



Intellect Pioneering Battery Technology Co.,Ltd.

UN38.3 TEST REPORT AND DROP TEST

Product Category : Lithium-ion Polymer Rechargeable Battery

Model : IP1002737-2P

NO. : 202102008

Product Category : Lithium-Ion Polymer Rechargeable Battery				Model : TP100213/21			NO. : 202102008				
TEST ITEM	TEST METHOD	CRITERION	CELL ID	Before The Test			After The Test			Test Results	Conclusion
				I.R(mΩ)	Voltage(V)	mass(g)	I.R(mΩ)	Voltage(V)	mass(g)		
T-1 Altitude Simulation	Test cell is stored at a pressure of 11.6kPa for above six hours at ambient temperature 20 ± 5 ℃.	No mass loss No leakage No venting No disassembly No rupture No fire. The ocv of each test cell after testing is not less than 90%.	1#	73.28	4.186	39.44	73.28	4.185	39.44	No mass loss No leakage No venting No disassembly No rupture No fire	pass
			2#	73.22	4.186	39.59	73.23	4.185	39.58		pass
			3#	73.36	4.190	39.54	73.36	4.189	39.54		pass
T-2 Thermal Test	4#		73.55	4.185	39.67	75.40	4.120	39.66	pass		
	5#		73.41	4.184	39.51	75.25	4.119	39.51	pass		
	6#		73.77	4.192	39.36	75.39	4.124	39.35	pass		
	7#		73.38	4.186	39.36	75.45	4.118	39.36	pass		
	8#		73.35	4.182	39.52	75.29	4.123	39.52	pass		
	9#		73.49	4.181	39.61	75.38	4.118	39.61	pass		
T-3 Vibration	10#		73.24	4.184	39.59	73.25	4.182	39.59	pass		
	11#		73.44	4.187	39.51	73.45	4.186	39.51	pass		
	12#		73.39	4.186	39.52	73.40	4.185	39.52	pass		
T-4 Shock	Each cell is subjected to a half-sine shock of peak acceleration of 150gn and pulse duration of 6ms or to a half-sine shock of peak acceleration of 50gn and pulse duration of 11ms,and then it is subjected to three shocks in the positive direction followed by three shocks in the negative direction of three mutually perpendicular mounting positions of the cell.		13#	73.36	4.188	39.52	73.37	4.187	39.52	No disassembly No rupture No fire	pass
			14#	73.03	4.189	39.53	73.05	4.188	39.52		pass
			15#	73.53	4.181	39.39	73.54	4.180	39.39		pass
			16#	73.93	4.185	39.32	73.94	4.184	39.32		pass
			17#	73.45	4.186	39.57	73.46	4.186	39.57		pass
			18#	73.80	4.188	39.52	73.81	4.187	39.51		pass
		19#	73.15	4.183	39.50	73.16	4.183	39.50	pass		
T-5 External Short Circuit	The cell is subjected to a short circuit condition with a total external resistance of less than 0.1 ohm at 57±4℃,this short circuit is continued for 1h after the cell external case temperature has returned to 57±4℃,and observe the cell for six hours.	20#	73.33	4.184	/	Max Temperature 57℃			No disassembly No fire		pass
		21#	73.24	4.182	/	Max Temperature 57℃					pass
		22#	73.43	4.191	/	Max Temperature 57℃				pass	
		23#	73.27	4.186	/	Max Temperature 57℃				pass	
T-6 Crush	1. A cell or component cell is to be crushed between two flat surfaces. The crushing is to be gradual with a speed of approximately 1,5 cm/s at the first point of contact. The crushing is to be continued until the first of the three options below is reached. (a) The applied force reaches 13 kN ± 0,78 kN. (b) The voltage of the cell drops by at least 100 mV, (c) The cell is deformed by 50% or more of its original thickness./ 2. A prismatic or pouch cell shall be crushed by applying the force to the widest side. A button/coin cell shall be crushed by applying the force on its flat surface.	If the external temperature don't exceed 170℃,there is no disassembly within six hours.	24#	42.37	3.836	/	Max Temperature 23℃			No disassembly No fire	pass
			25#	42.49	3.834	/	Max Temperature 22℃				pass
			26#	42.45	3.835	/	Max Temperature 22℃				pass
			27#	42.56	3.833	/	Max Temperature 22℃				pass
			28#	42.19	3.832	/	Max Temperature 22℃				pass
T-7 Overcharge	The cell is overcharge for 24 hours under the condition of twice max continuous charge current(1C) and twice max charge voltage(8.4V DC),and observe the cell for 7 days.	No disassembly No fire within 7 days	29#	73.98	4.191	/	/	/	/	No disassembly No fire within 7 days	pass
			30#	73.73	4.184	/	/	/	/		pass
			31#	73.26	4.181	/	/	/	/		pass
T-8 Forced Discharge	The cell is connected in series with a 12V D.C. power,and then is forced discharged with max discharge current,and observe the cell for 7 days.	No disassembly No fire within 7 days	32#	42.32	3.289	/	/	/	/	No disassembly No fire within 7 days	pass
			33#	42.24	3.293	/	/	/	/		pass
			34#	42.35	3.295	/	/	/	/		pass
Drop Test	Each package is capable of withstanding a 1.2m drop test in any orientation without damage to cells or batteries contained therein,without shifting of the contents so as to allow battery to battery contact and without release of contents.	No damage to batteries. No battery to battery contact. No release of congenets from the package.	35#	73.45	4.188	39.52	73.45	4.188	39.52	No damage to batteries. No battery to battery contact. No release of congenets from the package.	pass
			36#	73.07	4.190	39.61	73.08	4.189	39.61		pass
			37#	73.91	4.192	39.63	73.91	4.192	39.63		pass
			38#	73.20	4.188	39.66	73.20	4.188	39.65		pass
			39#	73.45	4.185	39.50	73.45	4.185	39.50		pass

Date of Test : 2021/02/01-2021/02/19

Operator: Hangeng Su

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Approval: Gui Xiao