



中国认可
检测
TESTING
CNAS L2914

Report No.:DGMSZ20S12LD001

UN38.3 检测报告

UN38.3 Test Report

样品名称:	可充电聚合物锂离子电池 E06R
Sample Name:	Rechargeable Polymer Lithium Ion Battery E06R
型号规格:	E06R 3.7V 200mAh 0.74Wh
Model:	
委托单位:	深圳市朗恒电子有限公司
Applicant:	SHEN ZHEN LANG HENG ELECTRONIC CO.,LTD
检测项目:	高度模拟、温度试验、振动、冲击、外部短路、挤压、过度充电、强制放电
Test Items:	Altitude simulation, Thermal test, Vibration, Shock, External short circuit, Crush, Overcharge, Forced discharge
检测类别:	委托检测
Test Category:	Commission test

北京迪捷姆空运技术开发有限公司

Beijing DGM Air Transport Technology Co., Ltd.

报告书使用约定

Terms of the Using of the Report

1. 本公司依据委托人（托运人或其代理人）提供的物品，做出检测并出具此报告书。

The report is issued by DGM China according to the test of the goods and the information of its shipping provided by the applicant (shipper or his agent).

2. 依据检测的需要，本公司要求委托人提供真实、完整的货物样品及资料。

According to the demand of test, DGM China requires the applicant to provide true and exact sample and data of the cargo.

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The applicant guarantees that the declared goods and/or the sample who provides should be identical with the contents of cargo that is to be transported.

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Beijing DGM Air Transport Technology Co., Ltd.
UN38.3 检 测 报 告
UN38.3 Test Report

样品类型 Sample Type	单电芯锂离子电池 Single Cell Li-ion Battery		商标 Trademark	FENIX
			型号/规格 Model	E06R 3.7V 200mAh 0.74Wh
委托单位 Applicant	名称 Name	深圳市朗恒电子有限公司 SHEN ZHEN LANG HENG ELECTRONIC CO.,LTD		
	地址 Address	深圳市宝安区 33 区 东方明工业城二栋八楼 8/F, 2nd Building, DongFangMing Industrial Center, 33rd District, Bao'an, Shenzhen		
来样方式 Means of Receiving	委托方送样 Submitted by applicant		送样日期 Accepted Date	2020.04.12
检测日期 Test Date	2020.04.13-2020.05.08			
检测地点 Test Site	深圳实验室 Shenzhen Laboratory		出证地点 Certificate Site	深圳分公司 Shenzhen Branch
检测项目 Test Items	高度模拟、温度试验、振动、冲击、外部短路、挤压、过度充电、强制放电 Altitude simulation, Thermal test, Vibration, Shock, External short circuit, Crush, Overcharge, Forced discharge			
检测依据 Test Method	联合国《关于危险货物运输的建议书-试验和标准手册》(第 6 版修订一) 38.3 节 UN Recommendations on the Transport of Dangerous Goods Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 /Amend. 1/ Subsection 38.3			
检测结论 Conclusion	根据联合国《关于危险货物运输的建议书-试验和标准手册》(第 6 版修订一) 38.3 节的规定, 该电池样品通过所有项目检测, 符合该条款的性能要求。 The samples have passed all test items of UN Recommendations on the Transport of Dangerous Goods - Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 /Amend. 1/ Subsection 38.3. 检测单位(盖章) Test Lab(Stamp) 签发日期(Issue Date): 2020 年 05 月 18 日			

检测:

Tested by:

罗晓峰

审核:

Checked by:

王明

批准:

Approved by:

马海

电池信息 Information for Battery			
电芯生产厂家 Cell manufacturer	东莞市金赛尔电池科技有限公司 Dongguan Golden CEL Battery Co.,Ltd.		
电芯厂家联系电话 Phone number	植荣健 18813387614	邮箱 e-mail	zhirongjian@celbattery.com
电芯厂家地址 Address	东莞市塘厦镇蛟乙塘银湖路 11 号 No. 11 Yinhu Industrial Park, Jiao YiTang Management Zone, TangXia, DongGuan, GuangDong		
电芯厂家网址 Website	//		
Pack 厂家 Pack manufacturer	东莞市金赛尔电池科技有限公司 Dongguan Golden CEL Battery Co.,Ltd.		
Pack 厂家联系电话 Phone number	植荣健 18813387614	邮箱 e-mail	zhirongjian@celbattery.com
Pack 厂家地址 Address	东莞市塘厦镇蛟乙塘银湖路 11 号 No. 11 Yinhu Industrial Park, Jiao YiTang Management Zone, TangXia, DongGuan, GuangDong		
Pack 厂家网址 Website	//		

电芯参数 Information for cell			
电芯型号 Cell Model	722018		
标称电压 Nominal Voltage	3.7V	额定容量 Rated Capacity	200mAh
标准充电电流 Standard Charging Current	40mA	标准放电电流 Standard discharging Current	40mA
最大连续充电电流 Maximum charging current	200mA	最大持续放电电流 Maximum Continuous discharge current	200mA
充电限制电压 Limited charging voltage	4.2V	放电截止电压 Cut-Off voltage	3.0V
外观形状 Appearance	银色长方体 Silvery cuboid	电芯尺寸 Cell size	17.5×18.9×7.2mm

电池参数 Information for battery			
标准充电电流 Standard charging current	40mA	标准放电电流 Standard discharging current	40mA
最大连续充电电流 Maximum charging current	200mA	最大放电电流 Maximum discharge current	200mA
充电限制电压 Limited charging voltage	4.2V	放电截止电压 Cut-Off voltage	3.0V
规格/型号 Model	E06R 3.7V 200mAh 0.74 Wh	电池尺寸 Battery size	18.9×19.2×7.2mm
组成电芯数量 Number of cell	单电芯 Single cell	外观形状 Appearance	银黄杂色长方体 Silvery-yellow cuboid

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UN38.3 检 测 报 告

UN38.3 Test Report

序号 No.	检测项目 Test Items	标准要求或标准条款 Standard Requirement or the Clause of Standard	检测结果 Test Result	单项评价 Conclusion	备注 Remark
1	高度模拟 Altitude Simulation	ST/SG/AC.10/11/Rev.6/ Amend. 1/ Subsection 38.3 Test T.1	无泄漏、无排气、无解体、无破裂、无起火， 试验后的开路电压不低于试验前的 90%。 No leakage, no venting, no disassembly, no rupture and no fire. The open circuit voltage of each battery after testing is not less than 90% of its voltage immediately prior to this procedure.	符合 Pass	/
2	温度试验 Thermal Test	ST/SG/AC.10/11/Rev.6/ Amend. 1/ Subsection 38.3 Test T.2	无泄漏、无排气、无解体、无破裂、无起火， 试验后的开路电压不低于试验前的 90%。 No leakage, no venting, no disassembly, no rupture and no fire. The open circuit voltage of each battery after testing is not less than 90% of its voltage immediately prior to this procedure.	符合 Pass	/
3	振动 Vibration	ST/SG/AC.10/11/Rev.6/ Amend. 1/ Subsection 38.3 Test T.3	无泄漏、无排气、无解体、无破裂、无起火， 试验后的开路电压不低于试验前的 90%。 No leakage, no venting, no disassembly, no rupture and no fire. The open circuit voltage of each battery after testing is not less than 90% of its voltage immediately prior to this procedure.	符合 Pass	/
4	冲击 Shock	ST/SG/AC.10/11/Rev.6/ Amend. 1/ Subsection 38.3 Test T.4	无泄漏、无排气、无解体、无破裂、无起火， 试验后的开路电压不低于试验前的 90%。 No leakage, no venting, no disassembly, no rupture and no fire. The open circuit voltage of each battery after testing is not less than 90% of its voltage immediately prior to this procedure.	符合 Pass	/
5	外部短路 External Short Circuit	ST/SG/AC.10/11/Rev.6/ Amend. 1/ Subsection 38.3 Test T.5	外壳温度不超过 170 ℃，无解体、无破裂、无 起火。 External temperature does not exceed 170℃. No disassembly, no rupture and no fire.	符合 Pass	/
6	挤压 Crush	ST/SG/AC.10/11/Rev.6/ Amend. 1/ Subsection 38.3 Test T.6	外壳温度不超过 170 ℃，无解体、无起火。 External temperature does not exceed 170℃. No disassembly, no fire.	符合 Pass	/
7	过度充电 Overcharge	ST/SG/AC.10/11/Rev.6/ Amend. 1/ Subsection 38.3 Test T.7	无解体、无起火。 No disassembly, no fire.	符合 Pass	/
8	强制放电 Forced Discharge	ST/SG/AC.10/11/Rev.6/ Amend. 1/ Subsection 38.3 Test T.8	无解体、无起火。 No disassembly, no fire.	符合 Pass	/

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T.1: 高度模拟

T.1: Altitude Simulation

样品编号 Sample No.	样品状态 Sample Status	检测前 Pre-test		检测后 After-test				有无泄漏、排气、解体、破裂、起火 Leakage, Venting, Disassembly, Rupture, Fire(Yes/No)
		质量 Mass	开路电压 OCV	质量 Mass	质量损失 Mass Loss	开路电压 OCV	剩余电压 Residual	
		m ₁ (g)	V ₁ (V)	m ₂ (g)	(%)	V ₂ (V)	OCV (%)	
A1	首次完全充电 First cycle fully charged	4.149	4.181	4.148	0.024	4.177	99.90	No
A2	首次完全充电 First cycle fully charged	4.112	4.182	4.112	0.000	4.178	99.90	No
A3	首次完全充电 First cycle fully charged	4.131	4.176	4.131	0.000	4.172	99.90	No
A4	首次完全充电 First cycle fully charged	4.120	4.181	4.120	0.000	4.176	99.88	No
A5	首次完全充电 First cycle fully charged	4.178	4.182	4.178	0.000	4.178	99.90	No
A6	25 次完全充电 25 cycles fully charged	4.164	4.176	4.164	0.000	4.173	99.93	No
A7	25 次完全充电 25 cycles fully charged	4.120	4.179	4.120	0.000	4.175	99.90	No
A8	25 次完全充电 25 cycles fully charged	4.108	4.180	4.107	0.024	4.171	99.78	No
A9	25 次完全充电 25 cycles fully charged	4.118	4.177	4.118	0.000	4.170	99.83	No
A10	25 次完全充电 25 cycles fully charged	4.149	4.178	4.149	0.000	4.175	99.93	No

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T.2: 温度试验

T.2: Thermal Test

样品编号 Sample No.	样品状态 Sample Status	检测前 Pre-test		检测后 After-test				有无泄漏、排气、 解体、破裂、起火 Leakage, Venting, Disassembly, Rupture, Fire(Yes/No)
		质量 Mass $m_1(g)$	开路电压 OCV $V_1(V)$	质量 Mass $m_2(g)$	质量损失 Mass Loss (%)	开路电压 OCV $V_2(V)$	剩余电压 Residual OCV (%)	
A1	首次完全充电 First cycle fully charged	4.148	4.177	4.145	0.072	4.123	98.71	No
A2	首次完全充电 First cycle fully charged	4.112	4.178	4.108	0.097	4.125	98.73	No
A3	首次完全充电 First cycle fully charged	4.131	4.172	4.128	0.073	4.120	98.75	No
A4	首次完全充电 First cycle fully charged	4.120	4.176	4.115	0.121	4.121	98.68	No
A5	首次完全充电 First cycle fully charged	4.178	4.178	4.173	0.120	4.122	98.66	No
A6	25 次完全充电 25 cycles fully charged	4.164	4.173	4.162	0.048	4.119	98.71	No
A7	25 次完全充电 25 cycles fully charged	4.120	4.175	4.119	0.024	4.120	98.68	No
A8	25 次完全充电 25 cycles fully charged	4.107	4.171	4.105	0.049	4.117	98.71	No
A9	25 次完全充电 25 cycles fully charged	4.118	4.170	4.117	0.024	4.118	98.75	No
A10	25 次完全充电 25 cycles fully charged	4.149	4.175	4.147	0.048	4.121	98.71	No
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T.3: 振动

T.3: Vibration

样品编号 Sample No.	样品状态 Sample Status	检测前 Pre-test		检测后 After-test				有无泄漏、排气、 解体、破裂、起火 Leakage, Venting, Disassembly, Rupture, Fire(Yes/No)
		质量 Mass m ₁ (g)	开路电压 OCV V ₁ (V)	质量 Mass m ₂ (g)	质量损失 Mass Loss (%)	开路电压 OCV V ₂ (V)	剩余电压 Residual OCV (%)	
A1	首次完全充电 First cycle fully charged	4.145	4.123	4.143	0.048	4.121	99.95	No
A2	首次完全充电 First cycle fully charged	4.108	4.125	4.107	0.024	4.122	99.93	No
A3	首次完全充电 First cycle fully charged	4.128	4.120	4.126	0.048	4.119	99.98	No
A4	首次完全充电 First cycle fully charged	4.115	4.121	4.113	0.049	4.120	99.98	No
A5	首次完全充电 First cycle fully charged	4.173	4.122	4.170	0.072	4.120	99.95	No
A6	25 次完全充电 25 cycles fully charged	4.162	4.119	4.161	0.024	4.118	99.98	No
A7	25 次完全充电 25 cycles fully charged	4.119	4.120	4.118	0.024	4.119	99.98	No
A8	25 次完全充电 25 cycles fully charged	4.105	4.117	4.103	0.049	4.115	99.95	No
A9	25 次完全充电 25 cycles fully charged	4.117	4.118	4.115	0.049	4.117	99.98	No
A10	25 次完全充电 25 cycles fully charged	4.147	4.121	4.146	0.024	4.119	99.95	No
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T.4: 冲击

T.4: Shock

样品编号 Sample No.	样品状态 Sample Status	检测前 Pre-test		检测后 After-test				有无泄漏、排气、 解体、破裂、起火 Leakage, Venting, Disassembly, Rupture, Fire(Yes/No)
		质量 Mass $m_1(g)$	开路电压 OCV $V_1(V)$	质量 Mass $m_2(g)$	质量损失 Mass Loss (%)	开路电压 OCV $V_2(V)$	剩余电压 Residual OCV (%)	
A1	首次完全充电 First cycle fully charged	4.143	4.121	4.142	0.024	4.120	99.98	No
A2	首次完全充电 First cycle fully charged	4.107	4.122	4.107	0.000	4.121	99.98	No
A3	首次完全充电 First cycle fully charged	4.126	4.119	4.125	0.024	4.118	99.98	No
A4	首次完全充电 First cycle fully charged	4.113	4.120	4.113	0.000	4.119	99.98	No
A5	首次完全充电 First cycle fully charged	4.170	4.120	4.168	0.048	4.118	99.95	No
A6	25 次完全充电 25 cycles fully charged	4.161	4.118	4.161	0.000	4.117	99.98	No
A7	25 次完全充电 25 cycles fully charged	4.118	4.119	4.117	0.024	4.118	99.98	No
A8	25 次完全充电 25 cycles fully charged	4.103	4.115	4.103	0.000	4.115	100.00	No
A9	25 次完全充电 25 cycles fully charged	4.115	4.117	4.114	0.024	4.116	99.98	No
A10	25 次完全充电 25 cycles fully charged	4.146	4.119	4.145	0.024	4.117	99.95	No

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T.5: 外部短路**T.5: External Short Circuit**

样品编号 Sample No	样品状态 Sample Status	样品表面最高温度(℃) Highest External Temperature/℃	有无解体、破裂、起火 Disassembly, Rupture, Fire(Yes/No)
A1	首次完全充电 First cycle fully charged	55.7	No
A2	首次完全充电 First cycle fully charged	56.2	No
A3	首次完全充电 First cycle fully charged	56.3	No
A4	首次完全充电 First cycle fully charged	56.1	No
A5	首次完全充电 First cycle fully charged	57.0	No
A6	25 次完全充电 25 cycles fully charged	55.8	No
A7	25 次完全充电 25 cycles fully charged	56.6	No
A8	25 次完全充电 25 cycles fully charged	56.1	No
A9	25 次完全充电 25 cycles fully charged	56.5	No
A10	25 次完全充电 25 cycles fully charged	56.4	No
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T.6: 挤压**T.6: Crush**

样品编号 Sample No.	样品状态 Sample Status	样品表面最高温度(℃) Highest External Temperature/℃	有无解体、起火 Disassembly, Fire(Yes/No)
B1	首次 50%容量 First cycle charged 50% rated capacity	31.9	No
B2	首次 50%容量 First cycle charged 50% rated capacity	31.7	No
B3	首次 50%容量 First cycle charged 50% rated capacity	31.5	No
B4	首次 50%容量 First cycle charged 50% rated capacity	31.8	No
B5	首次 50%容量 First cycle charged 50% rated capacity	31.8	No
B6	25 次 50%容量 25 cycles charged 50% rated capacity	30.6	No
B7	25 次 50%容量 25 cycles charged 50% rated capacity	30.3	No
B8	25 次 50%容量 25 cycles charged 50% rated capacity	30.8	No
B9	25 次 50%容量 25 cycles charged 50% rated capacity	30.5	No
B10	25 次 50%容量 25 cycles charged 50% rated capacity	30.7	No
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T.7: 过度充电**T.7: Overcharge**

样品编号 Sample No.	样品状态 Sample Status	有无解体、起火 Disassembly, Fire(Yes/No)
C1	首次完全充电 First cycle fully charged	No
C2	首次完全充电 First cycle fully charged	No
C3	首次完全充电 First cycle fully charged	No
C4	首次完全充电 First cycle fully charged	No
C5	25 次完全充电 25 cycles fully charged	No
C6	25 次完全充电 25 cycles fully charged	No
C7	25 次完全充电 25 cycles fully charged	No
C8	25 次完全充电 25 cycles fully charged	No
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T.8: 强制放电

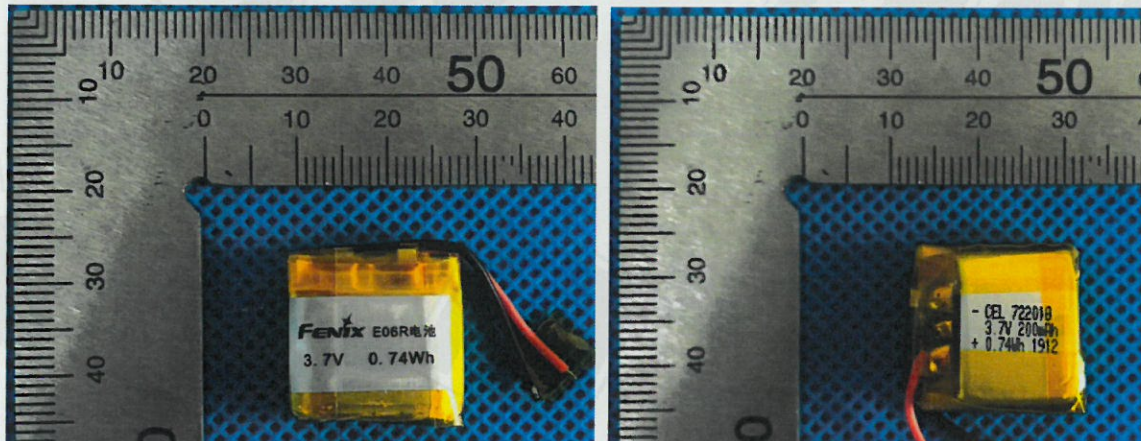
T.8: Forced Discharge

样品编号 Sample No.	样品状态 Sample Status	有无解体、起火 Disassembly, Fire(Yes/No)
D1	首次完全放电 First cycle fully discharged	No
D2	首次完全放电 First cycle fully discharged	No
D3	首次完全放电 First cycle fully discharged	No
D4	首次完全放电 First cycle fully discharged	No
D5	首次完全放电 First cycle fully discharged	No
D6	首次完全放电 First cycle fully discharged	No
D7	首次完全放电 First cycle fully discharged	No
D8	首次完全放电 First cycle fully discharged	No
D9	首次完全放电 First cycle fully discharged	No
D10	首次完全放电 First cycle fully discharged	No
D11	25 次完全放电 25 cycles fully discharged	No
D12	25 次完全放电 25 cycles fully discharged	No
D13	25 次完全放电 25 cycles fully discharged	No
D14	25 次完全放电 25 cycles fully discharged	No
D15	25 次完全放电 25 cycles fully discharged	No
D16	25 次完全放电 25 cycles fully discharged	No
D17	25 次完全放电 25 cycles fully discharged	No
D18	25 次完全放电 25 cycles fully discharged	No
D19	25 次完全放电 25 cycles fully discharged	No
D20	25 次完全放电 25 cycles fully discharged	No
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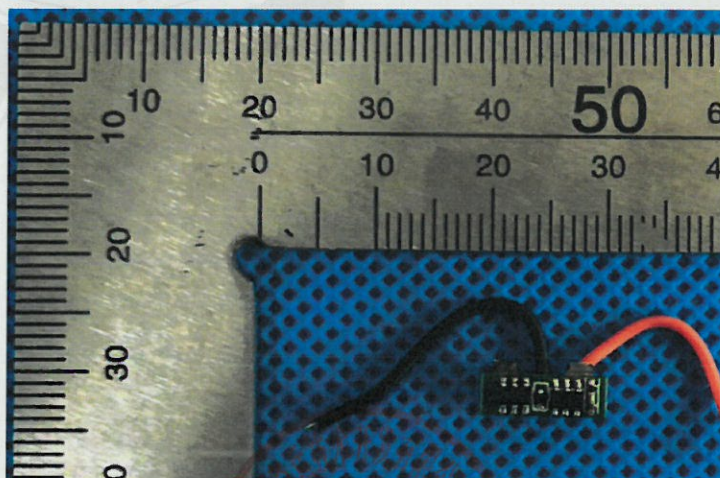
UN38.3 检 测 报 告

UN38.3 Test Report

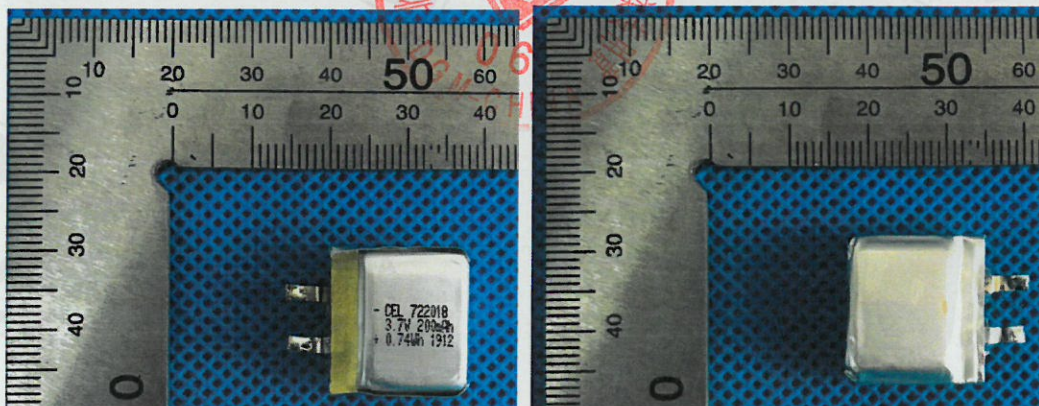
电池图片/Battery pictures



保护装置/Protective devices



内部电芯/Internal cell:



* End of the report *