SPECIFICATION

GN Rechargeable Lithium Ion

Model No. : RLI-9600

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Date : July 30,2008

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Content

This Technical specification is for reference only.

1. Scope

These specifications shall be applied to Rechargeable Lithium Ion Battery Manufactured by GN BATTERIES & ELECTRONICS INC.

Model : RLI-9600 600mAh SIZE : 9V

2. General Specification

(1) Operating Voltage Range : 5.5 ~ 8.56V

(2) Mass : 28.2g

(3) Rated Capacity : Nominal Capacity : 550mA

Typical Capacity : 600mA

(4) Nominal Voltage : 7.4V

(5) Maximum Charge Current : 550mA

(6) Charge Voltage : 8.4V ± 0.3V

(7) Final Discharge Voltage : 5.5V

(8) Operating temperature range for charge : 0 ~ +45℃

(9) Operating temperature range for discharge : -20 ~ +60℃

(10) Storage temperature for short period : -20 ~ +45℃

(11) Storage temperature for long period : -20 ~ +35℃

3. Appearance and Dimensions

(1) Length : 26.5 ± 0.2mm

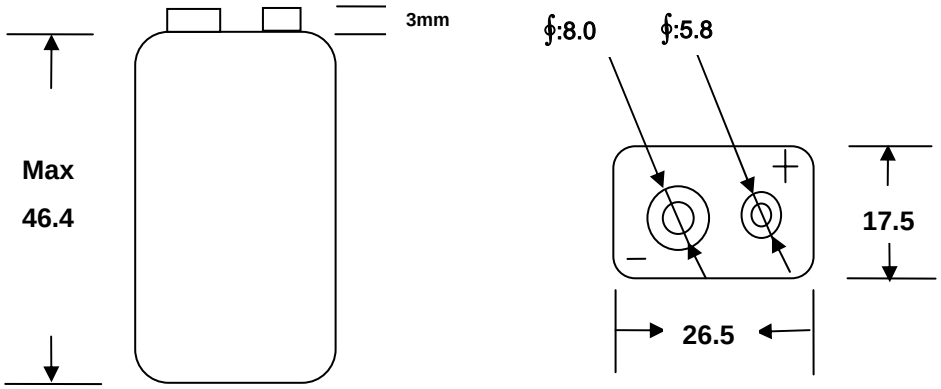
(2) Width : 17.5 ± 0.2mm

(3) Height : max. 46.4mm

(4) Terminal(+) : ∮: 5.8mm h:3mm

(5) Terminal(-) : ∮: 8.0mm h:3mm

(6) Weight : 28.2g



4. Performance

Test procedure and its criteria shall be referred to as follows.

1C = 550mA

Full charge : 8.4V (0.5C) × 5h (25℃)

(1) Open Circuit Voltage

Test method : Within 1 hour after full charge, measure

open circuit voltage.

Criteria : More than 8.2V.

(2) Discharge Capacity

Test method : Within 1 hour after full charge, discharge until final discharge voltage at 0.2C and measure the time.

Criteria : More than 300 minutes.

(3) Charge/Discharge cycle life

Test method : Charge ⇨ 8.4V (0.5C) ~ 0.02C cut off (25℃).

Discharge ⟹ 1C to 6V (25℃).

This charge and discharge cycles shall be repeated.

Criteria : More than 180 minutes.

(4) Appearance by visual shall be no defect and leakage.

5. Charge

(1) Standard charge must be carried out with 0.5C – 8.4V (Constant current / constant voltage). Charging shall be stopped when the time or current satisfy specified condition.

(2) Charge voltage must be below 8.46V considering the charger's tolerance. If the charger would be out of order, when the voltage goes up 9V charging must be stopped.

(3) Charge current of charger must be below 1C.

(4) Equip with an extra charging control. If the battery voltage is

below 6V, extra charge shall be began with about 0.2C. After it, if the battery goes up 6V within 10 minutes, normal charge shall be began, or if the voltage was below 6V charging shall be stopped.

(5) Equip with a full charge detection control, which detects fully charged condition measuring time or current, stops charging.

(6) The initial ambient temperature for charging must be within The range of 0 to 45℃.

(7) No reverse charging or connection.

6. Discharge

(1) Discharge current must be defined below 2C.

(2) Ambient temperature for discharging must be within the range of -20 to 60℃.

(3) Final discharge voltage must be over 5.5V.

(4) Do not over-discharge such as the battery voltage becomes below 5.5V/cell.

(5) Do not short-circuit.

7. Protection Circuit

To make the battery safety more reliable under miss operation, equip with a following protective circuit mechanic inside of the battery pack.

(1) Protection for Over Charge

If the battery voltage comes to 8.56±3V while charging , protection for over charge shell be operated and stops charging.

(2) Protection for Over Discharge

If the battery voltage comes to 6V±0.1V while discharging, protection for over discharge shall be operated and stops discharging. The consumed current while the protection for over-discharge is operating shall be set below 1μA.

(3) Protection for Over Current

If the current comes over 3A while discharging, protection for over-discharge shall be operated and stops discharging. However the value-3A is possible to be changed depending on the consumed current of used equipment.

(4) Electric Circuit

To prevent the discharge during storage, design so that the consumed current of electric circuit inside of the battery pack (protective circuit, fuel gauge….etc.) will be minimum value.

8. Storage

For long-term storage, it is preferable to put batteries on a dried place below 25℃ with about 50% charged condition.