

Product Specifications

Model No.: CR2025

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1. APPLICABILITY

This specification is applicable to GP Manganese Dioxide Lithium Primary Cell CR2025.

2. GENERAL

2.1 Type designation : CR2025(IEC/JIS)

2.2 Nominal voltage : 3V

2.3 Typical capacity : 170mAh @15k Ω to 2.0V at 20°C

2.4 Shape and dimension : Refer to Drawing 1.

2.5 Typical weight : 2.5g

2.6 Shelf life : 5 years 20±2°C storage

3. APPEARANCE

There shall be no dirt, scratch or deformation detrimental to practical service in appearance.

4. CELL VOLTAGE

4.1 Test method

Method of sampling : MIL-STD-105E level II single sampling normal inspection.

Voltmeter : Digital Voltmeter (DVM) with the precision of 1mV (internal resistance

not less than 1 Megohm)

Test temperature : 20+2°C

4.2 Off Load Voltage

| A | t shipping | 12 months after manufactured |
|---|-------------|------------------------------|
| 3 | 5.0V ~ 3.4V | Above 3V |

5. Service Life

| | Test Mode | Initial | Initial | 12 months storage at 20°C (Nominal) |
|----------------------|-----------------------------|-----------|-----------|----------------------------------------|
| | | (Nominal) | (Minimum) | |
| Service life at 20 2 | 15kΩ24H/D (EPV=2.0V) | 715H | 650H | 615H |

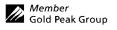
H: hour

D: day

EPV: end point voltage

Note:

- Initial test: A test commencing within one month after delivery.
- Storage test: A test conducted within 12 months storage under the specified conditions after delivery.





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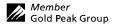
6. ELECTROLYTE LEAKAGE

| | Test Items | Test Conditions | Requirements |
|-----|----------------------|---------------------------------------------------|--------------------------|
| 6.1 | Arrival at warehouse | ral at warehouse Within two months after shipping | |
| 6.2 | Long term storage | Within storing for 12 months at 20 ±15°C, | leakage observed with |
| | | 65±20%RH | naked eye and no bulging |
| 6.3 | High Temperature | Test specimens shall be kept standing at | or deformation of |
| | | 45±2°C and below 70% RH or less for 30days | batteries in excess of |
| 6.4 | Over-discharge | 15 kΩ continuously discharge down to 1.8V at | dimensions on shown in |
| | | 20±2°C, 65±20%RH | the Drawing 1 |

7. QUALITY ASSURANCE

| DESCRIPTION | SAMPLING PLAN | |
|--------------------|--------------------|--|
| Battery dimensions | 0.65% (Note 5) | |
| Appearance | 1.0% (Note 5) | |
| Off load voltage | 0.65% (Note 5) | |
| Service output | Note 1 (Note 5) | |
| Leakage 6.1 | 0.65% (Note 2 & 5) | |
| 6.2 | Note 3 | |
| 6.3 | Note 4 | |
| 6.4 | Note 4 | |

- Note 1: Acceptance / rejection in accordance with IEC publication 60086-1 (2011), Sub-clause 5.3.
 - 1) Test nine batteries.
 - 2) Calculate the average without the exclusion of any result.
 - 3) If this average is equal to or greater than the specified figure and no more than one battery has a service output of less than 80% of the specified figure, the batteries are considered to conform for service output.
 - 4) If this average is less than the specified figure and/or more than one battery has a service output of less than 80% of the specified figure, repeat the test on another sample of nine batteries and calculate the average as previously.
 - 5) If the average of this second test is equal to or greater than the specified figure and no more than one battery has a service output of less than 80% of the specified figure, the batteries are considered to conform for service output.
 - 6) If the average of second test is less than the specified figure and/or more than one battery has a service output of less than 80% of the specified figure, the batteries are considered not to conform and no further testing is permitted.
- Note 2: Leakage on arrival at warehouse is within two months after shipping.
- Note 3: Sample size : n=20
 - Judgement: Ac=1 Re=2
- Note 4: Sample size :n=20
 - Judgement :Ac=0, Re=1
- Note 5: AQL General Inspection level II, single sampling plan.





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8. PACKAGING

Packaging shall be a form agreed by both parties.

9. WARRANTY

One (1) year limited warranty against workmanship and material defects.

Precaution & Handling

- 1) Do not disassemble or short-circuit batteries.
- 2) Do not recharge batteries.
- 3) Do not dispose of batteries in fire.
- 4) Do not allow metal objects to contact the battery terminals.
- 5) Do not mix with used or other battery type (such as alkaline with carbon zinc).
- 6) Do not solder the batteries directly. If soldering or welding connection to the battery is required, consult our engineer for proper methods.
- 7) Do not over-discharge batteries. Force discharging batteries by external power source in a series may cause explosion.
- 8) To install or remove batteries, follow the equipment manufacturer's instructions.
- 9) Keep battery away from small children. If swallowed, consult a physician at once.
- 10) Remove batteries from device when it is not in use.

Storage

- 1) Store in a cool, dry place before use.
- 2) Do not keep batteries at temperature of 45°C or above.
- 3) Do not keep batteries at relative humidity of 75% or above.

GP Batteries

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Drawing 1

