

# POWER-XTRA

Model : Power-Xtra 1.2V Ni-Cd AA 600 Mah Rechargeable Battery (Flat Head)

Ver: A8

NO:900.600.503.013

## Product Specification

Name: Ni-Cd Battery

Model: Ni-Cd AA600mAh 1.2V

Application: \_\_\_\_\_

Author: Zhenfeng Huang

Review: Peter

Approval: Sam

Date: 2017/08/01

Item	Signature	Date
Customer Signature		

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## Revision History

Revision	Date	Editor	Contents
A0	2017-08-01	Peter	Draft
A3	2017-10-30	Penny	修改包装条形码
A4	2017-11-20	Abby	增加面垫-白色
A5	2017-11-30	Penny	修改抬头
A6	2018-01-10	Peter	增加包装防潮袋
A7	2018-01-23	Peter	更改内包装及增加标签描述
A8	2018-03-02	Dora	增加内盒标签

## Reference Picture



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## 1、 APPLICATION

Model : Ni-CdAA600mAh1.2V

Cell Size: AA ( $\phi 14.5^{-1.0} \times 49.0^{-1.5}$ )

## 2、 DATA OF STACK UP BATTERIES

All data involves voltage and weight to stack-up battery are equal to the value of unit cell times the number of unit cell which consisted in the stack-up batteries

Example:

Stack-up battery consisting three unit cells

Nominal voltage of unit cell=1.2V

Nominal voltage of stack-up batteries=1.2V $\times$ 3=3.6V

## 3、 RATINGS

Description	Unit	Specification	Conditions	
Nominal Voltage	V	1.2	Unit cell	
Nominal Capacity	mAh	600	Standard Charge/Discharge	
Standard Charge	mA	60(0.1C)	Ambient Temperature: Ta= 20 $\pm$ 5 $^{\circ}$ C	
	Hour	16		
Trickle Charge		(0.03C)~(0.05C)	Ta = 0~45 $^{\circ}$ C	
Standard discharge	mA	120(0.2C)	Ambient Temperature: Ta = 20 $\pm$ 5 $^{\circ}$ C Humidity: Max : 85%	
DischargeCut-off Voltage	V	1.0		
Operating temperature range	$^{\circ}$ C	0~45 $^{\circ}$ C	Humidity: Max : 85%	
Storage Temperature	$^{\circ}$ C	-20~35 $^{\circ}$ C	一年	Fully charged state、 Humidity、 Max.60%
		0~60 $^{\circ}$ C	一周	Fully charged state、 Humidity、 Max.80%
Typical Weight	g	Approx.17.0		

## 4、 PERFORMANCE

Unless otherwise stated, tests should be done within one month of delivery under the following conditions:/

Ambient Temperature, T: 20 $\pm$ 5 $^{\circ}$ C

Relative Humidity: 65 $\pm$ 20%

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Test	Unit	Specification	Other Condition	Remarks
Capacity	mAh	600	Standard Charge Discharge	up to 3 cycles are allowed
Open Circuit Voltage(OCV)	V	≥1.25	Within 1 hour after standardCharge	
Internallmpedance	m Ω/ Cell	≤40	Upon fully charge(1KHz)/	
High Rate Discharge(1.0C)	minute	≥48	Standard Charge, 1 hour rest Before Discharge by 1.0C to 1.0 V	up to 3 cycles are allowed
Overcharge		Noleakagenor explosion	0.1CCharge14 days	
Charge Retention	mAh	≥390(65%)	Standard Charge, Storage: 7 day rest at 45Ambient Temperature, Standard Discharge	
IEC Cycle Life	Cycle	≥500	IEC61951-1(2003)7.4.1.1	(see Note )
Leakage Test		No leakage nor deformation	Fully charged at 0.5C for 2.5 hour stand for 14 days. 0.5C	
Security Test		No explosion, but leakage or deformation is allowed	Charge the cell 0.1C 16hrs, Then ≤100 mΩ Impedance short circuit for 1hour	Ambient Temperature/: T=20±5°C
Impact Resistance		Change of voltage should be under 0.02V/ Cell Change of impedance should be under 5 mΩ/ Cell	Charge the cell 0.1C 16hrs Then leave for 1~4hrs, check battery before/after dropped, Height 50cm Wooden board (thickness 30mm) Direction not specified, 3 times.	Ambient Temperature: T=20±5°C

Vibration Resistance		Change of voltage should be under 0.02V/cell, Change of impedance should be under 5 milliohm	Charge the battery 0.1C 16hrs, then leave for 24hrs, check Battery before/after vibration, Amplitude 1.5mm Vibration 3000CPM, Any direction for 60mins.	Ambient Temperature/: T=20±5°C
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## 5、 CONFIGURATION, DIMENSIONS AND PACKINGS

Please refer to the attached drawing.

## 6、 EXTERNAL APPEARANCE

The cell/battery shall be free from cracks, scars, breakage, rust, discoloration, leakage nor deformation.

## 7、 CAUTION

- 1) Reverse charging is not acceptable.
- 2) Charge before use. The cells/batteries are delivered in an uncharged state
- 3) Do not charge/discharge with more than our specified current
- 4) Do not short circuit the cell/battery Permanent damage to the cell/battery may result.
- 5) Do not incinerate or mutilate the cell/battery.
- 6) Do not solder directly to the cell/battery.
- 7) The life expectancy may be reduced if the cell/battery is subjected adverse conditions like: extreme temperature, deep

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cycling, excessive overcharge/ over-discharge.

- 8) Store the cell/battery uncharged in a cool dry place. Always discharge batteries before bulk storage or shipment; .

## Notes:

- 1) Ambient Temperature.
- 2) Approximate charge time from discharged state is for reference only.
- 3) We recommend cells or batteries are charged and discharged at least once every 6 months.
- 4) IEC61951-1(2003)7.4.1.1 Cycle Life:

Cycle No./	Charge	Rest	Discharge
1	0.1C×16h	None	0.25C×2h20min
2-48	0.25C×3h10min	None	0.25C×2h20min
49	0.25C×3h10min	None	0.25C to 1.0V/ cell
50	0.1C×16h	1-4h	0.2C to 1.0V/ cell
Cycles 1 to 50 shall be repeated until the discharge duration on any 50th Cycle becomes less than 3 h.			

## 8、 Other/

- 1) The information ( subject to change without prior notice ) contained in this document is for reference only and should not be used as a basis for product guarantee or warranty.
- 2) Manufacturer reserves the right to alter or amend the design, model and specification without prior notice.

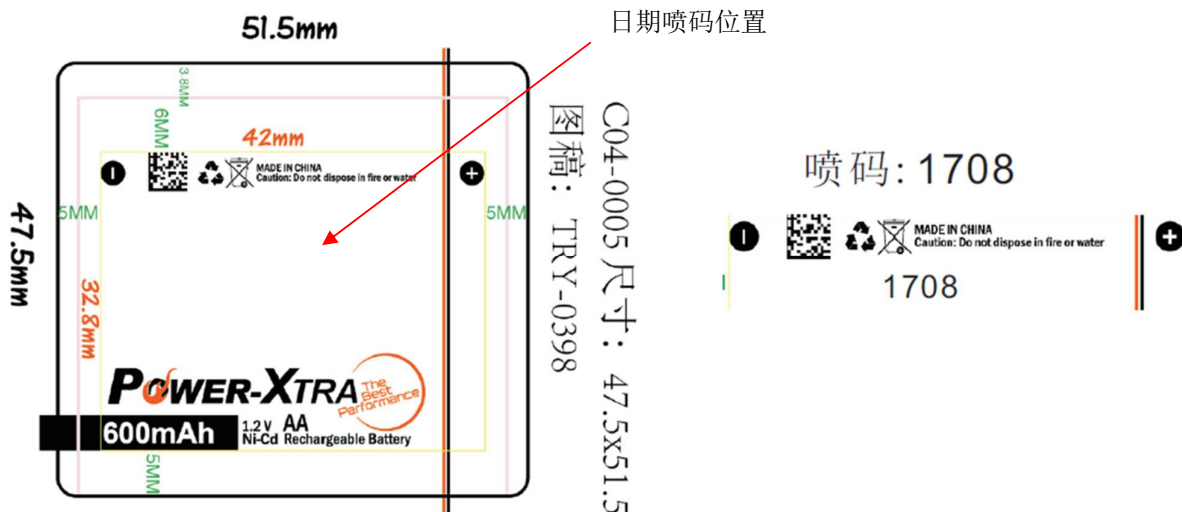
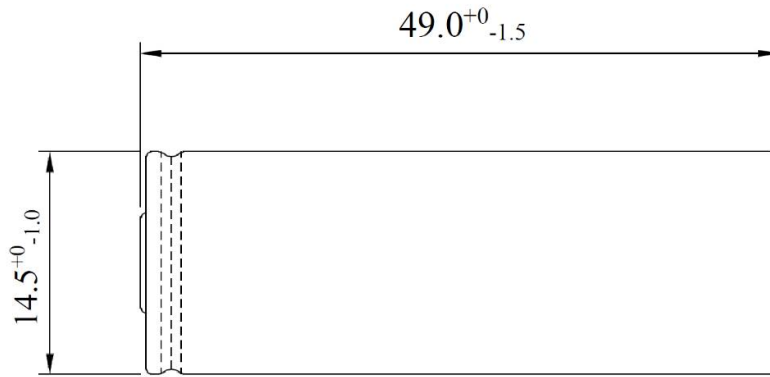
Attached Drawing /附图

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铝膜卷标, GS1(EAN.UCC)/EAN-13 Bar code条形码, 内容为“8680187000592”。日期按出货月份更改。年份在前, 月份在后(年月), 如: 1708(2017年08月)。

NO	NAME	SIZE	QTY	NOTE		
1	CELLS	AA600MAH	1	NICD		
2	PVC	47.5*51.5*0.07MM	1		MODEL	
3	SURFACMAT	AA (φ13mm)	1	WHITE		
					DESIGN BY	
					CHECKER	
					VERSION	

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## Drawing Packing 包装图

卡纸单独隔开装内盒,内盒侧面贴标签, 标签标示数量按实际装盒数量填写更改; 标签内容格式及位置如下:



标签位置示意图,  
统一贴于纸盒左侧面

每箱不超 20KG, 内置防潮袋, 贴侧唛: 客户定制 Logo 外箱: 外箱 Logo 内容格式如下:

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侧唛:

条形码格式为: GS1(EAN.UCC)/ENA-13Bar 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 18-1
MODEL NO.	900.600.503.013
QTY	500PCS
DATE	YYYY-MM-DD
Made in China	
	
8 680187 000592	

← 根据每次订单更改

← 根据每箱数量更改

← 根据出货日期更改