



Polymer Battery Specification

Model Number: LP874854 3.7V 2800mAh



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1. SCOPE

This document describes the performance characteristics and testing methods for Polymer batteries produced by Li-ION Ltd., Hungary

2. PRODUCT TYPE AND MODEL NUMBER

2.1 PRODUCT TYPE

Polymer Lithium-ion Battery

2.2 MODEL NUMBER

LP874854 3.7V 2800mAh

SPECIFICATION

No.	Item	Characteristics	Remarks
1	Nominal Capacity	Minimum 2716mAh Typical: 2800mAh	Fully charged @1C to 4.2V for 2.5 hrs, then discharge to 3.0V @ 0.2C.
2	Nominal Voltage	3.7V	
3	Charging Cut-off Voltage	4.2V	
4	Discharge Cut-off Voltage	3.0V	
5	Maximum Constant Charging Current	2800mA (1.0C)	
6	Maximum Continuous Discharging Current	5600mA (2.0C)	
7	Operating Temperature	Charge 0~45°C Discharge -20~60°C	
8	Storage Temperature	-20~45°C for 1Month -20~35°C for 6Months	
9	Weight	45g	Approximate value
10	Storage Voltage	3.80-3.90V	

3. Dimensions

Please refer the drawing in appendix.

4. Appearance

No scratches, dirt, defect, leakage of electrolyte or gassing should be observed as a new product.

5. Characteristics



6.1 Electrochemical performance characteristics

No.	Item	Testing Method	Requirements
1	Fully Charged State	CCCV or Constant current charge to 4.2V @1C follow by a constant voltage holding at 4.2V until current drops below 15 mA.	
2	Rated Capacity	CCCV at 4.2V (per 6.1.1) at room temp. (25±2°C), rest for 1-2 hrs then discharge at a constant current of 0.2C to 3.0V, testing will be terminated by either 5 cycles or any one discharge time exceeds 5 hrs	≥2800mAh
3	Cycle Life @25°C	Discharge to 3.0V @1C, then CCCV charge to 4.2V, rest for 10 min. discharge @ 1C to 3.0V and rest for 10 min. Continue the charge/discharge cycles until discharge capacity lower than 80% of rated capacity.	Cycle life ≥300
4	Internal Impedance With PCM	Internal impedance is measured on a 50% charged battery at 1KHz AC at ambient temperature (25±2) °C.	≤190m Ω
5	Capacity Retention	Fully charge cells per 6.1.1, store them at (20±2)°C for 28 days, then discharge the cells to 3.0V at 0.2C.	Discharge capacity ≥2380mAh
6	High Temperature Characteristics	Fully charge cells per 6.1.1, store them at (55±2)°C for 2 hours, then discharge the cells to 3.0V at 0.2C.	Discharge capacity ≥2380mAh
7	Low Temperature Characteristics	Fully charge cells per 6.1.1, store them at (-10±2)°C for 16~24 hours, then discharge the cells to 3.0V at 0.2C.	Discharge capacity ≥1690mAh
8	Cell Voltage during Transportation	Check open circuit voltage (OCV) of cells prior to the delivery to customers	≥3.80V

6.2 Reliability

No.	Item	Test Method	Requirements
1	Overcharge	Discharge cells to 3.0V at 1C, then charge to 4.8V at 3C and rest for 8 hours.	No fire No explosion
2	Over Discharge	Fully charge cells per 6.1.1, then discharge the battery to 3.0V with 0.2CmA at room temperature, connect with external load of 30 Ω for 24hours.	No fire No explosion
3	Hot Oven Test	Put a fully charged battery in a forced air oven and raise the temperature at 5±2°C/min. to 130±2°C Rest for 10 minutes.	No fire No explosion

