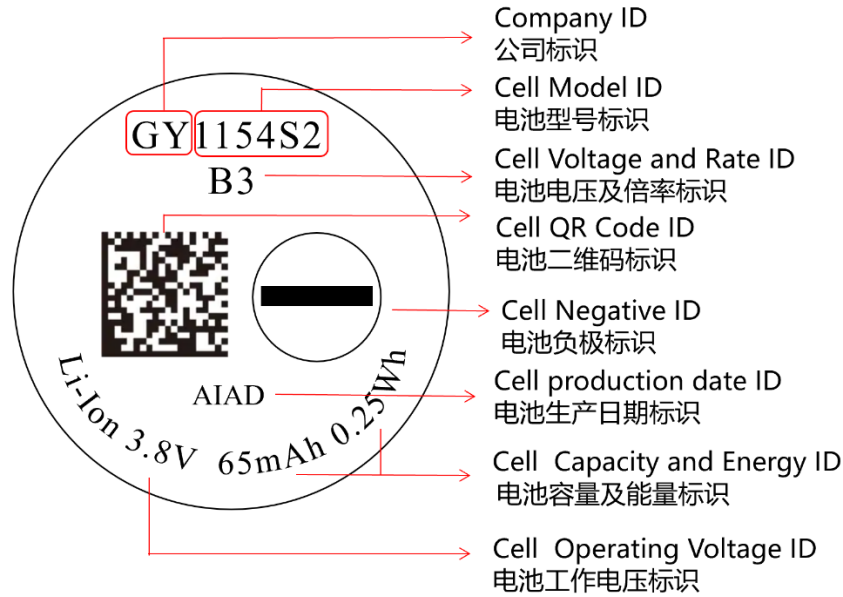
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| | | | |
|----|--|---|---|
| | | | 备注: 出厂时间小于6个月, 循环次数小于30次 T = 25°C |
| 10 | Battery wire 电池线 | Red红L2: 21 ± 2mm, black黑L1: 18 ± 2mm | |
| 11 | Battery weight 电池重量 (packed) | Appr: 1.6g | |
| 12 | Max charge current最大充电电流 | 195mA, 3C | 15°C ≤ T ≤ 45°C |
| | | 32.5mA, 0.5C | 0°C ≤ T < 15°C |
| 13 | Max discharge current最大放电电流 | 195mA, 3C | 15°C ≤ T ≤ 60°C |
| | | 13mA, 0.2C | -20°C ≤ T < 15°C |
| 14 | Operating temperature 工作温度范围 | Charge 充电: 0 ~ 45°C Discharge 放电: -20 ~ 60°C | |
| 15 | Cycle life 循环寿命 (3.0C charge充电, 3.0C discharge放电) | 500次充放电后, 电池恢复80%的初始容量 After 500cycles charge/discharge, battery can recover 80% of its initial capacity | |
| 16 | Storage temperature 存储温度 | 1 Month: -20 ~ 45 °C | Relative humidity: 45 ± 20%; 相对湿度: 45 ± 20%; |
| | | 3 Months: -20 ~ 35 °C | |
| | | 1 Year: 25 ± 3 °C | |
| 17 | Support certification 可支持认证 | UN38.3, IEC62133, UL1642, RoHS, REACH | |

4、Battery cell specification 电芯规格:

| No 序号 | Item 项目 | Parameter 参数 | |
|----------|---|-----------------|--|
| 1 | Battery cell model 电芯型号 | GY1154S2B3 | |
| 2 | Minimal capacity最小容量 (0.2C discharge current放电电流) | 65mAh | |
| 3 | Typical capacity典型容量 (0.2C discharge current 放电电流) | 67mAh | |
| 4 | Nominal voltage标称电压 | 3.80V | |
| 5 | Cell charge ending voltage 电芯充电限制电压 | 4.35V | |
| 6 | Cell Impedance 电芯内阻 | ≤450mΩ | |
| 7 | Maximum Cell Diameter电芯最大直径 D | 11.1mm | |
| 8 | Maximum Cell Height 电芯最大高度 H | 5.5mm | |

5、Sketch map of battery laser etching content 电池激光蚀刻内容示意图:



6、Term and Definition 术语和定义

6.1 Standard charge process 标准充电流程

Battery pack is charged by 0.2C constant current at $25 \pm 3^\circ\text{C}$ until 4.35V. Then, battery cell is charged by constant voltage until current drop to 0.02C.

在 $25 \pm 3^\circ\text{C}$ ，电池成品以0.2C恒流电流充电直到4.35V，电池用恒压充电直到电池电流降到0.02C。

6.2 Standard discharge process 标准放电流程

Battery pack is discharged by 0.2C continuous current at $25 \pm 3^\circ\text{C}$ until the voltage drop to 3.0V.

在 $25 \pm 3^\circ\text{C}$ ，电池成品以0.2C连续放电电流放电直到3.0V。

6.3 Maximum charge current 最大充电电流

Battery pack is charged by 3.0C constant current at $25 \pm 3^\circ\text{C}$ until 4.35V. Then, battery pack is charged by constant voltage at 4.35V until current drop to 0.02C.

在 $25 \pm 3^\circ\text{C}$ ，电池成品以3.0C恒流电流充电直到4.35V，电池用恒压充电直到电池电流降到0.02C。

6.4 Maximum discharge current 最大放电电流

Battery pack is discharged by 3.0C continuous current at $25 \pm 3^\circ\text{C}$ until the voltage drop to 3.0V.

在 $25 \pm 3^\circ\text{C}$ ，电池成品以3.0C连续放电电流放电直到3.0V。

6.5 Initial impedance 初始内阻值

Battery pack is fully charged by standard charge process.

The impedance of fully charged battery cell is tested by AC impedance tester at 1kHz. The initial impedance should be $\leq 500\text{m}\Omega$ at 25°C .

电池成品用标准充电流程充满电。再使用交流阻抗测试仪（1KHz）测量初始内阻。电芯初始内阻在 25°C 下，应 $\leq 500\text{m}\Omega$ 。

6.6 Initial capacity 初始容量值

Battery pack is fully charged by standard charge process and then battery cell is fully discharged by



standard discharge process. The initial capacity is $\geq 65\text{mAh}$.

电池成品用标准充电流程充满电。电芯再用标准放电流程放完电。电芯初始容量 $\geq 65\text{mAh}$ 。

6.7 Cycle life 循环寿命 (RT: $25 \pm 3^\circ\text{C}$)

Test procedure 测试步骤:

Step 1: Battery pack is charged by 3.0C constant current at $25 \pm 3^\circ\text{C}$ until 4.35V. Then, battery cell is charged by constant voltage at 4.35V until current drop to 0.02C.

Step 2: Wait for 10mins

Step 3: Battery pack is discharged by 3.0C continuous current at $25 \pm 3^\circ\text{C}$ until the voltage drop to 3.0V.

Step 4: Wait for 10mins

Step 5: Repeat step1 to step 4 until discharge capacity is less than 80% of initial battery capacity. Cycle life should be more than or equal to 500cycles.

(1) 电池成品在 $25 \pm 3^\circ\text{C}$ 按 3.0C 恒流充电直到 4.35V。再用 4.35V 恒压充电直到充电电流小于 0.02C。

(2) 静置 10 分钟。

(3) 电池成品在 $25 \pm 3^\circ\text{C}$ 按 3.0C 恒流放电直到 3.0V。

(4) 静置 10 分钟。

(5) 重复 (1) 到 (4) 直到放电容量小于初始容量 80%。

循环寿命需要大于等于 500 周。

6.8 Rate Charge Characteristics 倍率充电性能

Battery pack is charged by 0.2C, 1.0C, 3.0C, to cut-off 4.35 V. Then, battery is charged by constant voltage at 4.35V until current drop to 0.02C. Then 10 minutes standing by, Battery pack is discharged by 0.2C continuous current at $25 \pm 3^\circ\text{C}$ until the voltage drop to 3.0V.

在 $25 \pm 3^\circ\text{C}$ 环境条件下, 分别以 0.2C、1.0C、3.0C 充电至 4.35V, 再以 4.35V 恒压充电至电流降为 0.02C。搁置 10min, 再以 0.2C 恒流放电至 3.0V。

| | | | |
|------------------|------|------|------|
| Charge rate 充电倍率 | 0.2C | 1.0C | 3.0C |
| Capacity容量 | 100% | 95% | 90% |

6.9 Rate Discharge Characteristics 倍率放电性能

Battery pack is charged by 0.2C to cut-off 4.35 V. Then, battery is charged by constant voltage at 4.35V until current drop to 0.02C. Then 10 minutes standing by, Battery pack is discharged by 0.2C, 1.0C, 3.0C continuous current at $25 \pm 3^\circ\text{C}$ until the voltage drop to 3.0V.

在 $25 \pm 3^\circ\text{C}$ 环境条件下, 以 0.2C 充电至 4.35V, 再以 4.35V 恒压充电至电流降为 0.02C。搁置 10min, 再分别以 0.2C、1.0C、3.0C 恒流放电至 3.0V。

| | | | |
|---------------------|------|------|------|
| Discharge rate 放电倍率 | 0.2C | 1.0C | 3.0C |
| Capacity容量 | 100% | 95% | 90% |

7、Testing requirements 测试要求



7.1 Cell test environment 电池试验环境

(If there is no special note, the test environment should be carried out according to this requirement)

(无特别注明时, 试验环境应符合此项要求)

Temperature 温度: $25\pm 3^{\circ}\text{C}$ 。

Relative humidity 相对湿度: 25~65%RH。

Atmospheric pressure 大气压力: 86~106KPa。

7.2 Measuring instrument requirements 测量仪表要求

7.2.1 Voltage instrumentation requirements: The accuracy of voltage meter is no less than 0.5 magnitude.

电压仪表要求: 测量电压的仪表的精确度不低于0.5级。

7.2.2 Current instrumentation requirements: Measuring the current meter accuracy no less than 0.5 magnitude.

电流仪表要求: 测量电流的仪表精确度不低于0.5级。

7.2.3 Time instrumentation requirements: Measuring the time meter accuracy no less than 0.1%.

时间仪表要求: 测量时间的仪表精确度不低于0.1%。

7.2.4 Temperature instrumentation requirements: Measuring the temperature meter accuracy no less than 0.5°C .

温度仪表要求: 测量温度的仪表准确度不低于 0.5°C 。

7.2.5 Impedance instrumentation requirements: The impedance should be tested by sinusoidal alternating (1KHZ).

内阻仪表要求: 测量内阻应由正弦交变(1KHZ)进行测试。

7.2.6 Dimensional measurement tool requirements: Minimum calibration of measuring instruments not less than 0.01mm.

尺寸测量工具要求: 尺寸测量仪器最小刻度不低于0.01mm。

8、Visual Inspection 外观

There shall be no such defect as scratch,flaw,crack,and leakage,which may adversely affect commercial value of the battery.

不允许有任何影响电池性能的外观缺陷, 如裂纹、裂缝、泄漏等。

9、Cell Performance Specification 电池性能规格

9.1 Cell Electrical characteristics 电性能

| Items 项目 | Test Method and Condition 测试条件 | Specification 规格 |
|----------------------|--|---------------------|
| 9.1.1 Full charge | Charge to 4.35V with 0.2C, then go on charging with constant voltage 4.35V till charge current declines to 0.02C . | / |



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|--|--|---|----------|----------------------------------|----------|-----------|
| 满充电 | 以0.2C电流恒流充至4.35V，再4.35V恒压充电至电流小于0.02C。 | | | | | |
| 9.1.2 Rated capacity 最小容量 | The capacity means the discharge capacity of the battery that was discharged to 3.0V with discharge current of 0.2C within 1h after the full charge. 电池满充电后1小时内用0.2C电流放电，放电至3.0V截止的放电容量。 | | | ≥65mAh | | |
| 9.1.3 RT Cycle life 常温循环寿命 | Cycle life is the capacity of the battery that was repeated 500 cycles with full charge and then discharging to 3.0V with discharge current of 3.0C. 电池满充电后以3.0C放至3.0V，充放电循环500次后的放电容量。 | | | ≥80% Minimum capacity | | |
| 9.1.4 Temperature capacity Test 温度性能 | Temperature capacity test is the discharging ability at 0.2C of the battery in different temperature as follow after fully charged in a temperature of 25°C, the time between charging and discharging must beyond 3 hours. 不同温度条件下的放电容量对比，即在25°C常温条件下电池满充电后，在下表所示温度下以0.2C放至3.0V的容量。如果充电和放电温度不是同一温度时，温度变化的间隔时间要求是3小时。 | | | | | |
| | Charge temperature 充电温度 | Discharge temperature 放电温度 | | | | |
| | 25°C | -20°C | 0°C | 25°C | 60°C | |
| | | ≥60% | ≥80% | 100% | ≥95% | |
| 9.1.5 Self-discharge 自放电 | The fully-charged battery stores under the conditions as Item 6 for 28 days and discharges with 0.2C till 3.0V. Testing the capacity after the discharge. 满充电后在标准测试条件下储存28天，检测0.2C放电至3.0V的容量。 | | | Capacity≥80% Minimum capacity | | |
| 9.1.6 Storage characteristics 存储特性 | SOC 荷电状态 | The battery store at different SOC, the initial capacity VS time (25°C) 电池不同荷电状态条件下存储，初始容量随时间变化如下 (25°C) | | | | |
| | | Storage duration 存储时间 | 3 months | 6 months | 9 months | 12 months |
| | Approx. 30% charge state (3.68<OCV≤ 3.83V) | Recovered capacity (%) 容量恢复率 | 95.5% | 93.5% | 91.5% | 90.5% |
| | | Recovered impedance (%) 内阻恢复率 | 120.00% | 130.00% | 135.00% | 140.00% |
| | Approx. 50% charge state (3.83<OCV≤ 4.00V) | Recovered capacity (%) 容量恢复率 | 95.00% | 93.00% | 91.00% | 90.00% |
| | | Recovered impedance (%) 内阻恢复率 | 120.00% | 130.00% | 135.00% | 140.00% |
| | Approx. 70% | Recovered capacity (%) 容量恢复率 | 92.00% | 88.00% | 86.00% | 85.00% |



| | | | | | | |
|--|---|----------------------------------|---------|---------|---------|---------|
| | charge state ($4.00 < OCV \leq 4.15V$) | Recovered impedance (%) 内阻恢复率 | 125.00% | 135.00% | 145.00% | 150.00% |
| | Approx. 100% charge state ($4.15 < OCV \leq 4.35V$) | Recovered capacity (%) 容量恢复率 | 90.00% | 85.00% | 82.00% | 80.00% |
| | | Recovered impedance (%) 内阻恢复率 | 130.00% | 140.00% | 150.00% | 160.00% |

9.2 Mechanical specification 机械特性

| Items 项目 | Test Method and Condition 测试条件 | Specification 规格 |
|------------------------------------|--|---|
| 9.2.1 Vibration Test 振动测试 | <p>Batteries are firmly secured to the platform of the vibration machine without distorting the batteries in such a manner as to faithfully transmit the vibration. The vibration shall be a sinusoidal waveform with a logarithmic sweep between 7 Hz and 200 Hz and back to 7 Hz traversed in 15 minutes. This cycle shall be repeated 12 times for a total of 3 hours for each of three mutually perpendicular mounting positions of the cell. One of the directions of vibration must be perpendicular to the terminal face.</p> <p>试验电池和电池组紧固在振动机上, 所受振动为正弦波形, 频率在7Hz和200Hz之间摆动再回到7Hz的对数扫频为时15min。这一过程须在三个互相垂直的电池安装方位的每一方向都重复进行12次, 总共为时3h。其中一个振动方向必须与端面垂直。</p> | <p>No explosion, no fire, no leakage. 不爆炸, 不起火, 不漏液</p> |
| 9.2.2 Drop Test 跌落测试 | <p>Battery cell is fully charged by standard charge process.</p> <p>Battery cell is free fall from a height of 1m on the cement floor, from X-axis、Y-axis positive and negative direction. Each direction is free fall 1 time.</p> <p>电芯按标准充电流程满充电。</p> <p>电芯从1米高处自由跌落到水泥地板上, 从X轴、Y轴的正负方向, 每个方向自由跌落一次。</p> | <p>No explosion, no fire 不爆炸, 不起火</p> |
| 9.2.3 Crush Test 挤压测试 | <p>Battery cell is fully charged by standard charge process.</p> <p>The battery cell is to be crushed with its longitudinal axis parallel to the surfaces of crushing apparatus. The surfaces are to be brought in contact with cell and the crushing is to be continued until an applied force of $13 \pm 1kN$ is reached. Once the maximum force has been obtained, it is to be released.</p> <p>电芯按标准充电流程满充电。</p> <p>电芯的纵向跟平面金属板间平行, 持续施加 $13 \pm 1kN$ 的压力挤压, 直到压力达到 $13 \pm 1kN$ 时停止并释放压力。</p> | <p>No fire, No explosion 无起火, 无爆炸</p> |



| | | |
|-----------------------------|--|--|
| 9.2.4 Shock Test 撞击测试 | <p>Battery cell is fully charged by standard charge process.</p> <p>Battery cell is secured to the testing machine by means of arigid mount which will support all mounting surfaces of the battery cell. The battery cell is subjected to a total of two shocks of equal magnitude. The shocks are to be applied in each of two mutually perpendicular directions. For each shock the battery cell is accelerated in such a manner that during the initial 3ms the minimum average acceleration is 75g. The peak acceleration shall be between 125 g and 175g. Battery cell is tested at 20±5°C</p> <p>电芯按标准充电流程满充电。</p> <p>在环境温度下，将电芯分别按二个轴向固定在测试台面上，前3ms内平均加速度最少达到75g（g 为重力加速度），峰值加速度达125g 至175g。电芯测试温度为20±5°C。</p> | <p>No fire, No explosion 无起火，无爆炸</p> |
|-----------------------------|--|--|

9.3 Safety Test 安全测试

| Items 项目 | Test Method and Condition 测试条件 | Specification 规格 |
|---|---|--|
| 9.3.1 Constant Humidity And Temperature Test 恒定湿热测试 | <p>Battery cell is fully charged by standard charge process. Then, battery cell is put into chamber with constant humidity(90~95%) and temperature (40±2°C) for 48hrs. After test, battery idle for 2hrs at 25±3°C and discharge by 0.2C to 3.0V.</p> <p>电芯按标准充电流程满充电。之后电芯放在恒温箱48 小时，湿度为90~95%和温度为40±2°C。</p> | <p>No fire, No leakage, No explosion 无起火，无漏液，无爆炸</p> |
| 9.3.2 Overcharge Test 过充电测试 | <p>Battery cell is fully charged by standard charge process. Then, the battery is charged by 3.0C rate constant current and voltage to 4.6V for 7hrs.</p> <p>电芯按标准充电流程满充电。之后电芯用3C4.6V恒流恒压充电7小时。</p> | <p>No fire, No leakage, No explosion 无起火，无爆炸</p> |
| 9.3.3 Over discharge Test 过放电测试 | <p>At 25±3°C, battery cell is discharged by 0.2C until 3.0V. And then battery cell is connected the load with 30 Ω to discharge for 7hours.</p> <p>电芯在25±3°C用0.2C 放电到3.0V。之后电芯连接30Ω负载放电7小时。</p> | <p>No fire, No leakage, No explosion 无起火，无爆炸</p> |
| 9.3.4 Short Test 短路测试 | <p>Battery cell is fully charged by standard charge process. Then, battery cell anode and cathode connected to 80±20mΩ load for 1hour.</p> <p>电芯按标准充电流程满充电。电芯的正负极连接到80±20mΩ负载1 小时。</p> | <p>No fire, No explosion The Temperature of the Battery surface not exceeded than 150°C 无起火，无爆炸，表面温度≤150°C</p> |
| | <p>Battery cell is fully charged by standard charge process.</p> <p>Battery cell is placed on the screen which is to be constructed by</p> | <p>No part of an exploding cell shall</p> |



| | | |
|---|--|--|
| <p>9.3.5 Projectile Test 焚烧测试</p> | <p>steel wire mesh. The screen is mounted above the burner. And eight-sided covered wire cage is to be placed over the battery cell. Battery cell is to be heated and remain on the screen until It explodes or has been ignited or burned out.</p> <p>电芯按标准充电流程满充电。</p> <p>将电芯放在钢丝网上，钢丝网下有燃烧器和钢丝网被八面铝网盖住。电芯在钢丝网上被加热直到电芯爆炸或被点燃或完全烧毁。</p> | <p>penetrate the wire screen.</p> <p>电芯的任何部分不得穿出此八面铝网。</p> |
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10、Charging 充电

Charging current and charging voltage should be less than specified in the BATTERY SPECIFICATION. The charger shall be designed to comply with BATTERY SPECIFICATION.

It is dangerous that charging with higher current or voltage than Product Specification may cause damage to the battery electrical, mechanical safety performance.

充电电流和充电电压不得超出本规格书中所规定的最大值。充电器的设计应满足本规格书的要求。

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使用超出本规格书要求的电流和电压范围可能引起电池充放电性能、机械性能和安全性能的问题

11、Warranty 品质保证

Period of warranty: 12 months after shipment;

产品保质期: 自从出厂代码日开始算起后的12个月;

Range of warranty: Operating within the specified current , voltage ranges and working temperature range, the battery performs normally without swelling, 0V and electrolyte-leaking. Battery damage caused by misuse or incorrect storage cannot apply the Warranty.

If the life cycle meets the requirement of the Specification, the battery is invalid in advance.

保 质 范 围: 在规格书规定的充放电电压范围、电流范围、工作温度等正常使用及存放条件下电池可进行充放电，无气鼓、零电压、漏液等不良现象。不当使用或存放造成电池不良不在保质范围内。当循环寿命达到规格书中要求后，电池提前过保质期。

12、Liability 产品责任

Operating within the specified current , voltage ranges and working temperature range, the battery performs normally without swelling, 0V and electrolyte-leaking. Battery damage caused by misuse or incorrect storage cannot apply the Warranty.

If the life cycle meets the requirement of the Specification, the battery is invalid in advance.

在规格书规定的充放电电压范围、电流范围、工作温度等正常使用及存放条件下电池可进行充



放电, 无气鼓、零电压、漏液等不良现象。不当使用或存放造成电池不良不在保质范围内。当循环寿命达到规格书中要求后, 电池提前过保质期。

13、Agency approvals 承认机构

GUOYAN XINNENG cell safety performance is designed according to UL1642 standard, IEC62133-2017 requirement and GB31241-2022. The product 's safety performance is conforming to UL1642 standard, IEC62133-2017 requirement and GB31241-2022 standard.

国研新能电芯的安全性能是根据UL1642 标准,IEC62133-2017 和GB31241-2022要求制定。产品的安全特性与UL1642 标准, IEC62133-2017和GB31241-2022的要求是一致的。

14、Cell precautions and safety instructions 电芯使用注意事项及安全说明

14.1 Please be sure to comply with the specifications and the following precautions to use cell. For any accident caused by operation not following the specifications, GUOYAN XINNENG (SHENZHEN) TECHNOLOGY CO., LTD will not take any responsibility.

请您务必遵守本规格书和以下使用注意事项使用电芯, 对于没有按照规格书进行操作所造成的任何意外事故, 国研新能(深圳)技术有限公司将不承担任何责任。

14.2 Warranty period is 12 months after shipment date.

从出厂代码日起12 个月内保修。

14.3 When the battery is stored for 3 months, it should be charged with 0.5C current to 50% SOC.

电池每放置三个月,请在放置前以0.5C充电1次,即让电池具备50%以上的电量。

14.4 Before using the battery, carefully read the instruction manual and battery labels on the surface.

使用电池前, 请仔细阅读使用说明书和电池表面标识。

14.5 Please use the original battery charger. The battery should be placed in a dry and ventilated place.

电池需使用原装充电器充电, 并应放置在干燥通风场所。

14.6 If the battery is not used for a long time, please charge the battery to 50% SOC status. Remove the battery from the device and place it separately, to avoid the short-circuit and damage caused by contacting metal.

如长期不使用时, 请将电池充电至半满电荷状态, 把电池从设备中拆除并分开放置, 避免金属接触电池, 造成短路或损坏现象。

14.7 When using or during storage, if the battery is hot, with leakage, odor, distortion or other anomalies, please stop using it immediately and stay away from the battery.

在使用或储存期间, 如发现电池有出现高温发热、漏液、散发异味、变形及其它异常现象时, 请立即停止使用并远离电池。

14.8 Do not short-circuit the battery positive and negative terminals. Do not damp the battery to avoid any danger.

切勿将电池正负极短路, 并注意不可让电池受潮, 以免发生危险。



14.9 Please keep the battery away from heat, high voltage place. Please do not beat or hit the battery.
使用过程中, 应远离热源、高压场所, 并勿摔打、撞击电池。

14.10 Remove the battery immediately from the device when the battery life ends. Please dispose the waste battery properly. Do not put it into fire or water.

电池寿命终止应立刻从设备中取出, 废弃电池请安全妥善处理, 切勿投入火中或水中。

15、Caution 注意事项

15.1 Prohibition of disassembly 禁止拆卸

15.1.1 Never disassemble the cells The disassembling may generate internal short circuit in the cell, which may cause gassing, firing, explosion, or other problems.

不要拆卸电池, 拆卸电池会发生电池内部短路, 会引起起火、爆炸、有害气体或者其它问题。

15.1.2 Electrolyte is harmful LIP battery should not have liquid from electrolyte flowing, but in case the electrolyte come into contact with the skin, or eyes, physicians shall flush the electrolyte immediately with fresh water and medical advice is to be sought.,

电解液是有害的万一电解液沾到皮肤、进入眼睛, 应立即用清水冲洗以及求助医生。

15.2 Prohibition of use of damaged battery 禁止使用损坏的电池

The cells might be damaged during shipping by shock. If any abnormal features of the cells are found such as damages in a plastic envelop of the cell, deformation of the cell package, smelling of an electrolyte, an electrolyte leakage and others, the cells shall never be used any more. The Cells with a smell of the electrolyte or a leakage shall be placed away from fire to avoid firing or explosion.

电池可能在出货途中碰撞而受损。如果发现电池有异常, 例如包装损坏、电池包裹变形, 有电解液的味道、发现漏液等等, 不要再使用这些电池。电池如果有电解液的味道或者出现漏液, 电池放置应该远离 火源避免起火及爆炸。

15.3 The following warning language is to be provided with the information packaged with the small cells and batteries or equipment using them

以下警告语言将提供与小型电池、电池或设备一起使用的信息:

15.3.1 Keeps mall cells and batteries which are considered swallow able out of the reach of children 将商场内的电池和电池放在孩子们够不到的地方。

15.3.2 Swallowing may lead to burns, perforation of soft tissue and death. Secere burns can occur within 2h of ingestion.

吞咽可能导致烧伤、软组织穿孔和死亡。摄入2小时后会造2次烧伤。

15.3.3 In case of ingestion of a cell or battery, seek medical assistance promptly.
误食电芯或电池时, 应立即寻求医疗救助。

15.3.4 Keep batteries out of reach of children to avoid being swallowed
把电池放到小孩够不到的地方以免吞服。



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15.3.5 If children use the battery, their guardians should explain the proper handling.

小孩使用电池时，监护人应详细解释操作方法。

15.4 Any other items are not covered in the specification shall be agreed by both parties.

任何本规格书没有包括的事项，需要双方协议确定。

16、Package 包装

Labeling: if the customer has no requirements, it shall be labeled according to our standard scheme.

贴标：若客户无制定要求，按我司标准方案贴标。

Package sketch map 包装示意图

