



**Shandong Huatai New Energy Battery Co.,Ltd.**

# **SPECIFICATION**

## **HIBAR LR6- SUPER ALKALINE BATTERY**

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## 1. Summary

This specification applies to Normal Performance LR6 AA AM-3 alkaline battery produced by Huatai Battery Co.,Ltd

### 1.1 Model No.

IEC: LR6      Other: AA      JIS: AM-3

### 1.2 Reference Standard:

IEC 60086-1:2021 --- Primary Batteries - Part 1: General

IEC 60086-2:2021--- Primary Batteries - Part 2: Physical and electrical specification

### 1.3 Execution Standard:

GB/T 8897.2-2021

## 2. Electrochemical system

Zinc Powder

KOH

Electrolyte Manganese Dioxide

No Added mercury and cadmium

## 3. Nominal Voltage: 1.5 Volt

## 4. Average Weight: 23.0g

## 5. Nominal Capacity: 2300mAh (Conditions:100mA, 1h/d 0.9V, Operating Temperature: 20±2°C)

## 6. Electrical Performance

Testing Conditions: Load resistance ( ±0.5%) 3.9Ω

Testing time: 0.3 seconds

Temperature: 20±2°C, 50+20/-40% )

	OCV (V)	load voltage (V)	Accepted Levels
New battery ( within 30 days of delivery )	≥1.58	≥1.40	MIL-STD105E, II , AQL=0.4



Storage after 12 months under the normal temperature	$\geq 1.56$	$\geq 1.35$	
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## 7. Discharge Performance

(Testing Conditions: Temperature:  $20 \pm 2^{\circ}\text{C}$ , Relative Humidity  $55 \pm 20 / -40\%$  RH)

	Discharge conditions			New battery discharge levels	Minimum Average Duration		
	Load	Daily period	End voltage		New battery	With $20 \pm 2^{\circ}\text{C}$ storage after 12 months	Applications
IEC ITEMS	$3.9\Omega$	1h/d	0.8V	7.8h	7.5h	7.2h	Motor/toy
	$3.9\Omega$	4min/h, 8h/d	0.9V	430min	400min	380min	Portable lighting (LED)
	250mA	1h/d	0.9V	8.2h	7.7h	7.4h	Toy, non-motorized
	100mA	1h/d	0.9V	24.0h	23.0h	22.0h	CD, digital audio
	50mA	1h/8d, 24h/d	1.0V	48.0h	47.0h	46.0h	Radio/clock/remote control
	1500mW/2s 650mW/28s	10T/h	1.05V	75time	70time	60time	High drain Application
	$3.9\Omega$	24h	0.9V	400min	380min	360min	Discharge test

Acceptance method:

- 1) Select 8 batteries for each testing item from a single delivery.
- 2) The conditions of test qualified:  
The average result is greater than or equal to the minimum average discharge time, and the quantity of signal battery's discharge time which below minimum average of 80% is less than one.
- 3) It need a retest sampling if the first one unqualified. The second test is passed, it should be judged qualified.
- 4) Discharge rate drop is within 10%, and the leakage rate is controlled 30ppm within one year.

## 8. Resistance to leakage

Item	Conditions	Testing Time	Results	Accepted Levels
Over discharge test	Discharge continuously under $10\Omega$ in the condition of $20 \pm 2^{\circ}\text{C}$ and $55 \pm 20 / -40\%$ RH	Continuous discharge for 48hours	The deformation of the battery cannot exceed the size limit and cannot occur the leakage by naked eyes.	N=20, Ac=1, Re=2



Temperature / Humidity test	Temperature:60 ±2°C Relative humidity 90±5% RH	35days		N=20 Ac=1, Re=2
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## 9. Safety Performance

Item	Test Conditions	Testing Time	Requirements	Accepted Levels
External short circuit	Temperature:20 ± 5°C	24h	There shall be no explosion during this test.	N=5, Ac=0,Re=1
Incorrect installation	Four undischarged batteries shall be connected in series with one reversed	24 h		N=20, Ac=0,Re=1

## 10. Identification

The contents printed on the label:

Model: LR6

Registered Trademark: POWERFLASH

Nominal Voltage: 1.5V

Battery Poloidal: “+” and “-”

Warning words: Install and use correctly. Do not recharge, disassemble, heat and short-circuit.

## 11. Precaution and Handling:

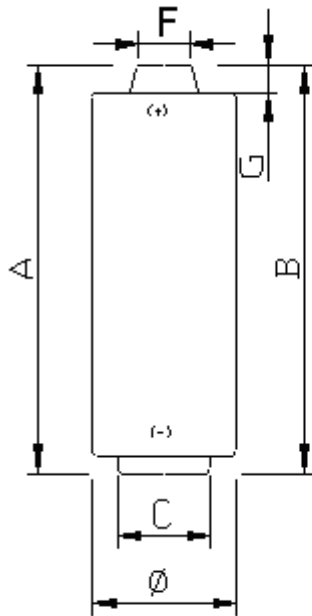
- (1) Do not recharge the alkaline batteries. May leak or explode if charged.
- (2) To install batteries following the instructions of “+” and “-” .
- (3) Do not short-circuit, heat, dispose in fire or disassemble.
- (4) Do not over-discharge batteries. Over- discharging battery may destroy the appliance.
- (5) Do not mix with used or other battery type at the same time. Make sure use the same brand and replace all batteries.
- (6) Remove batteries from device when it is not in use. Over-discharge may destroy the appliance.
- (7) Do not allow metal objects to contact the battery terminals. It may destroy the battery.

## 12. Expiry Date



10 years (Temperature:  $20 \pm 2^{\circ}\text{C}$ , Relative humidity :  $55 \pm 20\%$ )

### 13. Dimension and structure of LR6 AA AM-3 battery:



MODEL	LR6
DIMENSIONS (MM)	
A (Max)	50.5
B (Min)	49.5
C (Min)	7.0
F (Max)	5.5
G (Min)	1.0
Ø (Max)	14.5
Ø (Min)	13.7