

POWER-XTRA

Model : Power-Xtra 3.7V Li-ion 14500 AA 800 Mah Rechargeable Battery(PCM/2.0A) Ver: A1 NO:900.600.503.251

Model : ICR14500

Stock Code : 900.600.503.251

Cell Configuration: 1P1S

Nominal Voltage: 3.7V

Nominal Capacity: 800mAh

Draft 起草	Checking 审核	Approved 批准	Customer Confirmation 客户确认
Peter	Chun Qi Zeng		

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Revision History 版本记录

Revision 版本	Date 日期	Editor 更改人	Contents 内容
A0	2017-10-23	Peter	Draft
A1	2017-11-17	Peter	增加客户 code

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1. Application 应用

2. Basic Information

Description 描述:	Rechargeable Lithium ion battery pack 充锂离子电池
Cell Type 电芯:	ICR14500
PCM 保护板:	PX-PCM, 2A
Chemistry 化学成份:	Lithium ion 锂离子
Cell configuration 电芯配置:	1P 1S 一并一串
Voltage Nominal 标称电压:	3.8V
Capacity Nominal 标称容量:	800mAh (0.2C discharge to cut-off voltage 25°C 0.2C 放电到截止电压 25°C)
Rated Capacity 额定容量:	780mAh (0.2C discharge to cut-off voltage 25°C 0.2C 放电到截止电压 25°C)
Protection 保护:	A. Over Charge Protection 过充保护 B. Over Discharge Protection 过放保护 C. Over Current Protection 过流保护 D. Short Protection 短路保护

3. Electrical Characters 电气特性

Charging Method 充电方式	CC-CV 恒流恒压
Charging Voltage 充电电压	4.20±0.03V
Over Charging Protect 过充保护	4.25±0.05V
Standard Charging Current 标准充电电流	160mA(0.2C)
Max. Charging Current 最大充电电流	0.8A
Cut-off Charging Current 充电结束电流	16mA (0.02C)
Standard Discharging Current 标准放电电流	160mA (0.2C)
Max. Discharging Current 最大放电电流	2.0A
Discharging cut-off Voltage 放电结束电压	2.75V
Over Discharging Protect 过放保护	2.40V±0.10V
Internal Resistance 内阻	<200mOhm
Standard Charge Temperature 标准充电工作温度	0~45°C
Standard Discharge Temperature 标准放电工作温度	-20~60°C
Storage Humidity 存储湿度	65%RH not condensed (无凝结)
Weight 重量	About 20 g

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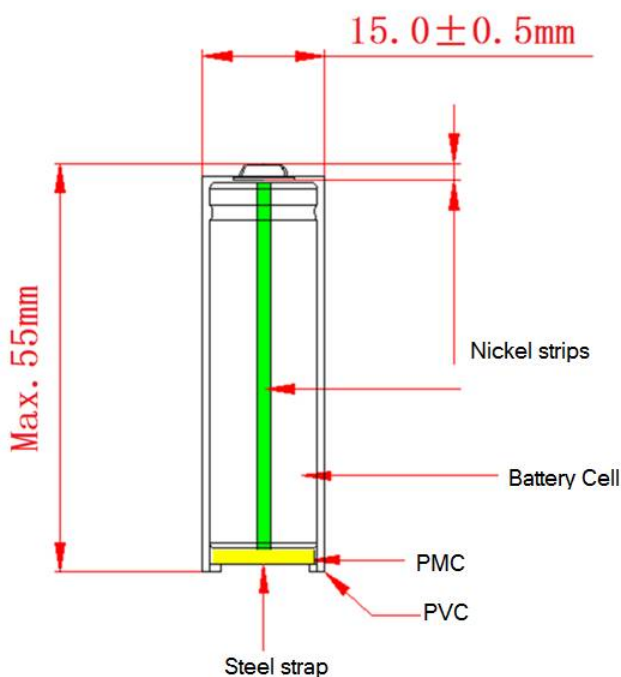
Model : Power-Xtra 3.7V Li-ion 14500 AA 800 Mah Rechargeable Battery(PCM/2.0A) Ver: A1 NO:900.600.503.251

4. Reliability Test Requirements 可靠性测试要求

Humidity Test 湿度测试	+60°C 85%RH for 24Hours
High Temperature Test 高温测试	+85°C 1000Hours
Low Temperature Test 低温测试	-25°C 1000Hours

5. Mechanical Drawings 结构图

5.1. Drawing of Outline 外框图



单位:mm

5.2. Drawing of Label 标签图

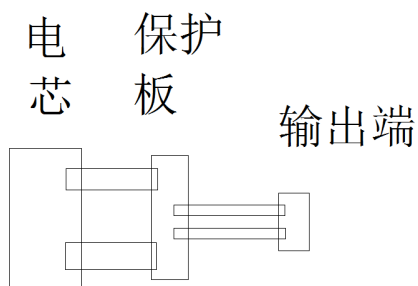
蓝色 PVC。印字方式：丝印，日期随生产日期更改（日期可喷码）YY为年，MM为月，如 1612（2016年12月）印字内容如下：



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6. Block Diagram 框图



7. Pack 包装

卡纸飞机盒包装（原来料包装），每箱不超 10KG。每箱注明型号数量。贴侧唛；客户定制 Logo 外箱；外箱 Logo 内容格式如下：

POWER-XTRA

侧唛：

条形码格式为：GS1(EAN.UCC)/ENA-13 Bar code，侧唛分别贴于纸箱两侧（尺寸视纸箱尺寸更改），内容及格式如下：

PO NO.	Order	← 根据每次订单更改
MODEL NO.	900.600.503.251	
QTY	500PCS	← 根据每箱数量更改
DATE	YYYY-MM-DD	← 根据出货日期更改
Made in China		
 8 680187 004255		

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8. Test Requirements 测试要求

轻微缺陷(Mi) AQL = 1.5; 重要缺陷 (Ma) AQL = 0.5; 致命缺陷(Cr)及全检项 Ac = 0;

除非报价和订单有指定品质等级, 否则默认按 II 级 (Class II) 生产出货。Test according to Quality Class II as default.

Test Items		Rang	Defect Class	Test Quantity 测试数量		
				Quality Class I	Quality Class II	Quality Class III
Mechanical 结构	Length 长度	<55.0mm	Ma	AQL(S-1)	AQL(II)	Full 全检
	Width 宽度	<15.5mm	Mi	AQL(S-1)	AQL(II)	Full 全检
Basic Function 基本功能	Charging 充电功能	OK / NG	Ma	Full 全检	Full 全检	Full 全检
	Discharging 放电功能	OK / NG	Ma	Full 全检	Full 全检	Full 全检
	Over Current 过电流	4~6A	Cr	Full 全检	Full 全检	Full 全检
	Internal Resistance 内阻	≤180m ohm	Ma	Full 全检	Full 全检	Full 全检
	Short Circuit 短路保护	Recoverable (OK / NG)	Cr	Full 全检	Full 全检	Full 全检
	Load Voltag (Load≥1mA)	±0.1V	Ma	Full 全检	Full 全检	Full 全检
Performance Test 性能测试	Capacity 容量	≥780mAh	Ma	AQL(S-1)	AQL(II)	Full 全检
	Over Charge Voltage	4.25±0.05V	Cr	AQL(S-1)	AQL(II)	Full 全检
	Over Discharge Voltage	2.40±0.10V	Ma	AQL(S-1)	AQL(II)	Full 全检
	Welding Test	≥15N	Ma	1pcs/1 machine	1pcs / 4hours * 1machine	1pcs / 2hours * 1machine
Additional Test 附加测试	Cont. Short Test (5 times)	OK / NG	Ma	1pcs-1‰	3pcs-1‰	3pcs-1‰
	Fully Charge Test	4.20±0.05V	Ma	AQL(S-1)	Full 全检	Full 全检
	PCM resistance Test	>1M ohm	Ma	AQL(S-1)	AQL(II)	Full 全检
	PCM High Voltage Test	OK / NG	Ma	1pcs-1‰	3pcs-1‰	3pcs-1‰

7. Caution and prohibition 注意事项

Before using and handling the pack, see carefully attached “Handling Instruction for Rechargeable Lithium ion battery Pack”.

For safety reasons rechargeable batteries are shipped in a low remaining capacity state. Charge before using. New pack is the initialized. If used without full charge and discharge for long time, the accuracy loss occurred. Recover such packs to original performance through repeating Several cycles of full charging and discharging

8. Warranty 保修

Manufacturer will be responsible for replacing the battery pack against defects or poor workmanship for 12 months from the date of shipping. Any other problem caused by malfunction of the equipment or misuse of the battery is battery is not covered under this warranty.

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9. Handling Instruction Guide for Li-ion Battery(Polymer) Pack 使用指导

11.1. General

Battery packs supplied by Power-Xtra has to be handle carefully according to the specification. Here are some more to be followed.

11.2. Storage of pack

The packs are requested to be stored under the following conditions:

- a. Indoor storage in a cool circumstances without direct sun light on the packs or cartons.
- b. Store batteries in a dry location with low humidity, and a temperature range of - 20°C to +30°C. In case of the long term storage
 - a. As long-term storage can accelerate battery self-discharge and lead to the deactivation of the batteries. To minimize the deactivation effect, store battery packs in a temperature range of +10°C to +30°C.
 - b. When charging for the first time after long-term storage, deactivation of the packs may have led to decreased capacity. Recover such packs to original performance through repeating several cycles of full charging and discharging.
 - c. When store packs for more than 6 month, charge at least once charring require per 6 months to prevent leakage and deterioration in performance due to self-discharging.

11.3. Charging pack

- a. Use suitable charger with the specified voltage and current. We strongly recommend Power-Xtra smart battery charger. We can recommend the usage or specification of the charger manufacturing. If you want to get the information about it, please contact us.
- b. Never attempt reverse charging. Charring with polarity reversed can cause a reversal in battery polarity, causing gas pressure inside of the battery to rise, which can be lead to leakage of the batteries in the pack.
- c. Avoid overcharging. Repeated overcharging can be lead to deterioration in pack performance. And Over-heat occurred.
- d. Charging efficiency drops at temperatures above 40°C.

11.4. Protection from unexpected damaged to pack

- a. (+) and/or (-) terminals must not be connected in metal wire, necklace, chains.
- b. Do not drop packs from height in order to prevent them from possible malfunction or damage.
- c. Do not twist or bend packs in order to prevent possible damage.

11.5. For Safety

- a. Do not disassemble packs.
- b. Do not use pack when something abnormal found such as smells, deformation, discoloration, and so on.
- c. Do not re-use Li-ion cells or other parts after removing from the packs.
- d. When the electrolyte leakage occurs, do not touch the liquid.
- e. Once watered, packs may have potential malfunctions. Do not use those packs.
- f. Do not have packs in the hot-temperature (60°C or more).
- g. Do not put packs into fire.
- h. Do not crush/nail pack.
- i. Do not apply solder directly to packs.