

PKCELL

SHENZHEN PKCELL BATTERY CO., LTD

LR20

Specifications for Non-Hg Alkaline Battery

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Product Model: PKCELL-LR20-D

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(The manufacturer keeps privilege to modify the product specifications and data without notice)

Specifications for Non-Hg LR20 Alkaline Battery

1 Product Model

LR20 D AM-1

2 Chemical System

Alkaline battery (Non-Hg, Non-Cadmium)

3 Specification (mm)

Total Length A: 59.5~61.5

External diameter ϕ : 32.5~34.5

4 Nominal Voltage: 1.5V

5 Storage Performance

After 12 months storage at specified conditions, discharge capacity should be no less than 90% of the original discharge capacity.

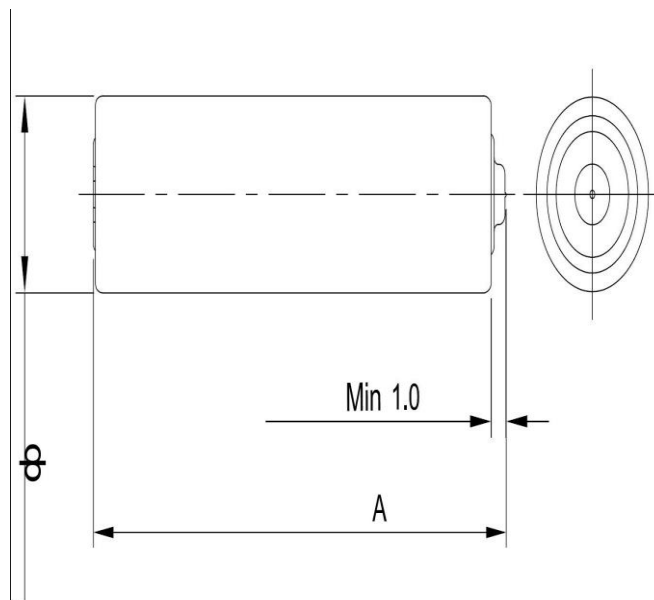
6 Mercury Content: Less than 1ppm

7 Electrical Performance (3.9 Ω 0.3S 20 \pm 2 $^{\circ}$ C)

/	Open Circuit Voltage (V)	Closed Circuit Voltage (V)	Short Circuit Current (A)
Initial period	Above 1.58	Above 1.45	Above 7
After 12 months	Above 1.55	Above 1.43	Above 6

8. Discharge Capacity (20 \pm 2 $^{\circ}$ C, RH: 45%~75%)

Standard	Discharge Condition			Average Minimum Discharge time		
	discharge Load	Discharge Time	E.P.(V)	New Battery	After 3 mths at 45 $^{\circ}$ C	after 12 mths.at room temperature
IEC	10 Ω	4H/D	0.9v	110H	100H	100H
IEC	3.9 Ω	1H/D	0.9V	35H	32H	32H
IEC	2.2 Ω	8H/D	0.9V	18H	17H	17H
IEC	2.2 Ω	1H/D	0.8V	18H	17H	17H



Pls check the sketch map as following

9. Performance

(1) Spillage proof test at over-discharge

The number of samples: 9

Test condition: $20\pm 2^{\circ}\text{C}$, relative humidity 45%-75%

Test method: 3.9 Ω continuous discharge at 48h

Requirements: no spillage at eyesight, the distortion of total height of the battery will not exceed 0.2mm, the max allowable value.

Standard: 0/9

(2) Spillage proof test at high temperature

The number of samples: 20

Test condition: $45\pm 2^{\circ}\text{C}$, relative humidity 85%-95%

Test method: Under the prescriptive test conditions, the samples are stored for 30 days. Then they are took out and placed under $20\pm 2^{\circ}\text{C}$, relative humidity 45%-75% conditions for 4 to 24 hours for observation.

Requirements: no spillage at eyesight, the distortion of total height of the battery will not exceed 0.2mm, the max allowable value.

Standard: 0/20

10. Safety performance

The performance of explosion protection due to the external short circuit

The number of samples: 10

Test condition: $20\pm 2^{\circ}\text{C}$, relative humidity 45%-75%

Test method: Under the prescriptive test conditions, external short circuit lasts for 24 hours

Requirements: no separation occurs between the negative terminal and the body of the battery.

Standard: 0/10

11. Guarantee period: 3 years

12. Label on the product:

The following items are labeling on the battery surface:

(1) Model: LR20

(2) Trademark: PKCELL

(3) Nominal voltage: 1.5V

(4) Polarity: “+”“—”

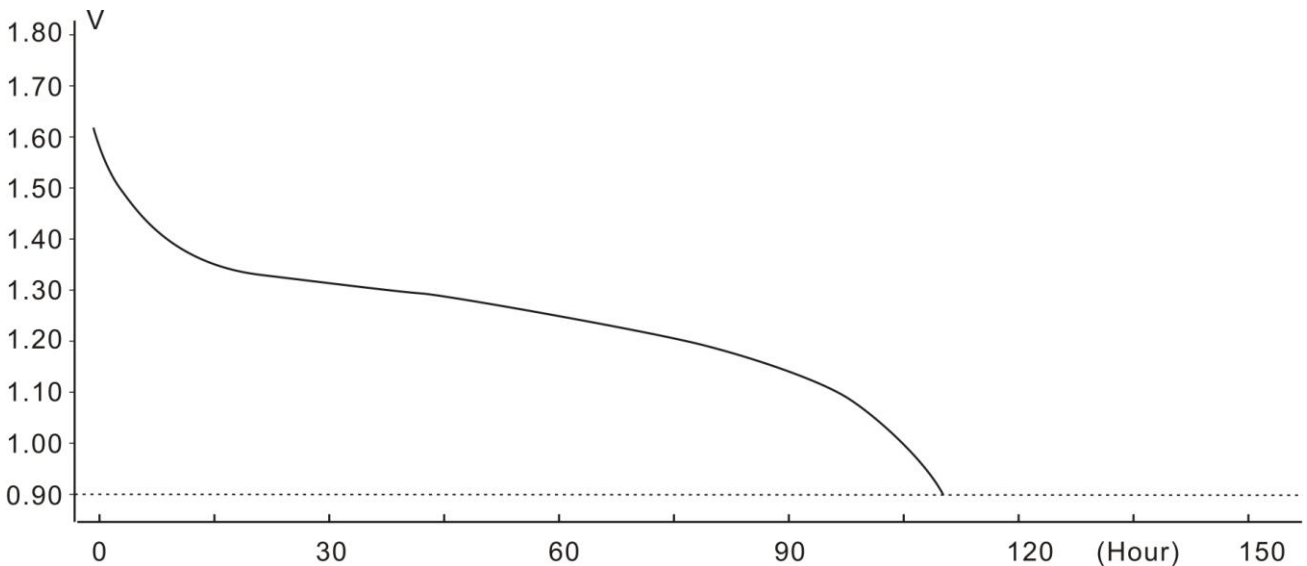
(5) Precautions: Do not attempt to recharge a battery, and Do not dispose of batteries in fire.

(6) Manufacturer: Pkcell

13. Precautions of use:

- (1) Since the battery is not manufactured for recharging, there are risks of electrolyte leakage or causing damage to the device if the battery is charged.
- (2) The battery shall be installed with its “+” and “-” polarity in correct position, otherwise may cause short-circuit.
- (3) Short-circuit, heating, disposing of into fire and disassembling the battery are prohibited.
- (4) Battery cannot be forced discharged, which leads to excess gassing and may result in bulging leakage and de-crimping of cap.
- (5) New and used batteries cannot be used at the same time, when replaced batteries recommend to replace all and with the same brand type.
- (6) Exhausted batteries should be removed from compartment to prevent over-discharge, which causes leakage damage to the device.
- (7) Direct soldering is not allowed, which will damage the battery.
- (8) Battery should be kept out of the reach of children to prevent swallow, in case of accident should contact physician at once.

Schematic diagram of discharge:



discharge Load: 10Ω

