Lithium-Ion Dry Cell Product Specification

Product Model: CU-PO-L1-N0G101

Version: V1.0

Release Date: 20260513

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1. Basic Product Information

Item	Specification	
Cell Model	425868	
Nominal Voltage	4.5V	
Nominal Capacity	>=900mAh (0.2C)	
Dimensions (L x W)	130mm*75mm	
Electrochemical System	LMNO/Gr	
Active Material Content	LMNO 96.0%	Gr 95.7%
Coating Areal Density (mg/cm2)	LMNO 13.80	Gr 5.95
Electrode Compaction Density (g/cc)	LMNO 3.06	Gr 1.50
Cell Structure	Stacked	
Recommended Electrolyte Filling Amount	4g	
Recommended Electrolyte	Not Available	

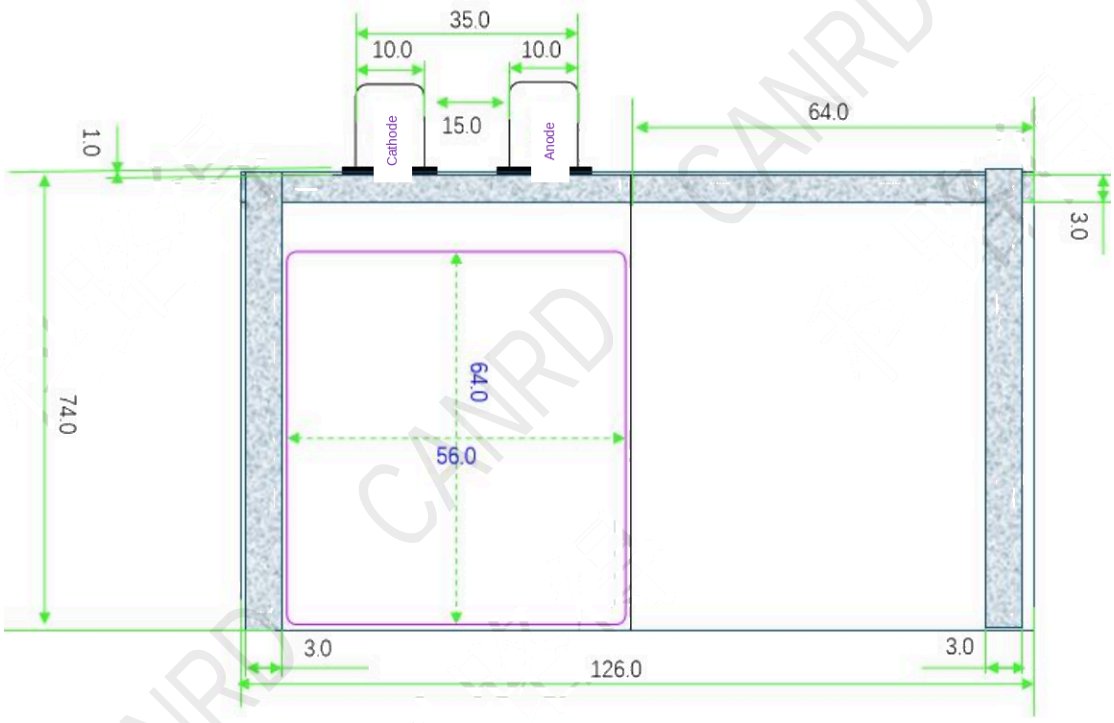
2. Charge/Discharge Parameters

Charge Voltage: 4.80V	Standard Charge Current: 0.5C
Discharge Cut-off Voltage: 3.50V	Standard Discharge Current: 1.0C

3. Environmental Adaptability

Item	Parameter Range
Charge Operating Temperature	10°C ~ 60°C
Discharge Operating Temperature	0°C ~ 45°C
Storage Temperature	25°C (Recommended)
Relative Humidity	<=85% RH (Non-condensing)

4. Appendix



5. Post-Processing of Dry Cell

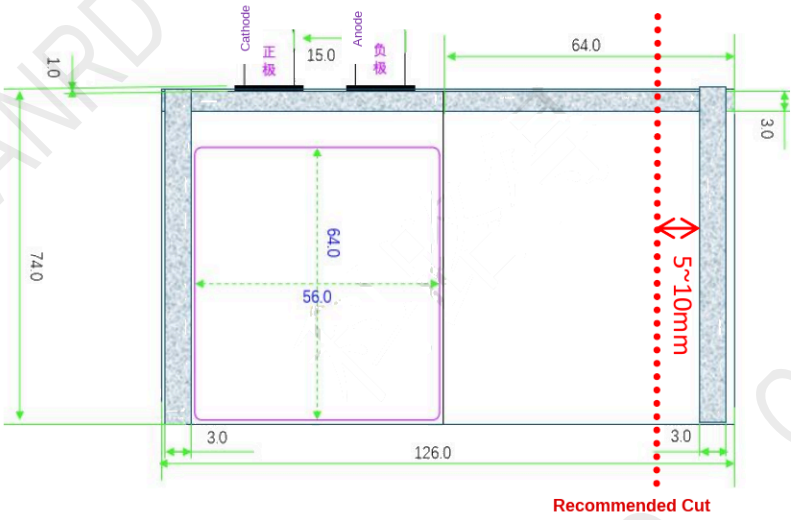
The following operating instructions use manual electrolyte filling as an example. Operations must be performed in a dry room or glovebox. The cell orientation shown below is the front side.

1) Inspection:

Before operation, inspect the cell for abnormalities such as (1) broken tabs; (2) air leakage; (3) damage to the aluminum-plastic pouch.

2) Create Electrolyte Filling Port:

Cut an electrolyte filling port 5-10 mm from the edge of the gas pocket. P.S.: It is strongly recommended to retain part of the gas pocket during the initial filling!!



3) Electrolyte Filling:

Rotate the cell 90° counterclockwise from the orientation shown, with the cut gas-pocket opening facing upward (a battery holder may be used for support), and place it vertically. Then place the cell on a balance and tare it. Use a pipette/disposable dropper to add the appropriate amount of electrolyte through the filling port.

4) Vacuum Rest:

Place the cell in a vacuum resting chamber, evacuate to <= -85 kPa, and rest for 3 min.

5) Vacuum Pre-sealing:

Vacuum seal at <= -85 kPa.

6) Measure OCV after filling:

In the uncharged/undischarged state, OCV is around 0 V (depending on the chemistry, positive or negative values may occur).

7) Resting:

Recommended: 48 h at room temperature or 24 h at 45°C. Adjust temperature and time reasonably based on cell size, electrolyte wetting, and filling amount.

8) Formation and Capacity Grading after Resting:

For the recommended first charge/discharge (activation) procedure, see below.

6. Recommended Formation and Capacity Grading Procedure:

6.1 With Hot-Press Formation and Capacity Grading:

Formation Steps: 45°C, 0.9 MPa

1) Rest 60 min (allow the cell to reach 45°C);

2) Charge at 0.02C CC for 120 min;

3) Rest 1 min;

4) Charge at 0.1C CC for 420 min;

5) Rest 1 min.

After the cell body cools to 25°C, degas and retain the gas pocket.

Capacity Grading Steps: 25°C, 0.9 MPa

1) Rest 1 min;

2) Charge at 0.2C CC-CV to 4.80V, cutoff current 0.05C;

2) Rest 3 min;

3) Discharge at 0.2C CC to 3.5V;

(Complete the first charge/discharge cycle and calculate initial Coulombic efficiency.)

6.2 Without Hot-Press Formation and Capacity Grading:

NEWARE Battery Tester: 25°C, 0.2 MPa;

1) Rest 3 min;

2) Charge at 0.05C CC to 4.80V, then CV to 0.02C;

3) Rest 3 min;

4) Discharge at 0.05C CC to 3.50V;

5) Release pressure; retain the gas pocket after degassing.

(Complete the first charge/discharge cycle and calculate initial Coulombic efficiency.)

6.3 Note: If the cell will remain in standby for a long time after capacity grading, it is recommended to perform one additional half-charge after grading.

Charge/Discharge Curve:

