

UN/DOT 38.3

UN 38.3 Test Summary Report for Lithium Batteries



ELERIX EX-L100K

[a] Cell Battery Product || Tested Type Part #: 48173125 || Same Type Part #: EX-L100K

Lithium Iron Phosphate Cell

Lithium Cell or Battery Test Summary in Accordance with Section 2.9.4 UN Model Regulations and Sub-section 38.3 of the UN Manual of Tests and Criteria, Part III, subsection 38.3.5


TEST RESULT: PASSED

[b] Applicant	ELERIX LTD
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	www.elerix.com

EU Representative	GIWAL LTD, o.z.
	Sterboholska 1404/104, 102 00 Praha 10 Czech Republic, EU
	www.giwal.com

[c] Certified Laboratory	Shenzhen TCT Testing Technology Co. Ltd. 1B/F. Building 1, Yibaolai Industrial Park, Qiaotou, Fuyong, Baoan District, Shenzhen, Guangdong. China
	

[d] Test Report No/ID.	TCT2010009B022	[e] Date of issue	2020-10-23
Test Results	PASSED	Validity	Permanent
[i] Tested According To:	ST/SG/AC.10/11/Rev.6/Section 38.3 UN Manual of Tests and Criteria, Part III, sub-section 38.3. third revised edition, am. 1		
[h] Battery assembly	<input checked="" type="checkbox"/> Not Applicable. <input type="checkbox"/> UN38.3.3 (f) <input type="checkbox"/> UN38.3.3 (g)		

	[j] Signatory Issued: 2021/8/13 <i>Kurt Sanders</i> Chief Technology Officer
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APPLICANT	ELERIX LTD
	Enterprise House 2 Pass Street, Oldham, Manchester, United Kingdom, OL9 6HZ
	www.elerix.com
BRAND	ELERIX (OEM)
[f] (iv) DESCRIPTION / MODEL	EX-L100K
[f] (v)	<input checked="" type="checkbox"/> Cell <input type="checkbox"/> Battery <input type="checkbox"/> Product
[f] (i) Chemistry	Li-metal (Li-Fe)
Nominal Voltage	3.2 V
Nominal Capacity	100 Ah
[f] (iii) Nominal Energy – Watthour rating	320 Wh
[f] (ii) Nominal Weight – Mass (g)	2300 g

TEST DATA RESULTS	
[g] List of Tests Conducted - Test Report ID	TCT2010009B022
38.3.4.1 - T1 – Altitude Simulation (Primary and Secondary Cells and Batteries) Low pressure testing that simulates unpressurized airplane cargo area at 15,000-meter altitude. After storing batteries at 11.6kPa for >6 hours, these criteria shall be met: no mass loss, leaking, venting, disassembly, rupture or fire, and voltage within 10% of pre-test voltage.	PASSED
38.3.4.2 - T2 – Thermal Test (Primary and Secondary Cells and Batteries) Test covers changes in temperature extremes from -40C to +75C. Batteries are stored for 6 hours at -40C (12 hours for large cells/batteries), then 6 hours at +75C (12 hours for large cells/batteries), for a total of 10 cycles.	PASSED
38.3.4.3 - T3 – Vibration (Primary and Secondary Cells and Batteries) Test simulates vibration during transportation. Test is a Sine Sweep: 7Hz – 200Hz – 7Hz in 15 Minutes; 12 Sweeps (3 hours); 3 mutually perpendicular axes.	PASSED
38.3.4.4 - T4 – Shock (Primary and Secondary Cells and Batteries) Test also simulates vibration during transportation. Test is a Half-Sine pulse: 150G/6ms for small cells/batteries; 50G/11ms for large cells/batteries; 3 pulses per direction; 6 directions (+/-z, +/-x, +/-y).	PASSED
38.3.4.5 - T5 – External Short Circuit (Primary and Secondary Cells and Batteries) This test simulates an external short to the terminals of the cell or battery. At temperature of +55C, apply short circuit (<0.1ohm) across terminals. Maintain at least an hour after sample temperature returns to +55 +/-2°C. Pass criteria are: Case temperature does not exceed +170°C and no disassembly, rupture, or fire within 6 hours of test. Fuse, current limiting circuit, and venting mechanism activation are allowable.	PASSED
38.3.4.5 - T6 – Impact (Primary and Secondary Cells) This test is only applicable to primary and secondary cells. For cylindrical cells >20mm diameter, it simulates impact to case of cell.	PASSED
38.3.4.5 - T7 – Overcharge (Secondary Batteries) This test is for secondary or rechargeable batteries only. It simulates an overcharge condition on a rechargeable battery: 2x the manufacturer’s recommended charge current for 24 hours. Then battery shall be monitored for 7 days for fire or disassembly.	PASSED
38.3.4.5 - T8 – Forced Discharge (Primary and Secondary Cells) This testing simulates a forced discharge condition for primary and secondary cells only.	PASSED
SUMMARY OF PERFORMED TESTS	ALL PASSED

PHOTOS OF PRODUCTS AND SAMPLES

