ELECTRO DH.

LR03

Model: 52.200

TECHNICAL SPECIFICATION

FOR

ALKALINE ZINC MANGANESE DIOXIDE BATTERY

1. Scope

This specification defines the technical requirements for LR03 Alkaline Battery Cross References: ELECTRO DH IEC JIS GB(CHINA) LR03 LR03 AM-4 LR03

2. Purpose

To assure that any LR03 battery manufactured that will meet or exceed our customer's expectations.

3. Reference Document

IEC 60086-2:2000, IEC 60086-1:2000, GB/T 7112-1998

4. Chemical System

Alkaline Zinc-Manganese Dioxide (KOH Electrolyte),

Mercury & Cadmium are not added in the Battery.

- **5. Nominal Voltage** : 1.5volt
- 6. Average Weight: 11.5g
- 7. Jacket: Foil Label
- 8. Nominal Capacity

1050 mAh (Conditions: 20Ωdischarge24 hours per day at 20 ± 2° C, end point voltage 0.9V)

9. Electrical Characteristics

	Off-load	On-load	Short	Acceptance Standard
	Voltage(v)	Voltage(v)	circuit	
			current	
Initialwithin30 day	1.58	1.45	7.0	GB/T2828.1-2003
After 12months	1.55	1.40	5.0	commonlylsampling AQL=0.4

(conditions: 3.9Ω±0.5% load resistance, measuring time 0.3 seconds, temperature at 20±2°C,

the hair spring type ampere meter with $\pm 0.5\%$ accuracy (0.5level) shall be used.

10. Service Time (Condition : test temp.20±2°C, tested within 30 days after delivery)

Discharge Condition			IEC	Average Minimum Discharge Time	
Discharge	Daily Discharge	End Point	Standard	Initial	After 12mth at
Load	time	Voltege(v)		within30day	20±2°C
75Ω	4h	0.9	44h	71.0h	67.5h
5.1 Ω	4min./h,8h/day	0.9	130min	225min	215min
10Ω	1h	0.9	5.0h	8.0.h	7.6 h
3.6Ω	15 sec/min	0.9	350cycles	615cycles	565 cycles
20Ω	24h	0.9		18h	17 h

Satisfaction standard: 9 pieces of battery will be tested for each discharging.

The result of the average discharging time from each discharging standard shall be equal to or more than the average minimum time requirement.

11.	Electrolyte	e Leakage	Proof	Characteristics
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Item	Condition	Period	Characteristics	Acceptance
				Standard
Over-discharge	20Ω continuous	48hours	There shall be no	N=9
leakage test	discharge at temp.		deformation	Ac=1
	20±2°C, Relative		exceeding the	Re=2
	Humidity:65±20%RH		specified	
High temp.	At temp. 45±2°C,	90days	dimensions, nor	
storage	Relative Humidity:		leakage recognized	N=40
leakage test	65% RH		by human eye	Ac=1
	At temp. 60±2°C,	20 days		Re=2
	Relative			
	Humidity:90±5%RH			

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12. Safety Characteristics

Item	Condition	Period	Characteristics	Acceptance
				Standard
Short circuit	Temp.: 20±2°C	24hours	N=9, Ac=0	
characteristics		There shall	Re=1	
		be no		
		explosion *		
		of battery		
Abusive test	At temp. 20±2°C, short	24hours		N=20
characteristics	circuit 4 pieces of batt			Ac=0
	ery in series, one of th			Re=1
	e 4 battery has to be			
	connected with its pol			
	arity reversed			

* An instantaneous release wherein solid matter from any part of the battery is propelled to a distance greater than 25 cm away from the Battery.

13. Caution for 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 "I "and " " in correct position.

- (3) Short-circuiting, heating, disposing of into fire and disassembling the battery are prohibited.
- (4) Avoid using old and new batteries together.

14. Shelf Life

3 years after delivery under proper storage condition.

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15. Discharge Curves

(a) 20Ω-24h/d	10Ω -1h/d	Page 3,
(b) 75Ω -4h/d,	5.1Ω -4m/h-8h/d	Page 4,

16. Expiry Period Marking :

a. Production date and shelf life 5 years marked o the finished cell.

b. For private, can mark according to customer's requirement.

17. Battery Structure and Dimension (mm) Page 5

20Ω Continuous Discharge Curve



10Ω 1hour/day Discharge Curve







5.1Ω 4m/h-8h/day Discharge Curve



BATTERY DIMENSION (mm)

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