

ALKALINE ZINC-MANGANESE DIOXIDE

MERCURY-FREE BUTTON CELL

(SAFETY STRUCTURE)

碱性锌-二氧化锰无汞扣式电池
(安全结构)

LR44 0.0%Hg-SS



TECHNICAL SPECIFICATION

技术规格书

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The manufacturer reserves the right to modify product specification herein without prior notice.

本公司对本产品技术规格如有更改, 恕不另行通知。

產品特性：

本發明專利產品 LR44 電池.有特別設計的安全結構,能承受很大的內壓力.如電池出現過放電或短路等原因導致嚴重氣脹時. 正極外殼能緊緊包實負極蓋,而不會使負極蓋爆開飛脫.正極殼封口處,還會裂開一條排氣縫.將氣體排洩,達到安全防爆的效果. 防漏液效果也比常規的鈕扣電池更好.

Product Characteristic:

This exclusive LR44 Battery registered with China Inventive Patent, it is comes with safe structure which can suffering from big internal pressure, if any over-discharge or short circuit may occur, the cell's Anode Can is well-sealed with the cap and gasket in secure ,the -ve cap should not be blasted out, just appears a Crack near the +ve R-creeping weak zone, per long time of observation, its leak proof and explosion proof features are better than the regular model.

1 Scope 適用範圍

This specification is applicable to New Leader' s alkaline zinc-manganese dioxide mercury-free

button cell : LR44 (safety structure)

本规格书适用于新利达碱性锌-二氧化锰无汞扣式电池：LR44 (安全结构)

2 Designations 型号

NEW LEADER 新利达	IEC	ANSI	JIS	OTHERS 其他
0.%Hg NL - LR44	LR44	1166A	A13	AG13, A76, L1154

3 Normative references 规范性引用文件

GB/T 8897.1—2013 原电池 第 1 部分：总则 (IEC 60086-1:2011, MOD)

GB/T 8897.2—2013 原电池 第 2 部分：外形尺寸和电性能要求 (IEC 60086-2:2011, MOD)

GB/T 8897.3—2013 原电池 第 3 部分：手表电池 (IEC 60086-3:2011, MOD)

GB 8897.5—2013 原电池 第 5 部分：水溶液电解质电池的安全要求 (IEC 60086-5:2011, IDT)

4 Chemical System 化学体系

Zinc-Manganese Dioxide (Potassium Hydroxide Electrolyte)

锌-二氧化锰 (氢氧化钾电解液)

5 Nominal Voltage 标称电压

1.5 V

6 Average Weight 平均重量

2.00 g

7 Typical Capacity 典型容量

170 mAh

Condition: Rated at 6.8K Ω at (20 $\pm$ 2) $^{\circ}$ C, continuous discharge to end-point voltage 0.9V.

条件：在(21 $\pm$ 2) $^{\circ}$ C环境下，使用 6.8K Ω 电阻连续放电至终止电压 0.9V。

8 Electrical Characteristics 电性能

Item 项目	Resistance 电阻	Fresh Battery (Within 30 days after delivery) 新电池 (交货后 30 天内)	After 12 months 贮存 12 个月后	Test Conditions 检测条件
Off-load Voltage 空载电压	—	1.55V ~ 1.65V	1.52V ~ 1.59V	Temp. 温度：(20 $\pm$ 2) $^{\circ}$ C RH 相对湿度：(55 $\pm$ 20)%
On-load Voltage 负载电压	34 Ω (2 秒内讀數)	$\geq$ 1.40V	$\geq$ 1.38V	Temp. 温度：(20 $\pm$ 2) $^{\circ}$ C RH 相对湿度：(55 $\pm$ 20)%

9 Discharge Performance 放电性能

Discharge Conditions 放電條件				Minimum Average Duration 最小平均放電時間 (MAD)	
Resistance 電阻	Discharge Schedule 放電計畫	End-point Voltage 終止電壓	Environmental Conditions 環境條件	Fresh Battery 新電池	After 12 Months 贮存 12 個月後
6.8 K Ω	Continuous 連續	0.9 V	Temp. 温度：(20 $\pm$ 2) $^{\circ}$ C RH 相對濕度：(55 $\pm$ 20)%	750 h 小時	680 h 小時

10 Safety Characteristics 安全性能

Test Item 测试项目	Condition 条件	Period 时间	Criteria 要 求	Acceptance Standard 验收标准
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External Short Circuit 外部短路	25±5℃下, 將 1 組 3 或 4 粒電池串聯直接短路 Under 25±5℃, dead short 3 or 4 pcs of LR44 batteries Per set in serial.	72-168 小时 72- 168 Hrs	每隔15天觀察一次, 直至60天後亦不會出現爆蓋, 只是汽脹令電池正極殼近封口位置出現一裂縫, 將內壓洩出, 達到安全效果。 Inspect any explosion may occur by every 15 days , until 60 days .	N=9 sets Ac=0 Re=1
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11 Marking 標識

The following marking will be printed, stamped or impressed on the body of the battery:

在电池上标明以下内容：

(1) Designation 型号：LR44

(2) Polarity marking 极性标记：“+” Marked on cathode can 正极外壳标注“+”。

(3) Manufacturer's trade mark 制造商商标：



(4) Mercury-free marking 无汞标识：0.0% Hg CELL

12. Storage and Dispose 貯存和棄置

12.1 Storage Environment 儲存環境

Batteries shall be stored in well-ventilated, dry and cool conditions. For normal storage, the temperature should be between 10°C and 25°C and should never exceed 30°C, the relative humidity should be at (55±20)%. High temperature or high humidity may cause deterioration of the battery performance or surface corrosion.

電池應貯存在通風良好、陰涼乾燥處。正常的貯存溫度應在 10°C ~ 25°C，不應當超過 30°C，相

對濕度應在(55±20)%。高溫或高濕可能會損害電池性能或造成電池表面腐蝕。

12.2 Use and Disposal 使用和處置

(1) Always insert batteries correctly with regard to the polarities (+ and -) marked on the battery and the equipment. Batteries which are incorrectly placed into equipment may be short-circuited, or charged. This can result in a rapid temperature rise causing leakage, explosion and may cause personal injury.

应按电池和电器具上标明的极性标志（+ 和 -）正确地装入电池。不正确装入电器具的

电池有可能被短路或充电，使电池温度迅速升高，导致漏液、爆炸和人身伤害。

- (2) Batteries should not be short-circuited, heated and thrown into fire.

不要将电池短路、加热及投入火中。

- (3) Do not charge batteries. Attempting to charge a non-rechargeable battery may cause internal gas and/or heat generation resulting in leakage, explosion and may cause personal injury.

不要对电池进行充电。试图对不可充电的电池充电会使电池内部产生气体和/或热量，导致电池漏液、爆炸和人身伤害。

- (4) Do not mix old and new batteries or batteries of different types or brands. When replacing batteries, replace all of them at the same time with new batteries of the same brand and type. When batteries of different brand or type are used together, or new and old batteries are used together, some batteries may be over-discharged due to a difference of voltage or capacity. This can result in leakage, explosion and may cause personal injury.

不要将新旧、不同型号或品牌的电池混用。更换电池时，要用同一品牌、同一型号的新电池同时更换全部电池。不同品牌或不同型号的电池或新旧电池混用时，由于存在电压或容量的差异，可能会使某些电池过放电，从而导致电池漏液、爆炸和人身伤害。

- (5) Exhausted batteries should be immediately removed from equipment and properly disposed of. When discharged batteries are kept in the equipment for a long time, electrolyte leakage may occur causing damage to the appliance and/or personal injury.

应立即从电器具中取出已耗尽电能的电池并妥善处理。放过电的电池长时间留在电器具中有可能发生电解液泄漏，导致电器具损坏和/或人身伤害。

- (6) Do not weld or solder directly to batteries. The heat from welding or soldering directly to a battery may cause internal short-circuiting resulting in leakage, explosion and may cause personal injury.

不要直接焊接电池。当直接焊接电池时，电池有可能因受热而损坏，导致内部短路并引起漏液和爆炸，可能导致人身伤害。

- (7) Do not dismantle batteries. When a battery is dismantled or taken apart, contact with the components can be harmful and may cause personal injury.

不要拆解电池。拆解电池，接触电池内部的部件是有害的，可能导致人身伤害。

- (8) Store unused batteries in their original packaging away from metal objects. If already unpacked, do not mix or jumble batteries to avoid them short-circuiting with each other.

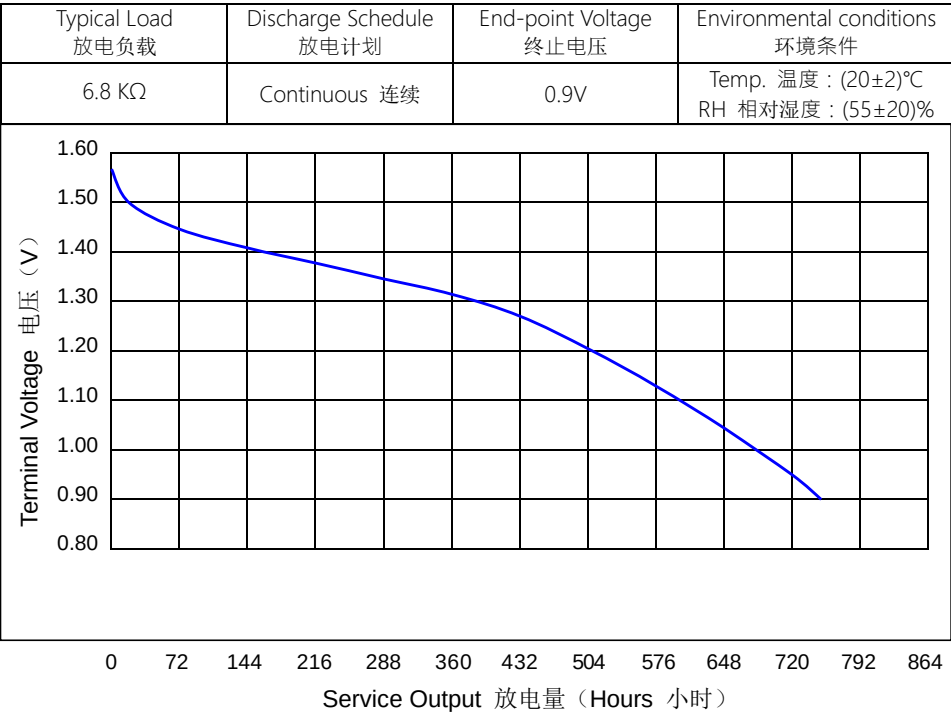
将不用的电池放在原包装内，远离易引起短路的金属物体。如果包装已经拆掉，不要把
电池混堆在一起，以免电池相互短路。

- (9) Keep batteries out of the reach of children to prevent swallow. In case of ingestion of a cell or a battery, the person involved should seek medical assistance promptly.
电池应存放在儿童拿不到的地方，以免儿童误吞电池。万一误吞电池应马上就医。

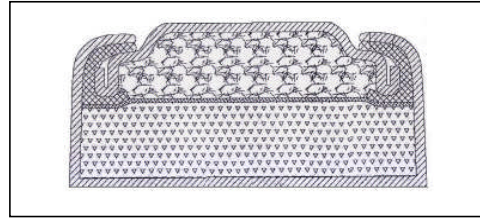
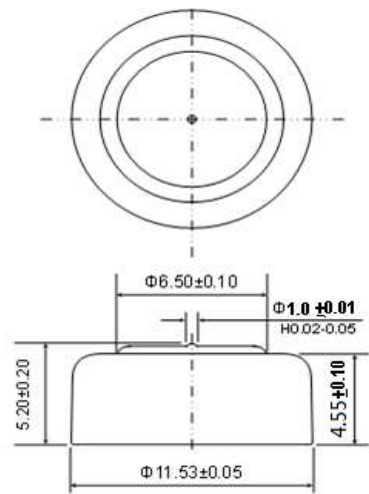
13 Storage Life 储存期

12 Months / 12 個月.

14 Typical Discharge Characteristics 典型放电特征



15 Dimensions & Structure 尺寸及結構



China Inventive Patent No.

中国发明专利号:

201310711992.4

16 Packing condition 包装数据

100 pieces per blister tray.

每个吸塑盘 100 只。

25 trays / 5,000 pieces per bundle.

每捆 25 盘 / 2,500 只

4 bundles per carton

每箱 4 捆。

Total 10K pieces per carton

每箱 10,000 只

Measurement 尺寸 29.5 X 20 X 30.5 CM

G.W. 毛重 22 Kgs

N.W. 净重 21.5 Kgs