

## 1. Scope

This specification governs the performance of the following Ni-Cd battery, Standard Industrial Type  
Model: 1.2V AA1000mAh

## 2. Ratings

The data involves the nominal voltage and the approximate weight of the battery cell.

| Description                          | Unit | Specification | Conditions                      |
|--------------------------------------|------|---------------|---------------------------------|
| Nominal Voltage                      | V    | 1.20          | Unit: cell                      |
| Typical Capacity                     | mAh  | 1000          | Standard charging / discharging |
| Min. Capacity                        | mAh  | 900           | Standard charging / discharging |
| Standard Charge                      | mA   | 100 (0.1C)    | Ta = -5°C~+45°C ( see note )    |
|                                      | hour | 16            |                                 |
| Trickle Charge                       | mA   | 50(0.05C)     | Ta = 0°C~+45°C ( see note )     |
| Rapid Charge                         | mA   | 500(0.5C)     | Ta = 5°C~+45°C, 2.5hrs          |
| Discharge Cut-Off Voltage            | V    | 1.00          | Less than 1C discharge          |
| Standard Discharge Current           | mA   | 200(0.2C)     | Ta= -20°C~+60°C                 |
| Maximum Discharging Current(mA)      | mA   | 1000(1.0C)    | Ta= -20°C~+60°C                 |
| Storage Temperature (40-60% charged) | °C   | -20~+40       | Less than 30 days               |
|                                      |      | -20~+30       | Less than 90 days               |
|                                      |      | -20~+25       | Less than 180 days              |
|                                      | %    | 65±20 RH      | Relative humidity               |
| Typical Weight                       | g    | 26.0          | Approx.                         |

The batteries must be standard discharged before charging

### Battery test information:

| Test                 | Unit  | Specification                     | Conditions   | Remarks                |
|----------------------|-------|-----------------------------------|--|------------------------|
| Capacity             | mAh   | 1000                              | Standard Charge / Discharge  | Up to 3 cycles Allowed |
| Open Circuit Voltage | V     | ≥1.25                             | Within 1 hr after standard charge  | Unit: cell             |
| Internal Impedance   | mΩ    | ≤30                               | Upon fully charge at 1Khz  | Unit: cell             |
| Discharge (0.2C)     | min   | ≥300                              | Standard charge, 30mins rest before discharge at 0.5C to 1.0V/cell               | Up to 3 cycles Allowed |
| Over charge test     | N/A   | No explosion<br>Leakage may occur | Cell is discharged with 0.2C to 1.0V, then 0.1C charged for 48 hours             |                        |
| Over discharge test  | N/A   | No explosion                      | Cell is discharged with 0.2C to 0.00V, then with 1C forced discharged for 1 hour |                        |
| Charge Retention 1   | mAh   | ≥600(60%)                         | Standard charge, storage for 28 days at 20±5°C, standard discharge               |                        |
| Charge Retention 2   | mAh   | ≥600(60%)                         | Standard charge, storage for 7 days at 40±5°C, standard discharge                |                        |
| IEC Cycle life test  | cycle | ≥500                              | IEC61951-1(2017) 7.5.1.2   |                        |

**Attention: The object of abuse test is single cell.**

**Append: IEC61951-2 Endurance in cycles**

**Standard Cycling Test:**

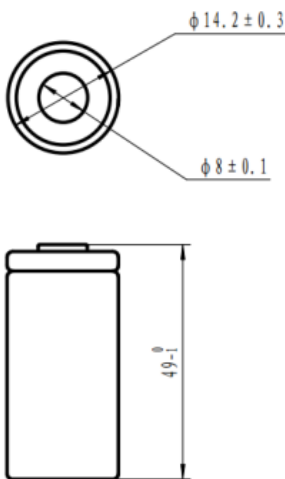
| Cycle No. | Charge              | Rest   | Discharge           |
|-----------|---------------------|--------|---------------------|
| 1         | 0.1C × 16hrs        | None   | 0.25C × 2hrs 20mins |
| 2~48      | 0.25C × 3hrs 10mins | None   | 0.25C × 2hrs 20mins |
| 49        | 0.25C × 3hrs 10mins | None   | 0.25C to 1.00V/cell |
| 50        | 0.1C × 16hrs        | 1~4hrs | 0.2C to 1.00V/cell  |

Cycle 1 to 50 shall be repeated until the discharge capacity less than 3hrs

The endurance test is considered complete when two such successive cycles give discharge duration less than 3 hours. The number of cycles obtained when the test is completed shall be not less than 500.

**Specifications of single cell**

Dimension of single cell with PVC



**Typical characteristics**

