锂离子聚合物可充电电池

Rechargeable Polymer Lithium Ion Battery

产 品 规 格 书

PRODUCT SPECIFACATION

型号 **Model:** **PLN9059156(8000mAh)35C22.2V6S1P XT60**

客户名称 **Customer Name:** _____

客户代码 **Customer Code:** _____

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1、适应范围 Scope

本规格书适用公司生产的锂离子聚合物可充电电池，应用于航模等需要高倍率放电的产品。

This specification is applied to Lithium Ion Polymer Battery manufactured by applied to the model aircraft and other products which need high-rate discharge.

2、产品类型 Description and Model

2.1 产品名称 Cell description: 锂离子聚合物可充电电池 Rechargeable Polymer Lithium Ion Battery

2.2 型号规格 Model specification: PLN9059156(8000mAh)35C 22.2V 6S1P XT60

3、产品机械性能 Cell mechanical character

3.1 外观尺寸 Outer dimension

项目Item	高度Height	宽度Width	厚度Thickness
尺寸Dimension	≤169mm	≤61mm	≤52mm

3.2外观 Appearance

电池表面无破损、划痕、油污、漏液等缺陷。

Cell surface without damage,scratches,oil,leakage and other defects.

4、产品基本参数 Cell Basic Information

除另有规定外，正常测试在温度25±2℃及湿度≤85%RH 下进行：

Unless otherwise specified,the normal test at temperature of 25±2℃ and humidity≤85%RH:

序号 Numberr	项目Item	额定参数Rating	备注Note
1	容量 Capacity	标称容量Nominal Capacity:8000mAh 最小容量Minimum Capacity:8000mAh	标准充电Standard Charge 标准放电Standard Discharge
2	工作电压 Operating Voltage	22.2V	
3	充电限制电压 Charging Limit Voltage	25.2V	
4	充电截止电流 Charging Cut-off Current	80mA	
5	放电截止电压 Discharge Cut-off Voltage	18.0V	
6	标准充电 Standard Charge	0.5C(4000mA)	恒流充电至充电限制电压，然后恒压充电至截止电流 Constant current charge to limit voltage then constant voltage charge to the cut-off current
7	标准放电 Standard Discharge	0.5C(4000mA)	恒流放电至终止电压 Constant current discharge to the cut-off voltage
8	最大持续充电电流 Maximum charge Continue Current	2C(16A)	
9	最大持续放电电流 Maximum Discharge Continue Current	40A	XT60最大持续放电电流：40A XT60 Plug Maximum Discharge Continue Current:40A

10	最大瞬间放电电流 Maximum Discharge Peak Current	300A	≤3S
11	工作温度和湿度范围 Operating Temperature And Humidity	充电温度：0～45℃;充电湿度<85%RH Charging Temperature:0～45℃; Charging Humidity<85%RH	
		放电温度：-20～60℃;放电湿度<85%RH Discharging Temperature:-20～60℃; Discharging Humidity<85%RH	
12	储存温度和湿度范围 Storage Temperature And Humidity	储存温度：-20～35℃;储存湿度<85%RH Storage Temperature:-20～35℃; Storage Humidity<85%RH	储存和运输荷电量：40～60% 储存和运输电压：22.2V~23.4V
13	重量 Weight	约1040g About 1040g	不加铝片

5、电池性能Cell Performance

序号 Number	项目Item	标准Standard	测试方法Test Method
1	开路电压 Open Circuit Voltage	≥22.8V (单体间压差≤0.015V) (single differential pressure≤0.015V)	电压表，精度至少为±1%。50%荷电状态到货后 Voltmeter,accuracy is at least±1%.50%state of charge after arrival
2	交流内阻 AC Resistance	≤13mΩ	内阻测试仪，采用1kHz交流电。50%荷电状态到货后 Resistance tester,using 1kHz alternating current.50% state of charge after arrival
3	额定容量 Rated Capacity	≥8000mAh	电池标准充电后，静置10min,标准放电，可循环3次，当有一次放电时间达到120min,即可终止 After standard charge,rest for 10min,standard discharge, recycled three times,when there is a discharge time reaches 120min,can be terminated

4	高温放电 High Temperature Discharge	放电时间≥57min Discharge Time≥57min 外观：无明显变形、无破裂、不漏液 Appearance:No significant deformation,no rupture,no leakage	电池标准充电后，在(55±2)℃的条件下静置4小时，在此条件下以1C放电至18.0V,记录放电时间，在室温状态下静置2小时，检查电池外观 After standard charge,under the conditions(55±2)℃ still four hours,in this condition 1C discharge to 18.0V, recording the discharging time,rest for 2 hours at room temperature,check the battery appearance
5	低温放电 Low Temperature Discharge	放电时间≥210min Discharge Time≥210min 外观：无明显变形、无破裂、不漏液 Appearance:No significant deformation,no rupture,no leakage	标准充电后，在-20±2℃条件下贮存24h,然后用0.2C放电至16.5V,记录放电时间，静置2小时，检查电池外观 After standard charge,at the condition of-20±2℃ storage 24h,then 0.2C discharge to 16.5V,recording the discharging time,rest for 2 hours,check the battery appearance
6	循环寿命 Cycle Life	次数≥300次 Times≥300	电池标准充电后，静置10min,以1C放电至18V,搁置10min;重复以上步骤，直到放电容量是初始容量的80% After standard charge,rest for 10min,1C discharge to 18V,aside 10min;Repeat the above steps until the discharge capacity is 80%of the initial capacity

6、可靠性测试 Reliability Test

序号 Number	项目Item	标准Standard	测试方法Test Method
1	恒定湿热性能 Constant Heat And Humidity Performance	剩余容量≥初始容量*85% Remaining capacity≥85%of initial capacity 恢复容量≥初始容量*90% Recovery capacity≥90%of initial capacity	电池标准充电后，静置10min,标准放电18V。此容量为初始容量；之后电池标准充电，测量并记录电池的内阻和厚度，在环境(45±5)℃、相对湿度为90%~95%的条件下开路放置48h,然后在20±5℃条件下开路放置2h,测量内阻，目测外观；以1C放电至18V,记录剩余容量，之后以1C电流循环3

		厚度变化≤5% Thickness change≤5% 内阻变化≤20% Resistance change≤20% 外观：无明显变形、锈蚀、冒烟或破裂、不漏液、标识清楚 Appearance:No significant deformation,corrosion, smoke,or rupture,no leakage, clearly marked	次，测量电池的恢复容量 After standard charge,rest for 10 min,standard discharge to 18V.This capacity is the initial capacity; after standard charge,measure and record the battery's internal resistance and thickness,at the conditions of (45±5)℃ and humidity of 90%to 95%rest for 48h, then at the condition of 20±5℃ rest for 2h, measuring resistance,observe the appearance;1C discharge to 18V,recording the remaining capacity, then three cycles of 1C current,measuring recovery capacity
2	振动 Vibration	电压变化≤0.3V Voltage change≤0.3V 内阻变化≤20% Resistance change≤20% 外观：无明显变形、不漏液 Appearance:No significant deformation,no leakage	电池标准充电后，测量并记录电池的内阻和电压，10min内进行振动试验；频率为10~60Hz,振幅为1.6mm,扫频速率为1oct/min的扫频振动，在X、Y、Z三个方向分别扫频30分钟，结束后测量电池的内阻和电压，目测电池外观 After standard charge,measure and record the battery internal resistance and voltage,vibration test was performed within 10min;sweep vibration is 10～60Hz frequency,1.6mm amplitude and sweep rate of 1oct/min,sweeping in three directions of X,Y,Z for 30 minutes,after the end of the battery internal resistance and voltage measurements,observe the appearance
3	高温储存 High Temperature Storage	恢复容量≥初始容量*90% Recovery capacity≥90%of initial capacity 厚度变化≤10% Thickness change≤10% 内阻变化≤20% Resistance change≤20%	在55℃满电状态贮存7d,观察电池外观，不漏液 At 55℃ fullpower state storage 7d,observe the battery appearance,no leakage

7、贮存性能 Storage Performance

1	贮存性能 Storage Performance	恢复容量≥初始容量*90% Recovery capacity≥90%of initial capacity 厚度变化≤5% Thickness change≤5% 内阻变化≤20% Resistance change≤20%	电池标准充电后，静置10min,标准放电至18.0V。此容量为初始容量；之后以1C给电池充入约50%的容量，测量并记录电池的内阻和厚度，然后在环境然后在环境温度（20±5)℃、相对湿度45%~85%的环境中贮存365d 后 ，以0.2C电流循环3次，测量电池的恢复容量；测量电池的内阻和厚度 After standard charge,rest for 10 min,standard discharge to 18.0V.This capacity is the initial capacity;then 1C charge to about 50%of capacity,measure and record the battery's internal resistance and thickness,and then at ambient temperature in the environment(20±5)℃,relative humidity of 45%to 85%after storage environments 365d,to 0.2C current cycle three times to restore the battery capacity measuring;measure battery internal resistance and thickness

8、保质期 Period of Warranty

保质期为出厂后12个月内(所有上述电池性能标准均应在收货后一个月内进行测试检验)。

The period of warranty is 12 months from the date of shipment(All of the above battery performance standards should be tested within one month after receiving).

9、产品责任书 Product Liability

您必须严格遵守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造成的任何意外事故，公司不负担任何责任。 You must strictly comply specifications and annotation of documents when

use the battery,since misuse can cause the battery to overheat,fire or explosion,any accident caused by the operation of not following the specifications, does not be responsible for any

responsibility.

10、使用注意事项 Handling Instructions

危险！Danger!

充电时请使用指定的充电器并按照说明书的要求进行充电。

Please use the specified charger charging and charging in accordance with the requirements of the specification.

仅在指定的设备上使用电池。

Use the battery only in the specified device.

不要把电池加热或投进火中。

Do not heat the battery or thrown into the fire.

- 不要在火源附近或温度超过60℃的轿车中使用或遗留电池，也不要在这些环境中进行充放电。

Do not use or leave the battery near fire or cars that temperature exceeds 60℃,and do not charge and discharge in these environments.

不要把电池投入水中，也不要弄湿。

Do not put the battery into the water,and do not wet the battery.

- 不要把电池与项链、发夹、硬币或螺钉等金属品一起放在兜中或包中，也不要把电池同上述物品一起储存。
- Do not put the battery with necklaces,hairpins,coins,screws and other metal items together in pocket or bag,do not storage the battery together with these items.

不要使用金属导体短路电池的正负极。

Do not short-circuit the battery positive and negative with metal conductor.

在装入设备时注意电池的正负极不要反装。

Do not reversed positive and negative of battery when you load the device.

不要使用锐利的物品刺穿电池。

Do not pierce battery with sharp objects.

不要对电池进行拆解。

Do not disassemble the battery.

不要直接对电池进行焊接。

Do not weld the battery directly.

不要使用带有严重伤痕或变形的电池。

Do not use a battery with serious scar or deformation.

- 在使用之前请详细阅读操作说明书，不适当的操作可能引起电池变热、着火、爆炸、毁坏或电池容量的衰减。

Please read the operating instructions before using,improper operation may cause the battery to become hot,fire, explosion,damage or battery capacity decay.

警告！Warning!

不要把电池放加热器皿、洗衣机或高压容器中。

Do not put the battery in hot utensils,washer or high-pressure container.

- 不要把电池同干电池或其它原电池一起使用，也不要同不同包装、不同型号或不同品牌的电池一起使用。

Do not use the battery with the dry battery or other primary battery,and do not use the battery with the battery of different packaging,different models or different brands.

如果在规定的充电时间内充电没有结束，停止充电。

If the charge within the specified charging time is not over,should stop charging

- 在使用、充电或储存期间如发现电池变热、散发气味、变色、变形或其它反常之处停止使用。

Stop using when using,charging or storing the batteries become hot,emitting odor,discoloration,deformation,or other unusual performance.

当发现电池漏液或散发出难闻的气味时立即远离。

Go away immediately when the battery is leakage or emit unpleasant odors.

如果电解液渗漏到你的皮肤或衣服上，立刻用清水清洗。

If the electrolyte leaks onto your skin or clothing,wash with water immediately.

> 如果电解液渗出并进入你的眼睛里，不要揉擦你的眼睛，立刻用干净的水清洗并去看医生。

If electrolyte leakage and into your eyes,do not rub your eyes,wash with clean water and see your doctor immediately.

注意！Attention!

把电池放到小孩够不到的地方以免吞服。

Put the batteries out of the reach of children to prevent swallowing.

小孩使用电池时，监护人应详细解释操作方法。

When children using the battery,the guardian should explain the operation method in detail.

在使用电池之前，应详细阅读操作指南并对使用中的注意事项有足够深刻的理解。

Before using the battery,we should carefully read the instructions and have sufficient understanding of matters.

在对电池充电之前仔细阅读操作指导指南。

Read the instructions guide carefully before charging the battery.

在将电池装入设备或从设备中取出之前详细阅读设备操作手册。

Read the operation manual in detail before inserting a battery in the device or removed from the device.

> 电池具有使用寿命，如果使用电池的设备的工作时间比平常少的多，要对电池进行更新。

Battery has service life,if operating time of device with battery you are using is much less than usual,the battery should be updated.

电池寿命终止后要立刻从设备中取出。

Remove battery immediately from the equipment after the termination of battery life.

当长期不用时，需将电池从设备中取出并放在低温低湿的环境中保存。

>When not used for long,remove the battery from the device and put a low temperature and low humidity environment for preservation

电池应在远离静电的场所进行充电、使用和储存。

The battery should be charged,used and stored far from the electrostatic place.

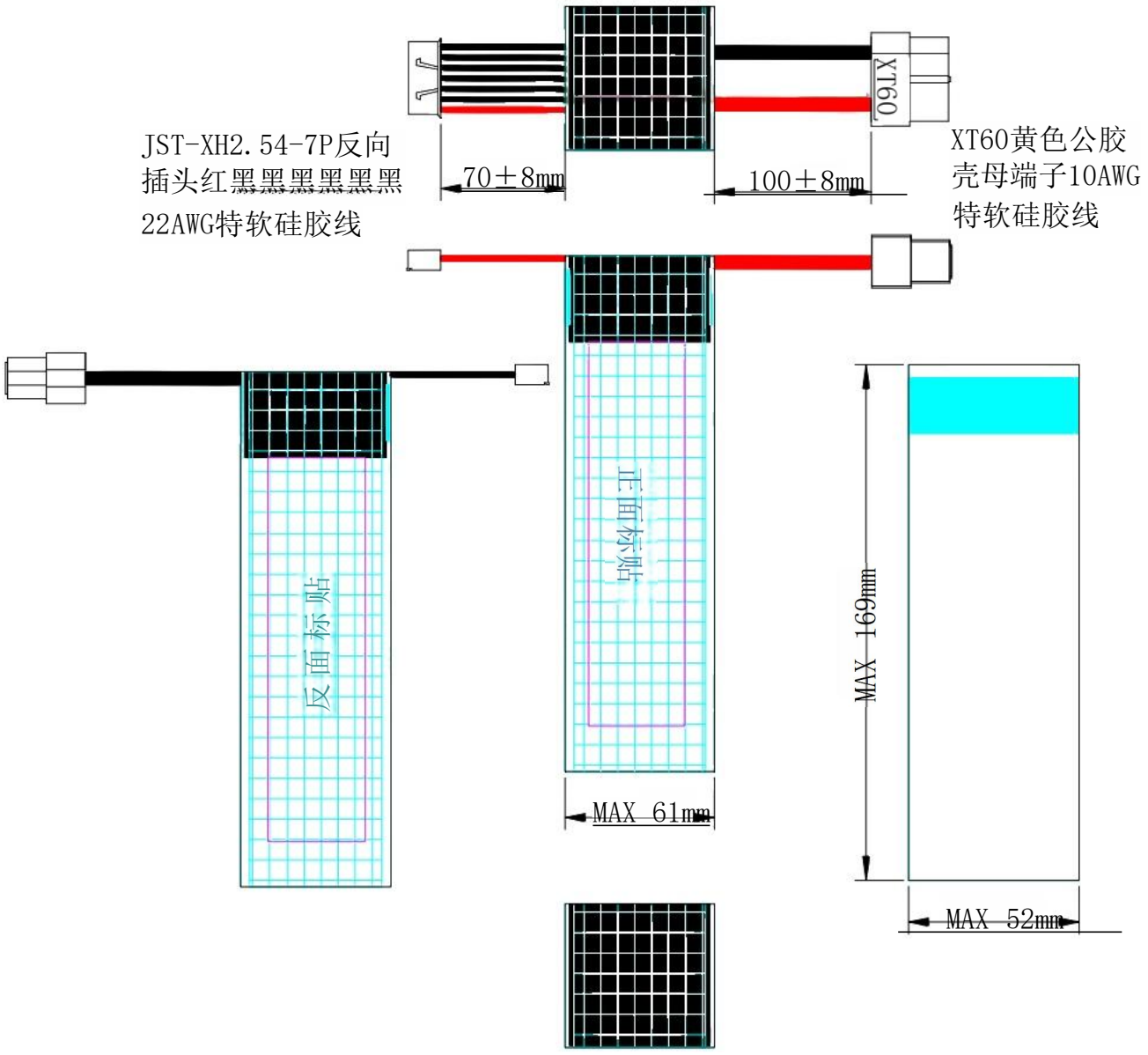
如果电池的接线端变脏，在使用之前用干布擦净。

If the battery terminals become dirty,wipe with a dry cloth before using.

电池在使用时的温度不能超出上面的要求。

When using the battery,temperature cannot exceed the above requirements.

附件一：电池尺寸图Appendix 1:Battery Dimensions Figure



T(厚度) Thickness	≤52	W（宽度） Width	≤61	H(高度) Height	≤169
备注： Remarks:				单位 UNIT	mm