

Specifications for Cylindrical
Alkaline Battery

LR1 Foil-type (size N)

* No Mercury and Cadmium are used.

PRODUCT SPECIFICATIONS

Individual Product Specification

Serial No.33081LE-01

1. Model No. : LR1 (IEC : LR1, ANSI/NEDA : 910A, JIS : LR1)
2. Nominal Voltage : 1.5 volts
3. Average Weight : 9.2 gr.
4. Dimensions : As per attached drawing
5. Terminals : (+)Cap, (-)Base
6. Cells and Connection : One LR1 ("N" size) cell
7. Performance
 - 7.1 Open-circuit Voltage : As per attached Table-1
 - 7.2 Service Life : As per attached Table-1

8. Electrolyte Leakage and Deformation :

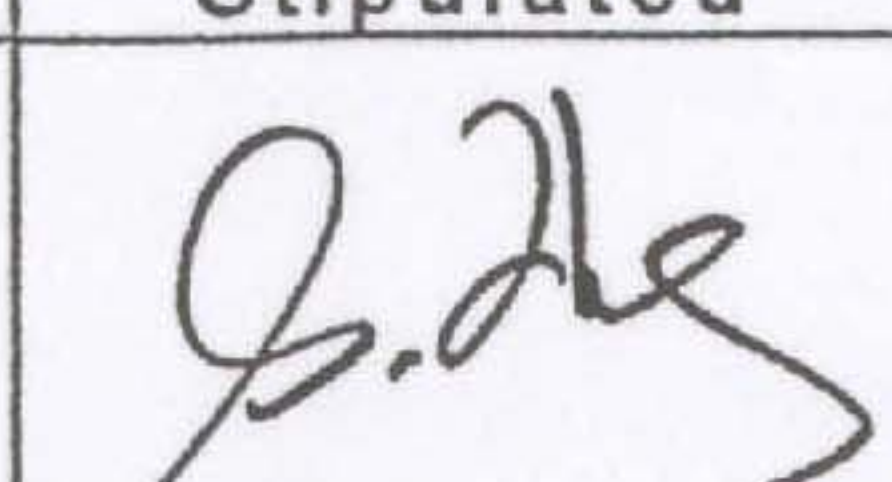
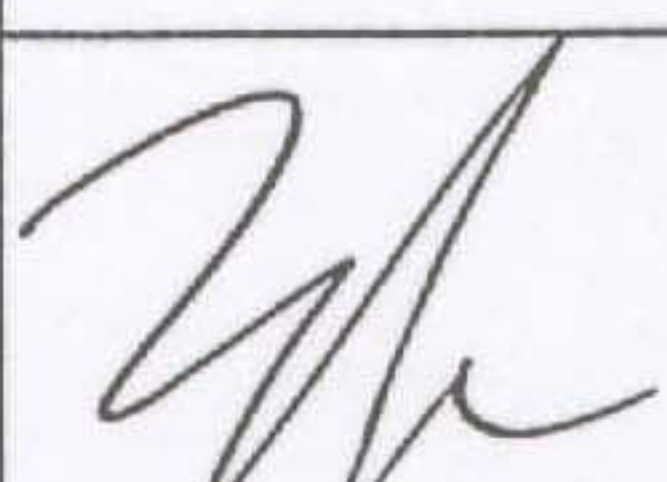

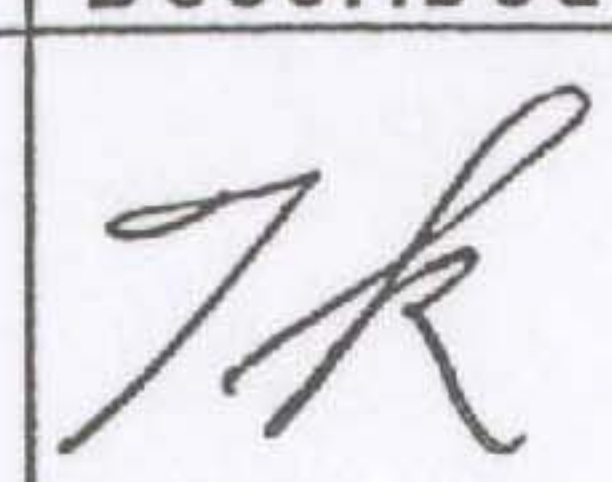
There shall be neither evidence of electrolyte leakage on the external surface of any battery nor deformation out of the specified dimension in the attached drawing at any time prior to or during the specified discharge test in Table-1, Test-1 and Test-2.

Test-1 : The battery is discharged with the specified load resistance and time schedule until the voltage on load drops for the first time below 40 % of the nominal voltage.

Test-2 : The battery shall be kept for 30 days at the temperature 45 ± 2 °C and the relative humidity below 70 %(RH).

9. Mercury and Cadmium :

Mercury and Cadmium are not used in the battery.

sym.		Date of Revision		Remarks	
Date of Stipulation		Stipulated		Described	
Apr.1.1998					

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Table 1 LR1 Performance

		Initial ¹⁾	After 12 months ²⁾
Open circuit Voltage at 20 ± 2 °C		1.54 + 0.11 - 0	1.53 + 0.12 - 0
Service life at 20±2 °C	5.1 Ω 5 M / day (0.9 V)	110 M	95 M
	300 Ω 12 h / day (0.9 V)	180 h	165 h

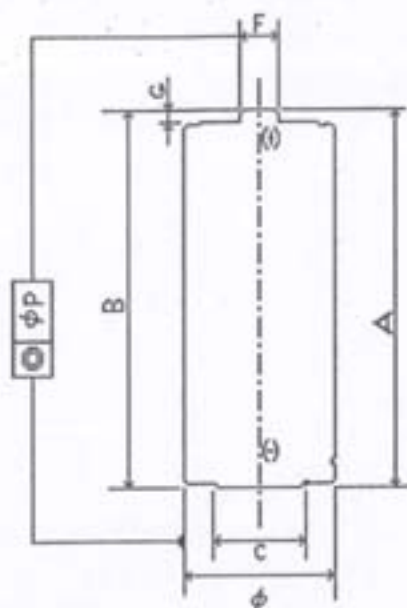
Note ¹⁾ The initial discharging test shall commence within 30 days since manufacture.

²⁾ During the specified period, the battery shall be kept under the condition of temperature 20±2 °C and relative humidity 65±20 %.

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unit : mm

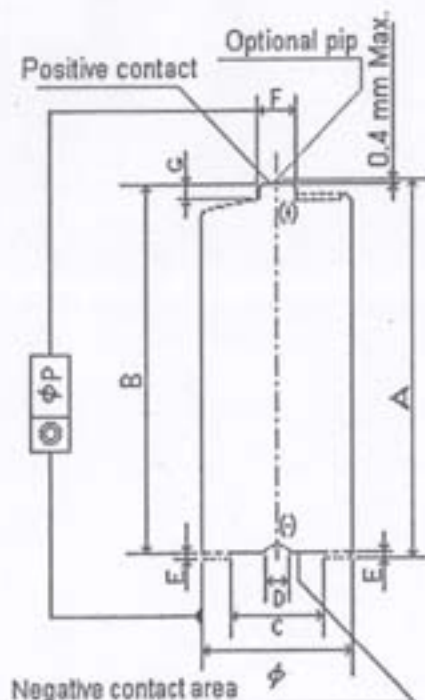


LR 1

	Max.	Min.
A	30.2	(29.1)
B	—	29.1
C	—	5.0
D	—	—
E	0.2	—
F	4.0	(2.0)
G	—	0.5
ϕ	12.0	10.9
ϕP	0.5	—
pip	0.4	—

Note 1. Numerical value in parentheses ; reference

2. The symbols of dimensions are as following.



Reference : IEC 60086-1

- A = Overall height
- B = Distance between (+) and (-) terminals, excluding pip.
- C = Outer diameter of (-) flat contact surface
- D = Diameter of concave part of central (-) terminal.
This model has none of concave part.
- E = Recess of (-) flat contact surface from outside cover.
This model has the projected (-) contact.
- F = Diameter of the specified projection of (+) terminal.
- G = Projected height of (+) contact, excluding pip.
- ϕ = Diameter of the battery
- P = Difference in coaxiality between (+) contact and cylindrical corner side.
- Pip = Optional projection on (+) contact.
This model has none of pip.