

PRODUCT SPECIFICATION

产品规格书

Lishen Juyuan Rechargeable Lithium-Ion Polymer Cell

力神聚元可充电锂离子聚合物电池

Model/型号: SP526578SR (ICP6/65/78) 5000mAh

Mar. 11 2025

Customer Approval/客户审 批	Signature/签名	Date/日期
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Product Specification

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1. SCOPE 使用范围

The product specification describes the requirements of the Lishen Juyuan Rechargeable Lithium Ion Polymer cell SP526578SR. For more information needed, customers are advised to contact Tianjin Lishen Juyuan New Energy Technology Co., Ltd

本产品规格书描述了力神聚元可充电锂离子聚合物电池 SP526578SR 的电池产品规格。如需更多信息，建议客户联系天津力神聚元新能源科技股份有限公司。

2. DESCRIPTION AND MODEL 描述和型号

No.	Items 项目	Specifications 规格
2.1	Description 描述	Rechargeable Lithium-Ion Polymer Cell 可充电锂离子聚合物电池
2.2	Model 型号	SP526578SR

3. STANDARD ENVIRONMENTAL TEST CONDITION 标准环境测试条件

Unless otherwise specified, all tests stated in this Product Specification are conducted at below condition:

除非有其它规格说明,所有测试条件都遵循以下规格:

No.	Items 项目	Specifications 规格
3.1	Temperature 温度	25±3°C
3.2	Humidity 湿度	65±20% RH

With this Specification “*”, cells shall be tested within one month from manufactured and cycled (charge discharge) no more than one time before the test.

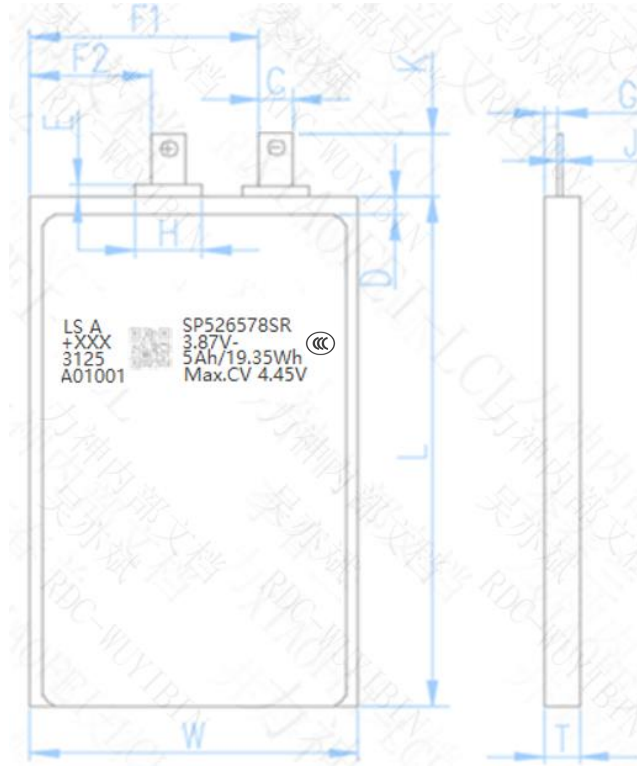
带 “*” 的规格仅适用于没有进行充放电循环的电池，且从制造完成开始存储时间不超过 1 个月。

4. CELL SPECIFICATIONS 电池规格

No.	Items 项目	Specifications 规格
4.1	Limited charging voltage 充电限制电压	4.45 V
4.2	Upper limited charging voltage 充电上限电压	4.5V
4.3	End of discharge voltage 放电终止电压	3.0V
4.4	Discharge cut-off voltage 放电截止电压	2.3V

4.5	Nominal voltage 标称电压	3.87 V	
4.6	* Typical Rated capacity *典型容量	5100mAh (0.2CmA discharge) at 25±3°C 25±3°C环境下0.2CmA放电至3.0V 放电容量5100mAh	
4.7	*Minimum Rated capacity *额定容量	5000mAh (0.2CmA discharge) at 25±3°C 25±3°C环境下0.2CmA放电至3.0V 放电容量5000mAh	
4.8	Standard Charging 标准充电	0.2C CC(constant current) charge to 4.45V, then CV(constant voltage) 4.45V charge till charge current decline to 0.02C 0.2C恒流充电至 4.45V,然后 4.45V恒压充电至电流0.02C截止	
4.9	Standard Discharge 标准放电	0.2C CC(constant current)discharge to 3.0V 0.2C 恒流放电至 3.0 V	
4.10	Charge Condition Over Temperature 不同温度范围充电制式	Temperature Range 温度区间	Charge current and voltage 充电电流和电压
		0°C ~ 15°C	0.2C CC-CV 4.45V 0.02C cut off
		15°C ~ 45°C	1.0C-4.45V CC-CV 0.02C cut off
		45°C ~ 55°C	1.0C-4.2V CC-CV 0.02C cut off
4.11	Max Charge Current 最大充电电流	0°C ~ 15°C	0.2C Max to 4.45V
		15°C ~ 45°C	1.2C Max to 4.45V
		45°C ~ 55°C	1.0C Max to 4.2V
4.12	Max Discharge Current 最大放电电流	-20°C ~ 60°C	1.7 C Max to 3.0V
4.13	Storage condition (at shipping status: approx. 50% of fully charged state) 存储条件(在出货状态下, 一般为 50% 充电态)	Temperature 温度	Storage time and status 时间和状态
		-20°C ~ 45°C	Within 3 month at shipping status 出货状态3个月以内
		25±3°C	Within 12 month at shipping status 出货状态12个月以内
4.14	Cell weight 电池重量	62±5g	

5. OUTLINE DIMENSION (UNIT: MM, NOT IN SCALE) 外形尺寸 (单位 MM, 不按比例)



Description/描述	Dimension and Spec/尺寸和规格
Thickness Before Shipping 出货厚度 T (by 600gf PPG)	4.95±0.25 mm
Width/宽度 W (by 300gf calipers)	64.3 ±0.7 mm
Length/长度 L	77 ±1 mm
Tab Length/极耳长度 K	8±0.5 mm
Tab Width/极耳宽度 C	6±0.3 mm
Tab Film/极耳胶外露 E	0.2~2 .7mm
Tab Distance (-)/负极耳距离 F1	46±1.1 mm
Tab Distance (+)/正极耳距离 F2	13±1.1 mm
Top sealant /前沿宽度 D	2.7±0.5 mm
G	Max 3.0 mm
Tab Thickness/极耳厚度 J	0.1±0.02 mm
Tab Film Width/极耳胶宽度 H	12±2 mm
Tab Material (-)/负极耳材质	Cu(Ni)
Tab Material (+)/正极耳材质	Al + Ni (隐形焊)

6. CELL PERFORMANCE CRITERIA 电池性能标准

No.	Items 项目	Test Method and Condition 测试方法和条件	Criteria 标准
6.1	*Initial Capacity *初始容量	The capacity means the discharge capacity of the cell. Cells shall be charged per 4.8 and discharged by 0.2C to 3.0V at 25±3°C 容量是指电池的放电容量。电池应按4.8充电，并在25±3°C下按0.2C至3.0V放电	≥5000 mAh
6.2	*Initial Impedance *初始阻抗	The AC impedance shall be measured at AC 1000 Hz initially 半充后在AC 1KHZ条件下测试电池交流内阻	≤25.0 mΩ (Cell only) ≤25.0mΩ (电池)
6.3	Cell Voltage 电压	Voltage of shipment 出货电压 (非空运)	3.80~3.95V
6.4	*Rated Capacity *倍率性能	Cells shall be charged per 4.8 and discharged by 0.5/1.0/1.5 to 3.0V at 25±3°C 电池应按4.8充电，并在25±3°C下按0.2C/1.0C/1.5C至3.0V放电	0.5C capacity≥95%(4750 mAh); 1.0C capacity≥90%(4500 mAh); 1.5C capacity≥80%(4000 mAh);
6.5	*Cap.Retention Performance *荷电保持性能	At 25±2°C, cell is charged per 4.8 and stored for 28 days, and then discharged with 0.2C to 3.0V after the storage. 电池在25±2°C下按照4.8充电方法满充并静置28天，然后用0.2C恒流放电至3.0V并记录放电容量。	Residue capacity ≥80% (4000 mAh); 残余容量≥80% (4000 mAh)
6.6	*Storage Performance *储存性能	Cell is stored for 7 days at fully charged state under the condition of 60±2°C, and rest for 2 hrs at room temperature, recording the cool thickness, then discharged with 0.2C to 3.0V at room temperature. Repeat the charge and discharge 3 times. 电池在满充状态下于60±2°C的环境下保存7天，然后在室温下冷却2小时，测试电池冷态厚度，然后用0.2C恒流放电至3.0V并记录放电剩余容量。可以重复以上充放电循环3次，记录恢复容量。	Residual Capacity ≥ 80%Cmin Recoverable Capacity ≥ 90%Cmin Thickness Swelling ≤ 10% 剩余容量 ≥ 80%(4000 mAh) 恢复容量 ≥ 90%(4500 mAh) 厚度膨胀 ≤ 10%(5.72mm)

6.7	*RT Cycle Life *室温循环寿命	At 25±2°C, Charge cell with 18W to 4.45V and with constant voltage till the current to 0.02C, and discharge cell with 25W until cell voltage reaches 3.0V. Repeat 300cycles. Then charge with 0.2C to 4.45V and with constant voltage till the current to 0.02C, and discharge cell with 0.2C until cell voltage reaches 3.0V, Record the 0.2C discharge capacity and thickness. 在25±2°C下,以18W恒功率充电至4.45V, 恒压至0.02C, 然后用25W恒功率放电至3.0V。重复以上充/放电300次, 然后以0.2C充到4.45V恒压至0.02C, 0.2C放电至3.0V, 并记录0.2C放电容量和电池厚度。	300 cycles Capacity retention ≥80% (4000 mAh). 300 次循环 容量保持率不低于80%(4000 mAh)。 Thickness after cycling (Voltage of shipment) ≤5.62mm 循环后满电厚度≤5.62mm
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7. CELL SAFETY CRITERIA 电池安全标准

No.	Items 项目	Test Method and Condition 测试方法和条件	Criteria 标准
7.1	*57°C External Short-circuiting Test *57°C外部短路试验	Cell fully charged, is to be short circuited by connecting the positive and negative terminals with a total external resistance of 80±20 mΩ wire. The test shall be continued Until the cell surface temperature is 20% lower than peak value . 充满电的电池将通过连接正极和负极端子进行短路, 总外部电阻为80±20 mΩ导线。应继续进行试验, 直到电池温度下降值达到温度最大值的20%。	No explode, no fire 不爆炸, 不起火
7.2	*Over Charge Test *过充测试	A sample cell is standardly charged to Charge Cut-off Voltage and rested for 5 min. Then it is charged at 1.2C to 4.65V, and kept at 4.65V until the charge time is ≥7 hours or the cell surface temperature is 20% lower than peak value. 电池常规放电至放电终止电压并静置5分钟, 然后以1.2C 充电至4.65V并保持充电, 当充电时间达到7小时, 或电池温度下降值达到温度最大值的20%时, 停止测试。	No fire No explosion 不起火 不爆炸

7.3	*130°C Heating test *130°C 热箱测试	Cell fully charged, is to be heated in a gravity convection or circulating air oven. The oven temperature will be ramped at 5C per minute to 130°C and held at 130°C for 30 min. 电池充满电后, 将在烘箱中加热。烘箱温度将按照5°C每分钟的升温速率升高到至130°C, 保持在130°C持续30分钟。	No explode, no fire 不爆炸, 不起火
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8. APPEARANCE 外观

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

不得存在可能对电池商业价值产生不利影响的划痕、开裂、腐蚀、漏液等缺陷。

9. WARRANTY 警告

As long as the cell is treated in accordance with this Product Specification and or Handling Precautions and Prohibitions, Supplier warrants that the cell should be free from any defect for a period of 12 months from the date of shipment.

只要电池按照本产品规范和 或处理注意事项和禁令进行处理, 供应商保证电池自装运之日起 12 个月内无任何缺陷。

The warranty set forth above or described in Handling Precautions and Prohibitions excludes a defect which is not related to manufacturing of the cell.

上述或“处理注意事项和禁止事项”中所述的保修不包括与电池制造无关的缺陷。

Any actions which would cause the short between the anode tab and Al layer of pouch(cell package material) must be forbidden, any issues which caused by these actions are not related to manufacturing of the cells.

必须禁止任何会导致阳极极耳和铝塑(电池封装材料)的 Al 层之间短路的行为, 这些行为引起的任何问题与电池制造无关。

10. OTHERS 其他注意事项

Any matter not included in this specification shall be conferred between the both parties.

本规范中未包含的任何事项应由双方协商解决。

If there are problems in this specification, Lishen Juyuan can consider to change specification after discussion.

如果规格书中存在问题, 力神聚元可以考虑在讨论后更改规范。

11. PACKAGING 包装方式

TBD

12. APPENDIX 附录

HANDLING PRECAUTIONS AND PROHIBITIONS FOR RECHARGEABLE LITHIUM-ION POLYMER BATTERIES

可充电锂离子聚合物电池的操作注意事项和禁止事项

Preface 序言

This document of “Handling Precautions and Prohibitions for Rechargeable Lithium Ion Polymer Batteries” shall be applied to the battery cells that are to be manufactured by Lishen Juyuan (Tianjin Lishen Juyuan New Energy Te Co.,Ltd).

本文件“可充电锂离子聚合物电池的操作注意事项和禁止事项”适用于力神聚元（天津力神聚元新能源科技股份有限公司）生产的电池。

Note 注:

- 1) The customer is requested to contact Lishen Juyuan in advance, if and when the customer needs other applications or operating conditions than those described in this document. Additional experimentation may be required to verify performance and safety under such conditions.

如果客户需要本文件中所述以外的其他应用程序或操作条件，请客户提前联系力神聚元。可能需要额外的实验来验证在这种条件下的性能和安全性。

- 2) Lishen Juyuan will take no responsibility for any accident when the cell is used under other conditions than those described in this document.

当电池在本文件所述条件以外的其他条件下使用时，力神聚元对任何事故不承担任何责任。

- 3) Lishen Juyuan will inform, in a written form, the customer of improvement(s) regarding proper use and handling of the cell, if it is deemed necessary.

如果认为有必要，力神聚元将以书面形式通知客户有关电池正确使用和处理方法。

12.1. CHARGING 充电

12.1.1 Charging current 充电电流:

Charging current should be less than maximum charge current specified in the Product Specification. Charging with higher current than recommended value may cause damage to cell performance and safety characteristics and could lead to heat generation or leakage.

充电电流应小于产品规范中规定的最大充电电流。以高于推荐值的电流充电可能会损坏电池性能和安全特性，并可能导致发热或漏液。

12.1.2 Charge voltage 充电电压:

Charging shall be done by voltage less than that specified in the Product Specification (4.5V cell). Charging beyond 4.5V, which is the absolute maximum voltage, must be strictly prohibited. The charger shall be designed to comply with this condition.

充电电压应低于产品规范中规定的电压（4.45V 电池）。必须严格禁止充电超过绝对最大电压 4.5V。充电器的设计应符合此条件。

It is very dangerous that charging with higher voltage than specified value may cause damage to cell performance and safety characteristics and could lead to heat generation or leakage.

在高于规定值的电压下充电可能会损坏电池的性能和安全特性，并可能导致发热或漏液，这是非常危险的。

12.1.3 Charge temperature 充电温度:

The cell shall be charged within the specified temperature range in the Product Specification.

电池应在产品规范中规定的温度范围内充电。

If the cell is charged at the temperature out of the specified range, leakage, heat generation or other damages may be caused.

如果电池在超出规定范围的温度下充电，可能会导致漏液、发热或其他损坏

Repeated charging and discharging at high and low temperature may cause degradation of cell performance even within the specified temperature range.

即使在规定的温度范围内，在高温和低温下重复充电和放电也可能导致电池性能下降

12.1.4 Prohibition of reverse charging 禁止反向充电:

Reverse charging is prohibited. The cell shall be connected correctly. The polarity has to be confirmed before you make wiring. In case of the cell is connected improperly, the cell cannot be charged. Simultaneously, the reverse charging may cause damaging to the cell(s) which may lead to degradation of cell performance and damage the cell safety, and could cause heat generation or leakage.

禁止反向充电。电池应正确连接。接线前必须确认极性。如果电池连接不正确，则无法对电池充电。同时，反向充电可能会对电池造成损坏，从而导致电池性能下降和电池安全性受损，并可能导致发热或泄漏。

12.2. DISCHARGE 放电

12.2.1 Discharge current 放电电流

The cell shall be discharged at less than the maximum discharge current specified in the Product Specification.

电池的放电电流应小于产品规范中规定的最大放电电流。

High discharge current may reduce the discharging capacity significantly or cause over-heat.

高放电电流可能会显著降低放电容量或导致过热。

12.2.2 Discharge temperature 放电温度

The cell shall be discharged within the temperature range specified in the Product Specification.

电池应在产品规范规定的温度范围内放电。

12.2.3 Over-discharge 过放电:

It should be noted that the cell would be over-discharged state by its self-discharge characteristics in case the cell is not used for long time. In order to prevent over-discharging, the cell shall be charged periodically to maintain between 3.7V and 3.9V.

应该注意的是，在电池长时间不使用的情况下，电池将由于其自放电特性而处于过放电状态。为了防止过度放电，电池应定期充电，以保持 3.7V 和 3.9V 之间。

Over-discharging may causes loss of cell performance, characteristics, or battery functions.

过度放电可能会导致电池性能、特性或电池功能的损失。

The charger shall be equipped with a device to prevent further discharging exceeding a cut-off voltaage specified in the Product Specification.

充电器应具备防止进一步放电超过产品规范中规定的截止电压的策略

Also the charger shall be equipped with a device to control the recharging procedures as follows:

充电器还应设置一个策略，用于控制充电程序，如下所示

The cell battery pack shall start with a low current (0.01C) for 15 - 30 minutes, i.e. pre-charging, before rapid charging starts. The rapid charging shall be started after the individual cell voltage has been reached above 3V within 15 - 30 minutes that can be determined with the use of an appropriate timer for pre-charging.

在快速充电开始之前，电池组应以低电流（0.01C）启动 15-30 分钟，即预充电。应在 15-30 分钟内单个电池电压达到 3V 以上后开始快速充电，这可以通过使用适当的预充电计时器来确定。

In case the individual cell voltage does not rise to 3V within the pre-charging time, then the charger shall have functions to stop further charging and display the cell pack is under abnormal state.

如果单个电池电压在预充电时间内没有上升到 3V，则充电器应具有停止进一步充电并显示电池组处于异常状态的功能。

12.3. PROTECTION CIRCUIT MODULE (PCM) 保护电路模块

12.3.1 The cell battery pack shall be with a PCM that can protect cell battery pack properly.

电池组应配有 PCM，能够正确保护电池组

12.3.2 PCM shall have functions of (i) overcharging prevention, (ii) over-discharging prevention, and (iii) over current prevention to maintain safety and prevent significant deterioration of cell performance. The over current can occur by external short circuit

PCM 应具有 (i) 防止过充电、(ii) 防止过放电和 (iii) 防止过电流的功能，以保持安全并防止电池性能的显著恶化。过电流可能由外部短路引起

12.3.3 Overcharging prohibition 禁止过度充电:

Overcharging prevention function shall stop charging if any one of the cells of the battery pack reaches 4.5V above.

如果电池组的任何一个电池达到 4.5V 以上，防过充电功能应停止充电。

12.3.4 Over-discharge prohibition 禁止过度放电:

Over-discharging prevention function shall work to minimize a dissipation current to avoid further drop in cell voltage of 2.3V or less per cell in either cell of the battery pack. It is recommended that the dissipation current of PCM shall be designed to minimized to 0.5uA after the overdischarge prevention function works.

过放电防止功能应能最大限度地减少耗散电流，以避免电池组任何一个电池中每个电池 2.30V 或更低的电池电压进一步下降。建议在过放电防止功能工作后，PCM 的耗散电流应设计为最小至 0.5uA。

The protection function shall monitor each bank of the battery pack for controlling the current all the time.

保护功能应监控电池组的每一组，以便始终控制电流。

12.4. STORAGE 存储

The cell should be stored within the proper voltage and temperature range specified in the Product Specification.

电池应储存在产品规范中规定的适当电压和温度范围内。

Lead tabs with pre-soldered wiring shall be spot welded to the cells.

带有预焊接线的引线接线片应点焊到电池上。

12.5. OTHERS 其他

12.5.1 Cell connection 电池连接

Direct soldering of wire leads or devices to the cell is strictly prohibited.

严禁将导线或器件直接焊接到电池上

Direct soldering may cause damage of components, such as separator and insulator, by heat generation

直接焊接可能会因发热而损坏部件，如隔膜和绝缘体

12.5.2 Ultrasonic welding of battery pack casing 电池组外壳超声波焊接

Ultrasonic welding of plastic lid to the plastic shell can be applied. However, the welding shall be done to avoid the ultrasonic wave power to the cells. Otherwise it may cause serious damage to the cells.

可以将塑料盖超声波焊接到塑料外壳上。然而，焊接应避免超声波功率到达电池。否则，它可能会对电池造成严重损害。

12.5.3 Prevention of short circuit within a battery pack 防止电池组内短路

Enough insulation layer between wiring and the cell shall be used to maintain multiple safety protection.

接线和电池之间应使用足够的绝缘层，以保持多重安全保护。

The battery pack shall be structured with no short circuit within the battery pack. The short circuit within the pack may cause generation of smoke or firing.

电池组的结构应确保电池组内无短路。电池组内的短路可能会导致冒烟或起火。

12.5.4 Prohibition of disassembly 禁止拆卸

Never disassemble the cells 切勿拆卸电池:

The disassembling may cause a chance to generate internal short circuit in the cell. Which may cause gassing, firing, explosion or other troubles.

拆解可能会导致电池出现内部短路。这可能会导致放气、着火、爆炸或其他问题

Electrolyte is harmful 电解液有害:

An electrolyte happens to be leaked out from the cells is harmful to the human bodies. If the electrolyte is contact with the skin, eyes or others, the electrolyte shall be flushed immediately with fresh water and see a doctor.

电解液如从电池中泄漏出来，将对人体有害。如果电解液与皮肤、眼睛或其他物体接触，应立即用淡水冲洗电解液并尽快就医。

12.5.5 Prohibition of short circuit 禁止短路

Never make short circuit the cells. It makes generation of very high currents which subsidiary cause heating of the cells which may cause the electrolyte leakage, gassing or explosion which are very dangerous.

切勿使电池短路。这会产生非常高的电流，从而导致电池发热，这可能会导致电解液泄漏、产气或爆炸，是非常危险的。

An appropriate circuitry with PCM shall be employed to protect accidental short circuit of the battery pack.

应采用带 PCM 的适当电路来保护电池组的意外短路

12.5.6 Prohibition of dumping of cells into fire 禁止向火中倾倒电池

Never incinerate nor dispose the cells in fire. These may cause explosion of the cells, which is very dangerous and is prohibited.

切勿在火中焚烧或处理电池。这些可能会导致电池爆炸，是非常危险的，也是被禁止的。

12.5.7 Prohibition of cells immersion into liquid such as water 禁止将电池浸入水等液体中

The cells shall never be soaked with liquids such as water, seawater, drinks such as soft drinks, juices, coffee or others.

电池不得被水、海水、软饮料、果汁、咖啡或其他饮料等液体浸泡。

12.5.8 Battery cells replacement 电池更换

The battery replacement shall be done only by either cells supplier or device supplier and never be done by the user.

电池更换只能由电池供应商或设备供应商进行，用户不得自行更换。

12.5.9 Prohibition of use of damaged cells 禁止使用受损电池

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.

电池在运输过程中可能会因震动而损坏。如果发现电池的任何异常特征，如电池的塑料外壳损坏、电池包装变形、电解质气味、电解质泄漏等，则不得再使用电池

The Cells with a smell of the electrolyte or a leakage shall be placed away from fire to avoid firing or explosion.

有电解液气味或泄漏的电池应放置在远离火源的地方，以避免起火或爆炸

12.5.10 Battery pack structure 电池组结构

Protection circuit shall be isolated from the cell considering the case electrolyte leakage occurred by mishap. Battery pack shall be designed not to allow running the leaked electrolyte to protection circuit as much as possible.

考虑到意外事故导致电解液泄漏的情况，保护电路应与电池隔离。电池组的设计应尽可能不允许泄漏的电解液流入保护电路。

Tolerance for electrolyte shall be considered when selection the battery case material.

在选择电池壳材料时，应考虑耐电解液性。

12.5.11 Protection circuit module design 保护电路模块设计

Electrolyte has corrosive characteristics. Protection circuit module may not work correctly if electrolyte attaches to it.

The follows should be considered for protection circuit module design

电解液具有腐蚀性。如果电解液附着在保护电路模块上，则保护电路模块可能无法正常工作。保护电路模块设计应考虑以下内容：

Main wiring patterns shall be away from each other as much as possible.

主印刷电路应尽可能地相互远离。

Conductive patterns and connection terminals that are possible to be short-circuited by electrolyte leakage should be away from each other as much as possible. (Another method is coating the whole surface of the module by resin.)

可能因电解液泄漏而短路的印刷电路和连接端子应尽可能远离彼此。（另一种方法是用树脂涂覆模块的整个表面。）

12.5.12 Marking 标记

The customer shall prepare the comprehensive explanation and appropriate markings for the end users.

客户应为终端用户准备全面的解释和适当的标记。

The battery packs will need its packing and handling (or safety) instructions in which cell usage, storage replacement or others in accordance with regulations, if any.

电池组需要其包装和搬运（或安全）说明，其中电池的使用、储存更换或其他符合规定的内容（如有）。

The prohibited items mentioned in this document, regulations in UL1642, and others shall be clearly explained to the users.

应向用户明确说明本文件、UL1642 中的规定和其他规定中提到的禁用项目。

The marking shall also be done, in which necessary items based on the marking guidelines of the rechargeable lithium ion batteries for maintaining safety of the cells.

还应进行标记，其中必要的项目应基于可充电锂离子电池的标记指南，以维护电池的安全。

12.5.13 Disposal instruction 处置说明

When the battery reaches the end of its useful life, the spent battery should be disposed by a qualified recycles or hazardous material hander. Do not mix this battery with the solid waste stream. Contact your Local Technologies Service Centre for recycling or disposal information.

当电池使用寿命结束时，应由合格的回收商或危险品搬运商处理废旧电池。请勿将此电池与固体废物流混合。有关回收或处置信息，请联系当地技术服务中心。

12.5.14 Prohibition short circuit between anode tab and pouch Al layer 禁止将阳极极耳和铝塑铝层之间短路

When designing the battery or system, any short circuit between the anode tab and the aluminum layer of pouch should be avoided, otherwise, the pouch corrosion, cell leakage and cell swelling problems will occur.

在设计电池组或系统时，应避免阳极极耳和铝塑铝层之间的任何短路，否则会出现铝塑腐蚀、电池泄漏和电池膨胀问题。