

Lithium-Ion Dry Cell Product Specification

Product Model: CU-PO-L1-5SG105

Version: V2.0

Release Date: 20260420

1. Basic Product Information

Item	Specifications	
Cell Model	425868	
Nominal Voltage	3.7V	
Nominal Capacity	≥1000mAh (0.2C)	
Dimensions (L x W)	130mm*75mm	
Electrochemical System	523/Gr	
Active Material Content	523 94.0%	Gr 95.7%
Single-Side Coating Areal Density (mg/cm²)	523 13.05	Gr 7.24
Electrode Compaction Density (g/cc)	523 3.35	Gr 1.50
Cell Structure	Wound	
Recommended Electrolyte Filling Amount	4.0g	
Recommended Electrolyte	KLD-1230C	

2. Charge/Discharge Parameters

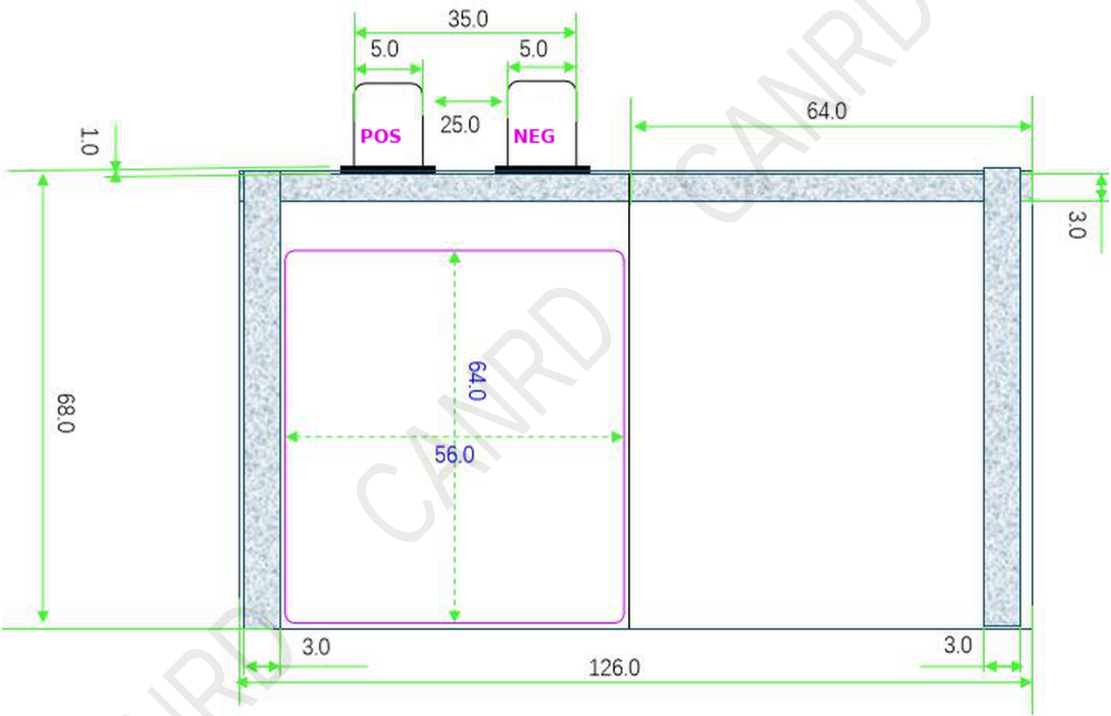
Charge Voltage: 4.2V	Standard Charge Current: 0.5C
Discharge Cut-off Voltage: 3.0V	Standard Discharge Current: 1.0C

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

Dimensional Diagram:

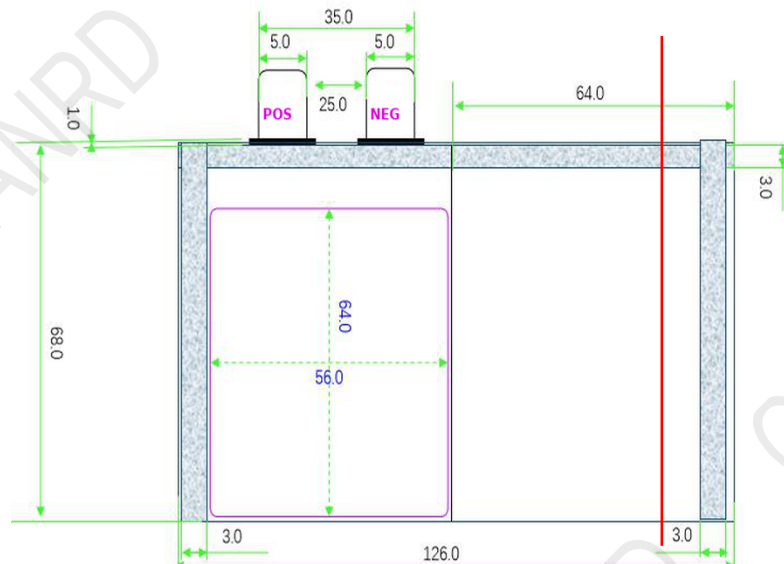


5. Post-Processing of Dry Cell

The following instructions use manual electrolyte filling as an example and 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) gas leakage; (3) damage to the aluminum-laminated pouch, etc.

2) Create Electrolyte Filling Port: Cut a filling port 5-10 mm from the edge of the gas pocket. Note: It is strongly recommended to retain part of the gas pocket during the first electrolyte filling!!



3) Electrolyte Filling: Rotate the cell 90° counterclockwise from the orientation shown at right, with the cut gas-pocket opening upward (a battery holder may be used), and place it vertically. Place it on a balance and tare to zero. Use a pipette/disposable dropper to inject the required amount of electrolyte through the filling port.

4) Vacuum Soaking: Place in a vacuum soaking chamber, evacuate to ≤ -85 kPa, and rest for 3 min.

5) Vacuum Pre-Sealing: Vacuum-seal at ≤ -85 kPa.

6) Measure OCV after Electrolyte Filling: Before charge/discharge, OCV is approximately 0 V (depending on the chemistry, the voltage may be positive or negative).

7) Resting: Recommended 48 h at room temperature or 24 h at 45°C. Depending on cell size, electrolyte wetting, and filling amount, temperature and time may be adjusted based on actual needs.

8) Formation and Capacity Grading after Resting (First Charge/Discharge / Activation): See the recommended procedure below.

6. Recommended Formation and Capacity Grading Procedure:

6.1 With Hot-Press Formation and Capacity Grading:

Formation Steps: 75°C, 0.9 MPa,

- 1) Rest 60 min (allow the cell body to reach 75°C);
- 2) Charge at 0.2C CC for 14 min;
- 2) Rest 3 min;
- 3) Charge at 0.5C CC for 74 min;

After the cell body cools to 25°C, degas and perform second sealing.

Capacity Grading Steps: 25°C, ambient pressure (if the gas pocket is retained after degassing, apply 0.2 MPa pressure during grading).

- 1) Rest 3 min;
- 2) Charge at 0.5C CC-CV to 4.20V, cutoff current 0.02C;
- 2) Rest 3 min;
- 3) Discharge at 0.2C CC to 3.00V;

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

6.2 Without Hot-Press Formation and Capacity Grading:

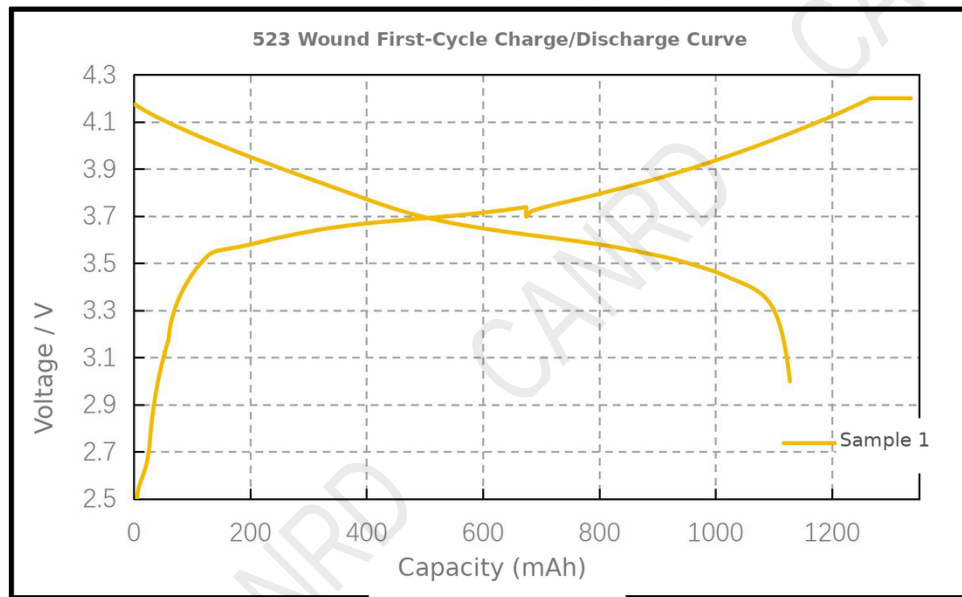
NEWARE tester: 25°C, 0.2 MPa;

- 1) Rest 3 min;
- 2) Charge at 0.05C CC to 4.20V;
- 3) Rest 3 min;
- 4) Discharge at 0.05C CC to 3.00V;

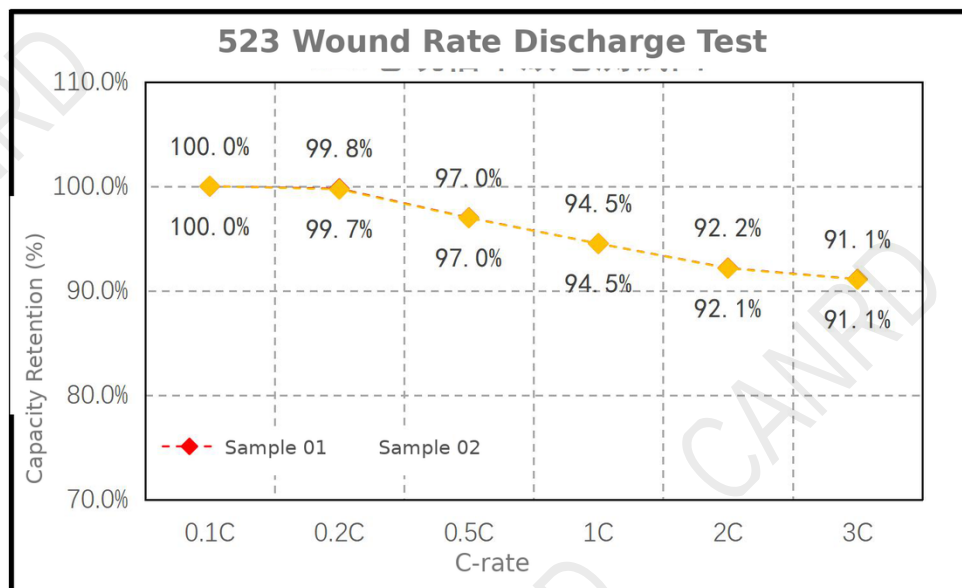
(Complete the first charge/discharge cycle and calculate initial Coulombic efficiency.)

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:



Rate Performance:



Cycling Performance:

