



ENGLISH

Datasheet

RS Article:1834285

RS Pro Lithium-ion button battery



1. Preface:

The purpose of this product specification is to provide technical information for the rechargeable Lithium-ion button battery LIR1654,

2. Description and Model

2.1 Description	Rechargeable Lithium-ion button battery
2.2 Model	LIR1254

3. Specification

3.1 Capacity	45±5mAh
3.2 Charging Voltage	4.20V
3.3 Nominal Voltage	3.7V at 0.2C mA
3.4 Standard Charging Method	Constant current:9mA Constant voltage 4.20V
3.5 Cut-off Discharge Voltage	2.75V
3.6 Max.Discharge Current	45mA
3.7 Max.Charge Current	45mA
3.8 Cycle Life	>500 cycles at 0.2C mA discharge
3.9 Ambient Temperature	
for Standard Charge	0°C ~45°C
for Discharge	-20°C ~60°C
3.10 Storage	
for within the temperature	-20°C ~60°C
for within the humidity	≤75%
3.11 Energy Density	
Wh/L	
Wh/Kg	
3.12 Weight of Bare Cell	~1.7g
3.13 Charge State Internal Impedance	≤1000mΩ

4. Appearance

Appearance shall be free from any remarkable scratch,flaws, rust, discoloration or electrolyte leakage (visible or by smell).

5. Standard Test condition

5.1 Environment Conditions: Unless otherwise specified,all test stated in this Product Specification are conducted within the temperature 15~25°C and the humidity 45~85%RH.

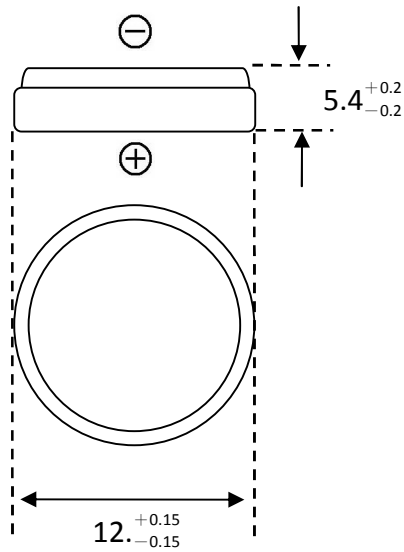
5.2 Test Equipment:

Impedance meter: The impedance meter with AC 1kHz should be used.

6. Test Procedure and Its Standard

Item	Measuring Procedure	Standard
6.1 Appearance	Visual	No Defect and Leak
6.2 Dimension	Caliper	As item 8
6.3 Weight	Scale	As item 3.12
6.4 Maximum Charge Current	CCCV(Constant Current Constant Voltage)	45 mA
6.5 Full charge	CC/CV	Charge it with 0.2CmA constant current till 4.2V(Max), then charge it with constant voltage 4.2V until the charging current drops to 0.01C.
6.6 Open Circuit Voltage	Within 1hr after full charge,measure Open circuit voltage	>4.15V
6.7 Internal Impedance	Measure the battery with 1kHz AC	$\leq 1000\text{m}\Omega$
6.8 Discharge Capacity	Within 1hr after full charge,discharge until final discharge,at 0.2C mA and measure the capacity	>45mAh
6.9 Maximum Discharge Current	Until final discharge voltage	45 mA
6.10 Charge/Discharge Cycle Life	Discharge:0.2CmA to 3.00V,This charge/discharge shall be repeated 500 times Charge:CCCV,CC-0.2CmA,CV- 4.2V until the CC is below 0.01CmA.	Discharge capacity should be >70% of item 6.8
6.11 Leakage Proof	After full charging,the battery shall be stored at $40\pm 2^{\circ}\text{C}$ and humidity $80\pm 5\%$ for 21 days.	No leakage should be observed by visual inspection
6.12 Temperature Characteristics	1) After full charge at $20\pm 5^{\circ}\text{C}$, stand at $-20\pm 2^{\circ}\text{C}$ for 18hrs, then discharge at 0.2C mA and measure the capacity. 2) After full charge at $20\pm 5^{\circ}\text{C}$, stand at $55\pm 2^{\circ}\text{C}$ for 2hrs, then discharge at 1C mA and measure the capacity.	Discharge capacity should be>60% of item 6.8 and no abnormality on its appearance and structure.
6.13 Charge Retention	After full charging, stand at $20\pm 5^{\circ}\text{C}$ discharge capacity for 28 days, measure the discharge should be>85% of item capacity according to item 6.8.	

7. Dimension(Bare cell) mm



8. Important Notes

Use dedicated charger

Keep away from Source of fire or heat.

Do not place battery in a pocket.

Do not disassemble battery

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 using the battery

Do not solder the battery directly.

Observe the correct polarity (+/-).

Do not mix the battery in usage with other types of battery.

Read the instruction manual carefully before use.