

## Lithium-ion Button Cell Battery

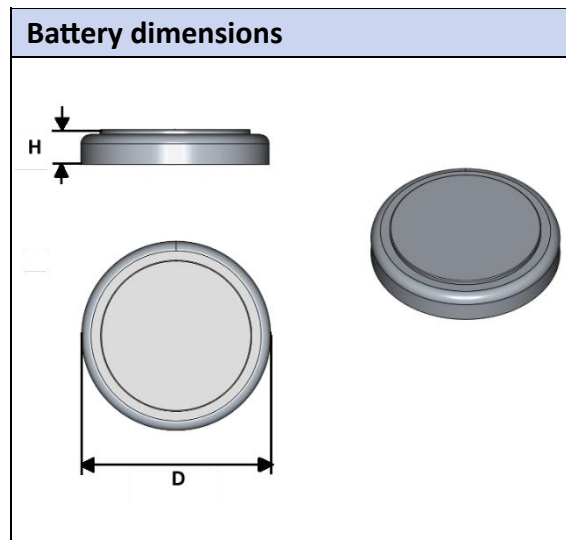
| Primary characteristics |       |      |
|-------------------------|-------|------|
| Parameter               | Value | Unit |
| Nominal voltage         | 3.7   | V    |
| Rated capacity          | 9mAh  | mA   |

## Scope

The purpose of this product specification is to provide technical information for the rechargeable Lithium-ion button battery LIR1220.

The test shall be conducted in strict accordance with the method specified in this specification.

If you have any objection to the test items or test methods, please contact Akyga Battery.



| Specification table                                                                                                                                                                                                                                                                                                                                                                                                                        |              |         |      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------|------|
| Parameter                                                                                                                                                                                                                                                                                                                                                                                                                                  |              | Value   | Unit |
| Model                                                                                                                                                                                                                                                                                                                                                                                                                                      |              | LIR1220 | -    |
| Nominal voltage                                                                                                                                                                                                                                                                                                                                                                                                                            |              | 3.7     | V    |
| Rated capacity                                                                                                                                                                                                                                                                                                                                                                                                                             |              | 9       | mAh  |
| Charging voltage                                                                                                                                                                                                                                                                                                                                                                                                                           |              | 4.2     | V    |
| Max. charging voltage                                                                                                                                                                                                                                                                                                                                                                                                                      |              | 4.25    | V    |
| Discharge cut-off voltage                                                                                                                                                                                                                                                                                                                                                                                                                  |              | 2.75    | V    |
| Internal resistance                                                                                                                                                                                                                                                                                                                                                                                                                        |              | ≤500    | mΩ   |
| Recharging current                                                                                                                                                                                                                                                                                                                                                                                                                         |              | 0.2     | mA   |
| Charging time                                                                                                                                                                                                                                                                                                                                                                                                                              |              | ≤5      | h    |
| Max. recharging current                                                                                                                                                                                                                                                                                                                                                                                                                    |              | 1C      | mA   |
| Fast charging time                                                                                                                                                                                                                                                                                                                                                                                                                         |              | 1       | h    |
| Standard discharge current                                                                                                                                                                                                                                                                                                                                                                                                                 |              | 0.2C    | mA   |
| Discharge current                                                                                                                                                                                                                                                                                                                                                                                                                          |              | 1       | C    |
| Size                                                                                                                                                                                                                                                                                                                                                                                                                                       | Diameter (D) | 12±0.1  | mm   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                            | Height (H)   | 2±0.2   | mm   |
| Weight                                                                                                                                                                                                                                                                                                                                                                                                                                     |              | 0.9     | g    |
| <b>Test conditions:</b><br>Temperature: 25°C<br>Relative Humidity: ≤75% ±5<br>Atmosphere pressure: 1 atm<br><b>Standard Charge/Discharge Characteristics:</b><br>The test should be conducted under the condition below:<br>In a temperature of 25°C CC charge 0.2CmA / voltage up to 4.2V; then CV charge. Leave it for 5 minutes, and then turn to constant current discharge, and then discharge to 2.75V with 0.2CmA constant current. |              |         |      |

**Fast Charge/Discharge:**

Temperature 25°C, CC charge at 1.0CmA to 4.2V; turn to CV charge. Leave it for 5 minutes, and then turn to constant current discharge, and then discharge to 2.75V with 0.2CmA constant current.

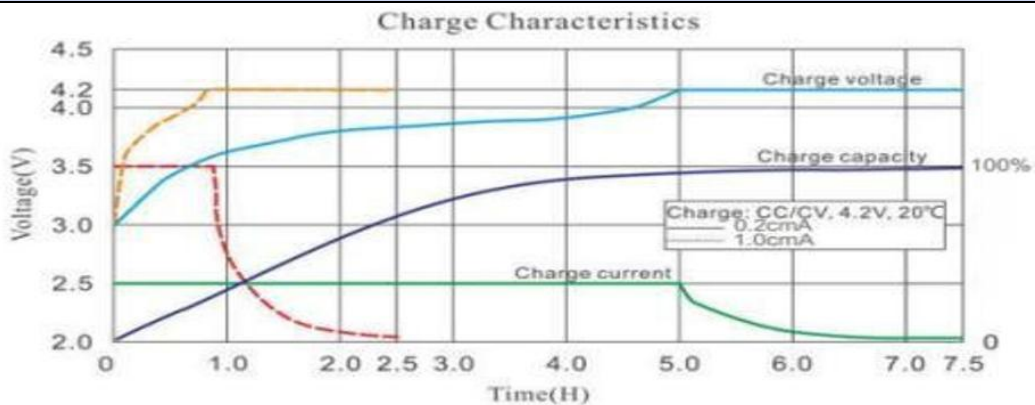
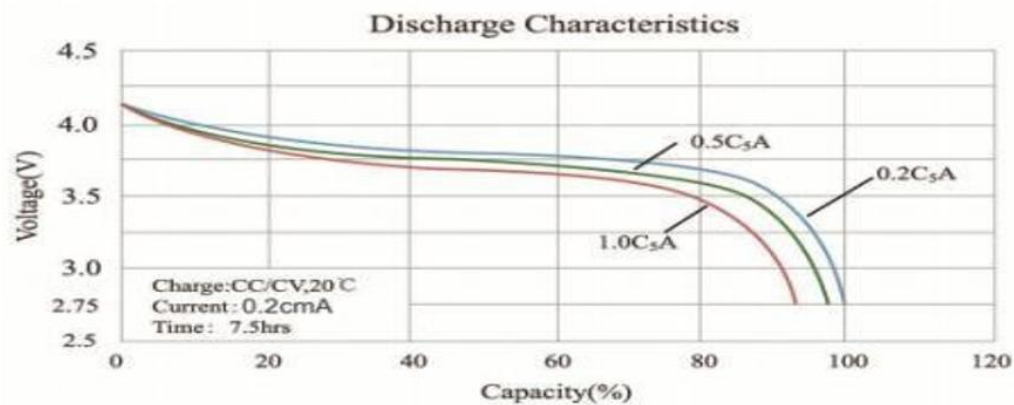
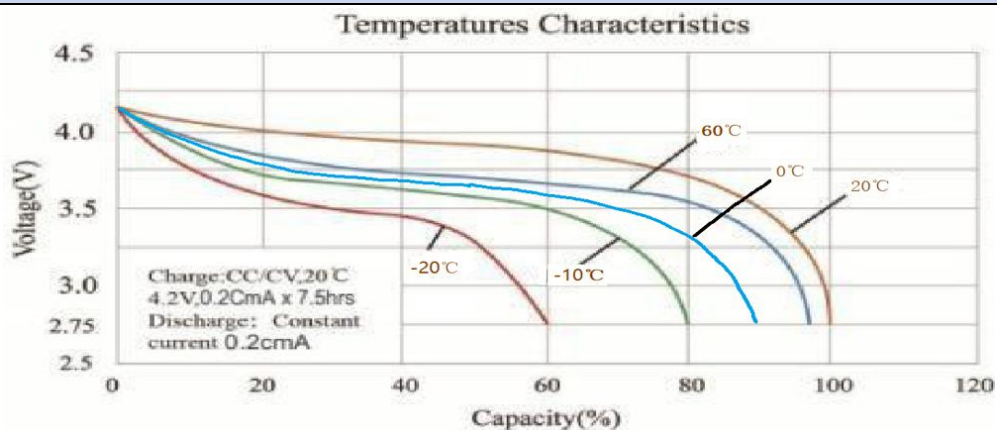
**Temperature Characteristics:**

Working temperature range:

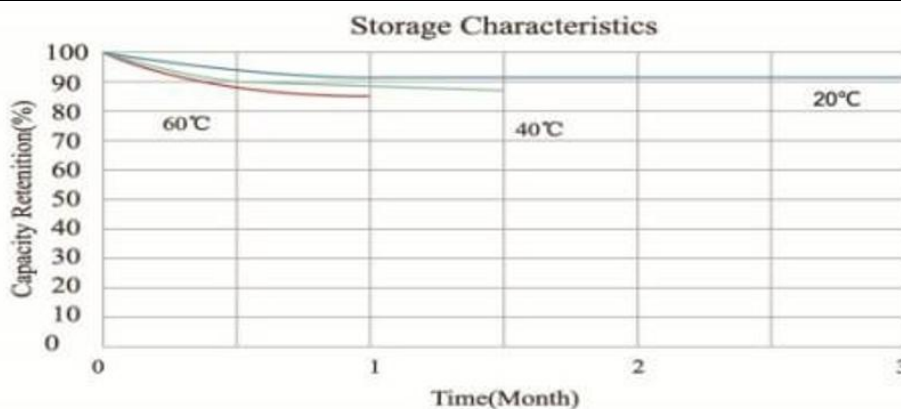
0°C ~ 45°C - Charging

-20°C ~ 60°C - Discharging

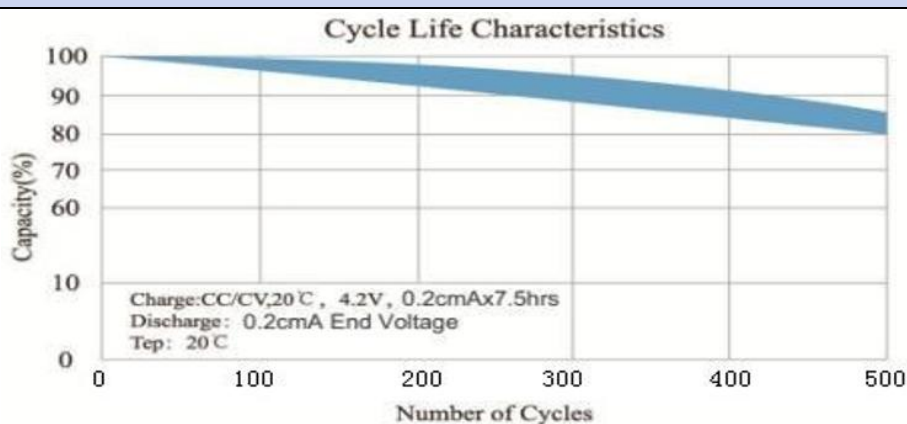
Storage temperature: 20°C ±1

**Charging characteristics at various currents**

**Discharging characteristics at various currents**

**Discharging characteristics at various temperatures**


### Storage characteristics



### Cycle life



## Important notes

- Keep away from source of fire and/or heat.
- Do not disassemble battery and/or battery pack.
- Do not connect the positive and negative pole directly using conductive metal; avoid short circuit.
- Do not put the battery into water or damp it.
- Do not cut the battery.
- Do not strike or needle the battery.
- Charge the battery using specified chargers.
- Do not solder the battery directly.
- Observe the correct polarity (+/-).
- Do not use the battery in un-specified application.
- Do not mix the battery in usage with other types of battery.
- Read the instruction manual carefully before use.
- When the battery is used on load, it is recommended to design a charge/discharge protection circuit for the battery.
- When the battery is stored and not used under room temperature for over 3 months, it needs to be recharged by the procedure below: Discharge by CC mode at 0.2CmA to 2.75V, then rest for 5 minutes, charge by CC mode at 0.2CmA to 4.20V limit, then change to CV charge mode. Cut off the charge when the charging current is less than 0.05CmA.

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## Declaration

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