

Lithium-Ion Battery Dry Cell Product Specification

Product Model: CU-PO-L1-9SG101

Version: V1.0

Release Date: 20250703

1. Basic Product Information

Item	Specification	
Cell Model	425868	
Nominal Voltage	3.7 V	
Nominal Capacity	≥1000 mAh (0.2C)	
Dimensions (L × W)	130 mm × 75 mm	
Electrochemical System	Ni90/Gr	
Active Material Content	Ni90 95.0%	Gr 95.7%
Single-Side Coating Areal Density (mg/cm ²)	Ni90 16.50	Gr 11.67
Electrode Compaction Density (g/cc)	Ni90 3.40	Gr 1.50
Cell Structure	Stacked	
Recommended Electrolyte Filling Amount	4.0 g	
Recommended Electrolyte	KLD-1230C	

2. Charge/Discharge Parameters

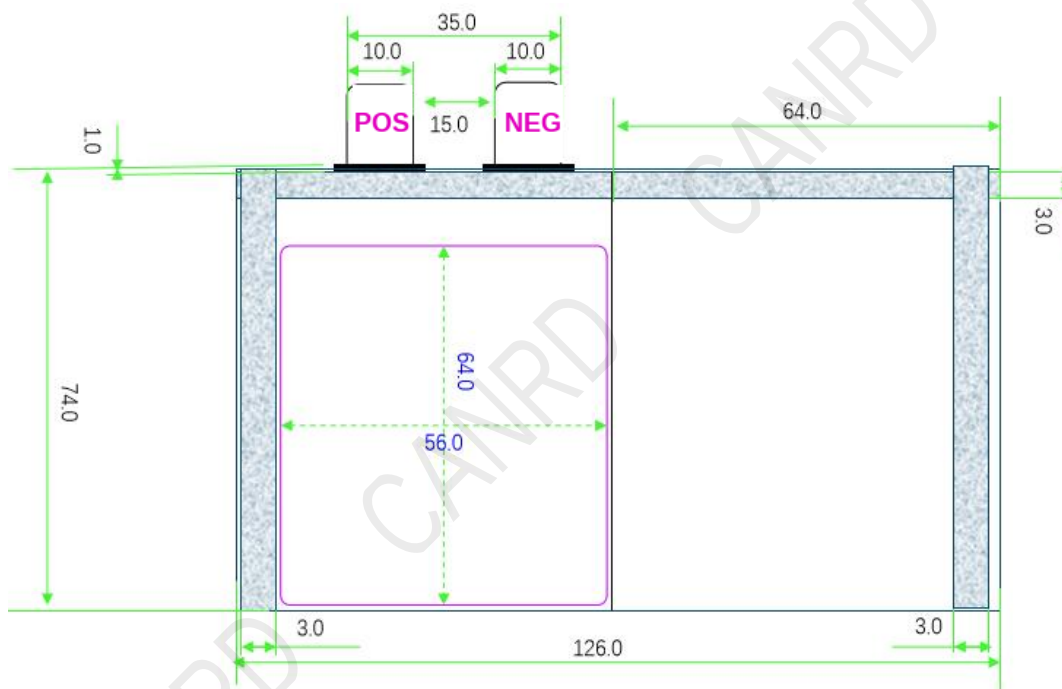
Charge Voltage: 4.2 V	Standard Charge Current: 0.5C
Discharge Cut-off Voltage: 3.0 V	Standard Discharge Current: 1.0C

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 Drawing:

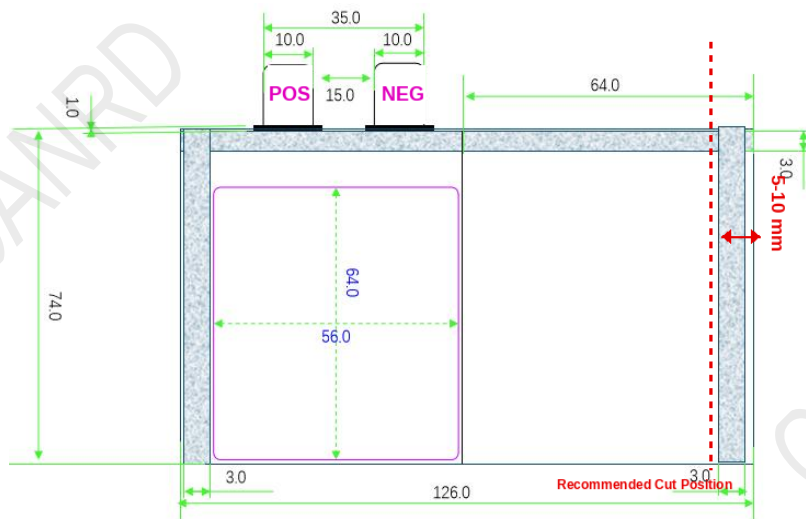


5. Post-Processing of Dry Cell

The following 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) gas leakage; (3) damaged aluminum-laminated pouch, etc.

2) Create Electrolyte Filling Port: Cut an electrolyte filling opening 5-10 mm from the edge of the gas pocket.



Strongly recommended: retain part of the gas pocket during the first filling!

3) Electrolyte Filling: Rotate the cell 90° counterclockwise based on the diagram on the right, with the opened gas-pocket port facing upward (a battery holder may be used for support), and place it vertically. Then place it on a balance and tare to zero. Use a pipette/disposable dropper to inject the appropriate amount of electrolyte through the filling port.

4) Vacuum Soaking: Place in a vacuum standing 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: In the uncharged/undischarged state, the OCV is around 0 V (depending on chemistry, it 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 performance and filling amount, temperature and time may be reasonably adjusted as required.

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 4.20 V, cut-off current 0.02C;
- 2) Rest 3 min;
- 3) Discharge at 0.2C CC to 3.00 V;

(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;

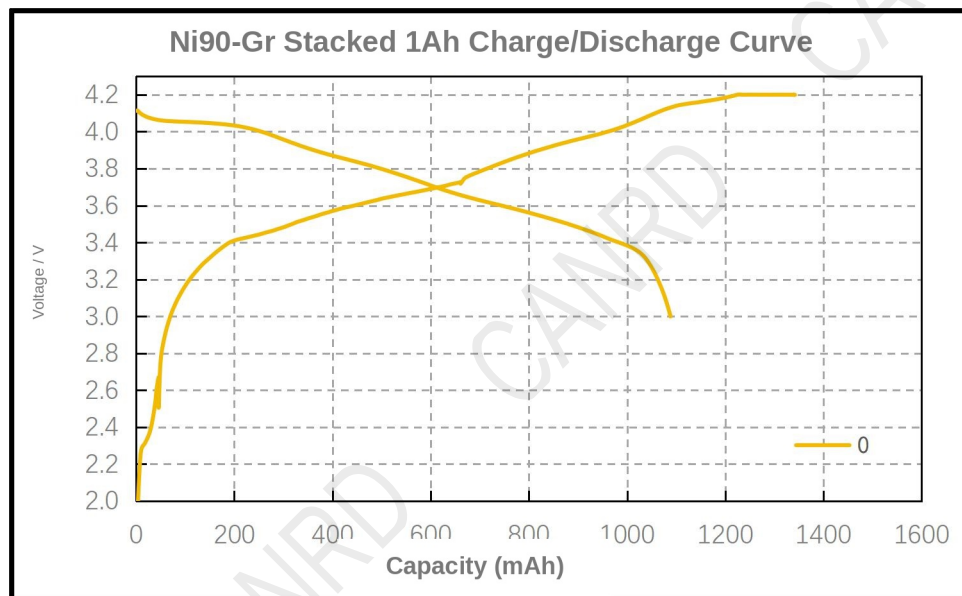
- 1) Rest 3 min;
- 2) Charge at 0.05C CC to 4.20 V;
- 3) Rest 3 min;
- 4) Discharge at 0.05C CC to 3.00 V;

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

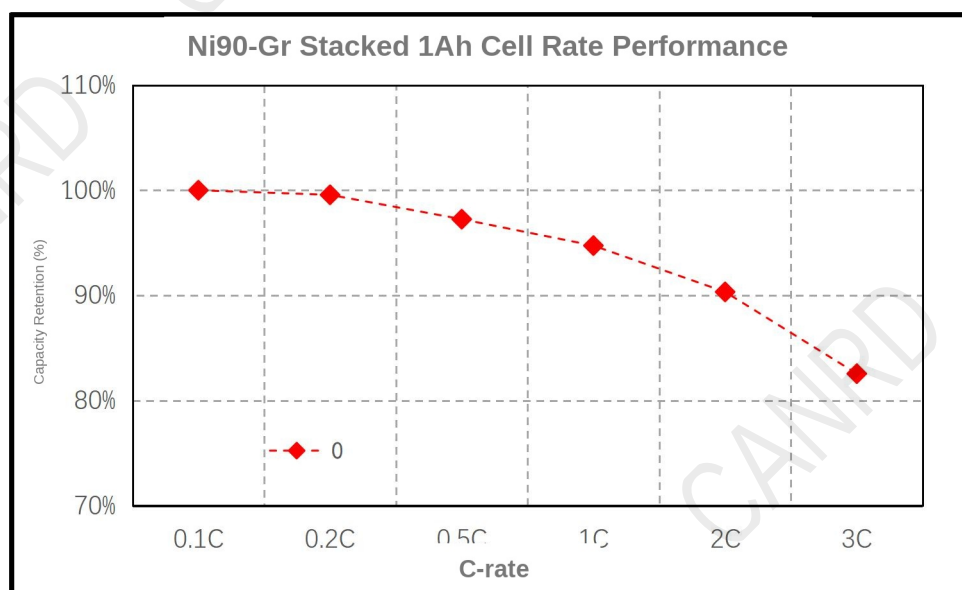
6.3 Note:

If the cell remains on standby for a long time after capacity grading, perform one additional half-charge after grading.

Charge/Discharge Curve:



Rate Test:



Cycle Test:

