



NO.1123120163

# 检测报告

## Test Report

样品名称：可充式锂离子电池 1054PF4C1 3.8V 42.5mAh 0.17Wh

Name of Sample: Rechargeable Lithium-ion cell 1054PF4C1 3.8V 42.5mAh 0.17Wh

委托单位：重庆市紫建电子股份有限公司

Consignor: Chongqing VDL Electronics Co., Ltd.



上海化工院检测有限公司

Shanghai Institute of Chemical Industry Testing Co., Ltd.

# 声 明

## Statement

1. 检测报告无本实验室公章（或检验检测专用章）无效。

The test report is invalid if it is not affixed the official seal of the laboratory to it.

2. 复制检测报告未重新加盖本实验室公章（或检验检测专用章）无效。

Copies of the test report without the official seal of the laboratory are invalid.

3. 检测报告无编制、审核、批准人签字无效。

The test report is invalid without the signatures of compiler, checker and approver.

4. 检测报告涂改无效。

The test report is invalid if it is blotted out.

5. 未经本实验室书面批准，不得部分复制检测报告。

It is forbidden to copy the test report partially without the written approval of the laboratory.

6. 送样委托检测结果，仅对所送样品有效。

The conclusion of the consignment test is only valid for the provided sample.

7. 本检测报告以中文为准，英文文本（如有）仅为译文，两者发生冲突时，应以中文文本为准。

The test report has been drafted in Chinese and translated into English (if exist) for convenience only. In the event of discrepancy, the Chinese version shall prevail.

8. 除另有说明，检测检验类别都是指委托分析。

Unless noted otherwise, the test type is consignment test.

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样品名称 Name of Sample	中文 Chinese	可充式锂离子电池 1054PF4C1 3.8V 42.5mAh 0.17Wh	
	英文 English	Rechargeable Lithium-ion cell 1054PF4C1 3.8V 42.5mAh 0.17Wh	
样品编号 Sample No.	1123120163		
委托单位 Consignor	重庆市紫建电子股份有限公司 Chongqing VDL Electronics Co., Ltd.		
生产单位 Manufacturer	重庆市紫建电子股份有限公司 Chongqing VDL Electronics Co., Ltd.		
检测方法 Test method	联合国《试验和标准手册》 ST/SG/AC.10/11/Rev.7&Amend.1 38.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3		
判定标准 Criterion	联合国《试验和标准手册》 ST/SG/AC.10/11/Rev.7&Amend.1 38.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3		
样品外观 Appearance	银色, 黄色双色 钮扣状塑料薄膜外壳 Silvery and yellow Button plastic film shell		
样品接受日期 Accepted Date	2023-12-07	检测起迄日期 Test Date	2023-12-14 ~ 2024-01-11
检测项目 Test Items	高度模拟;热测试;振动;冲击;外短路;挤压;强制放电 Altitude simulation, Thermal test, Vibration, Shock, External short circuit, Crush, Forced discharge		
检测结论 Conclusion	经检测, 该样品符合联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3标准要求。 The sample has passed the test items of UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 生效日期(Date): 2024-01-11		
备注 Comment	可充电单电芯电池Rechargeable Single Cell Battery. 该单电芯电池未安装过充电保护装置, 按设计要求只用于作为另一带过充电保护装置电池组或设备的部件, 未进行过充电测试。 Single cell batteries not equipped with battery overcharge protection that are designed to be only as a component in another battery or in equipment, which affords such protection, are not subject to the requirements of this test.		
委托单位地址 Consignor Address	/		邮政编码 Post Code /

批准  
Approver:  
职务  
Title:

许钲

审核  
Checker:

陆建峰

编制  
Compiler:

傅佳

电化学测试部部长(Head of Electrochemical Testing Department)



上海化工院检测有限公司  
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序号 No.	检测项目名称 Name of Test Items	标准要求或标准条款号 Standard requirement or The Clause Number of Standard	检测结果 Test Result	本项结论 Conclusion	备注 Remark	
1	高度模拟 Altitude simulation	联合国《试验和标准手册》 ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.1 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.1	见附表1 See Appendix 1	合格 Passed	/	
2	热测试 Thermal test	联合国《试验和标准手册》 ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.2 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.2	见附表2 See Appendix 2	合格 Passed	/	
3	振动 Vibration	联合国《试验和标准手册》 ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.3	见附表3 See Appendix 3	合格 Passed	/	
4	冲击 Shock	联合国《试验和标准手册》 ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.4 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.4	见附表4 See Appendix 4	合格 Passed	/	
5	外短路 External short circuit	联合国《试验和标准手册》 ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.5 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.5	见附表5 See Appendix 5	合格 Passed	/	
6	挤压 Crush	联合国《试验和标准手册》 ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.6 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.6	见附表6 See Appendix 6	合格 Passed	/	
7	强制放电 Forced discharge	联合国《试验和标准手册》 ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.8 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.8	见附表7 See Appendix 7	合格 Passed	/	
8	以下空白	This space intentionally left blank				
检测环境条件 Test Environment Condition		环境温度:20℃-22℃;环境湿度:/% Ambient temperature:20℃-22℃;Ambient humidity:/%				
分包检验情况 Subcontracted Test Condition		检测项目 Test Item	/			
		分包实验室 Subcontracted Laboratory	名称 Name	/	邮编 Post Code	/
			地址 Address	/	电话 Tel	/

# 上海化工院检测有限公司

## 检测报告—附表1

Shanghai Institute of Chemical Industry  
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序号 No.	1	检测项目名称 Name of Test Items		高度模拟 Altitude simulation				
样品 编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他 现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	1CYC完全充电 1CYC Fully charged	0.9898	4.33	0.9892	4.33	0.06	100.00	O
002	1CYC完全充电 1CYC Fully charged	0.9845	4.33	0.9841	4.33	0.04	100.00	O
003	1CYC完全充电 1CYC Fully charged	0.9914	4.33	0.9916	4.33	0.00	100.00	O
004	1CYC完全充电 1CYC Fully charged	0.9935	4.33	0.9936	4.32	0.00	99.77	O
005	1CYC完全充电 1CYC Fully charged	1.0058	4.33	1.0050	4.33	0.08	100.00	O
006	25CYC完全充电 25CYC Fully charged	0.9959	4.33	0.9956	4.32	0.03	99.77	O
007	25CYC完全充电 25CYC Fully charged	0.9958	4.33	0.9947	4.32	0.11	99.77	O
008	25CYC完全充电 25CYC Fully charged	0.9993	4.33	0.9991	4.33	0.02	100.00	O
009	25CYC完全充电 25CYC Fully charged	0.9919	4.33	0.9911	4.32	0.08	99.77	O
010	25CYC完全充电 25CYC Fully charged	0.9998	4.33	0.9997	4.33	0.01	100.00	O
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备注：L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。 Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage, No Venting, No Disassembly, No Rupture & No Fire.								

上海化工院检测有限公司  
 检测报告—附表2  
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序号 No.	2	检测项目名称 Name of Test Items		热测试 Thermal test				
样品 编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他 现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	1CYC完全充电 1CYC Fully charged	0.9892	4.33	0.9885	4.27	0.07	98.61	O
002	1CYC完全充电 1CYC Fully charged	0.9841	4.33	0.9830	4.26	0.11	98.38	O
003	1CYC完全充电 1CYC Fully charged	0.9916	4.33	0.9902	4.27	0.14	98.61	O
004	1CYC完全充电 1CYC Fully charged	0.9936	4.32	0.9929	4.26	0.07	98.61	O
005	1CYC完全充电 1CYC Fully charged	1.0050	4.33	1.0048	4.26	0.02	98.38	O
006	25CYC完全充电 25CYC Fully charged	0.9956	4.32	0.9938	4.27	0.18	98.84	O
007	25CYC完全充电 25CYC Fully charged	0.9947	4.32	0.9931	4.26	0.16	98.61	O
008	25CYC完全充电 25CYC Fully charged	0.9991	4.33	0.9973	4.25	0.18	98.15	O
009	25CYC完全充电 25CYC Fully charged	0.9911	4.32	0.9899	4.26	0.12	98.61	O
010	25CYC完全充电 25CYC Fully charged	0.9997	4.33	0.9981	4.26	0.16	98.38	O
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备注: L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。 Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage,No Venting, No Disassembly,No Rupture & No Fire.								

上海化工院检测有限公司  
 检测报告—附表3  
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序号 No.	3	检测项目名称 Name of Test Items		振动 Vibration				
样品 编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他 现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	1CYC完全充电 1CYC Fully charged	0.9885	4.27	0.9885	4.27	0.00	100.00	O
002	1CYC完全充电 1CYC Fully charged	0.9830	4.26	0.9829	4.26	0.01	100.00	O
003	1CYC完全充电 1CYC Fully charged	0.9902	4.27	0.9902	4.27	0.00	100.00	O
004	1CYC完全充电 1CYC Fully charged	0.9929	4.26	0.9928	4.26	0.01	100.00	O
005	1CYC完全充电 1CYC Fully charged	1.0048	4.26	1.0047	4.26	0.01	100.00	O
006	25CYC完全充电 25CYC Fully charged	0.9938	4.27	0.9938	4.27	0.00	100.00	O
007	25CYC完全充电 25CYC Fully charged	0.9931	4.26	0.9930	4.26	0.01	100.00	O
008	25CYC完全充电 25CYC Fully charged	0.9973	4.25	0.9972	4.25	0.01	100.00	O
009	25CYC完全充电 25CYC Fully charged	0.9899	4.26	0.9898	4.26	0.01	100.00	O
010	25CYC完全充电 25CYC Fully charged	0.9981	4.26	0.9981	4.26	0.00	100.00	O
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备注：L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。  
 Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage, No Venting,  
 No Disassembly, No Rupture & No Fire.

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 检测报告—附表4  
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序号 No.	4	检测项目名称 Name of Test Items		冲击 Shock				
样品编 号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他 现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	1CYC完全充电 1CYC Fully charged	0.9885	4.27	0.9885	4.27	0.00	100.00	O
002	1CYC完全充电 1CYC Fully charged	0.9829	4.26	0.9829	4.26	0.00	100.00	O
003	1CYC完全充电 1CYC Fully charged	0.9902	4.27	0.9901	4.27	0.01	100.00	O
004	1CYC完全充电 1CYC Fully charged	0.9928	4.26	0.9927	4.26	0.01	100.00	O
005	1CYC完全充电 1CYC Fully charged	1.0047	4.26	1.0046	4.26	0.01	100.00	O
006	25CYC完全充电 25CYC Fully charged	0.9938	4.27	0.9937	4.27	0.01	100.00	O
007	25CYC完全充电 25CYC Fully charged	0.9930	4.26	0.9929	4.26	0.01	100.00	O
008	25CYC完全充电 25CYC Fully charged	0.9972	4.25	0.9971	4.25	0.01	100.00	O
009	25CYC完全充电 25CYC Fully charged	0.9898	4.26	0.9897	4.26	0.01	100.00	O
010	25CYC完全充电 25CYC Fully charged	0.9981	4.26	0.9980	4.26	0.01	100.00	O
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备注: L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。  
 Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage,No Venting,  
 No Disassembly,No Rupture & No Fire.



上海化工院检测有限公司  
**检测报告—附表5**  
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序号 No.	5	检测项目名称 Name of Test Items	外短路 External short circuit
样品编号 Sample No.	样品状态 Sample Status	样品表面最高温度 Max. External Temperature /°C	其他现象 Other Event
001	1CYC完全充电 1CYC Fully charged	69.5	O
002	1CYC完全充电 1CYC Fully charged	68.0	O
003	1CYC完全充电 1CYC Fully charged	68.3	O
004	1CYC完全充电 1CYC Fully charged	71.1	O
005	1CYC完全充电 1CYC Fully charged	73.7	O
006	25CYC完全充电 25CYC Fully charged	72.9	O
007	25CYC完全充电 25CYC Fully charged	72.6	O
008	25CYC完全充电 25CYC Fully charged	71.1	O
009	25CYC完全充电 25CYC Fully charged	69.5	O
010	25CYC完全充电 25CYC Fully charged	72.1	O
以下空白	This space intentionally left blank		
备注：D-解体 R-破裂 F-起火 O-无解体、无起火、无破裂。 Note: D-Disassembly R-Ruptur F-Fire O-No Disassembly, No Fire & No Rupture.			

上海化工院检测有限公司  
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序号 No.	6	检测项目名称 Name of Test Items	挤压 Crush
样品编号 Sample No.	样品状态 Sample Status	样品表面最高温度 Max. External Temperature /°C	其他现象 Other Event
011	1CYC 50%容量 1CYC 50% Capacity	30.1	O
012	1CYC 50%容量 1CYC 50% Capacity	36.1	O
013	1CYC 50%容量 1CYC 50% Capacity	29.4	O
014	1CYC 50%容量 1CYC 50% Capacity	28.5	O
015	1CYC 50%容量 1CYC 50% Capacity	23.2	O
016	25CYC 50%容量 25CYC 50% Capacity	31.0	O
017	25CYC 50%容量 25CYC 50% Capacity	28.3	O
018	25CYC 50%容量 25CYC 50% Capacity	26.1	O
019	25CYC 50%容量 25CYC 50% Capacity	30.5	O
020	25CYC 50%容量 25CYC 50% Capacity	25.2	O
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备注: D-解体 F-起火 O-无解体、无起火。 Note: D-Disassembly F-Fire O-No Disassembly & No Fire.			

上海化工院检测有限公司  
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 Shanghai Institute of Chemical Industry  
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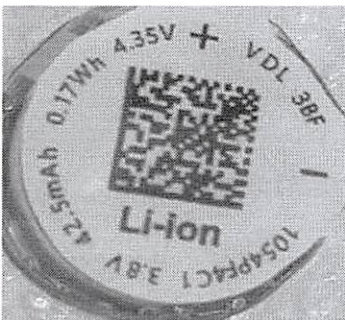
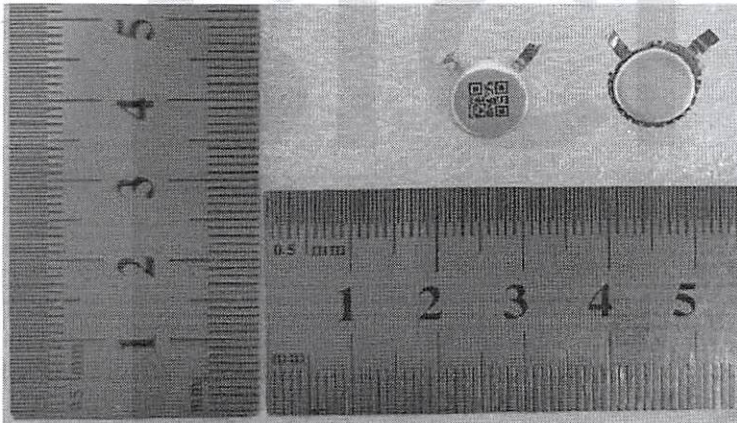
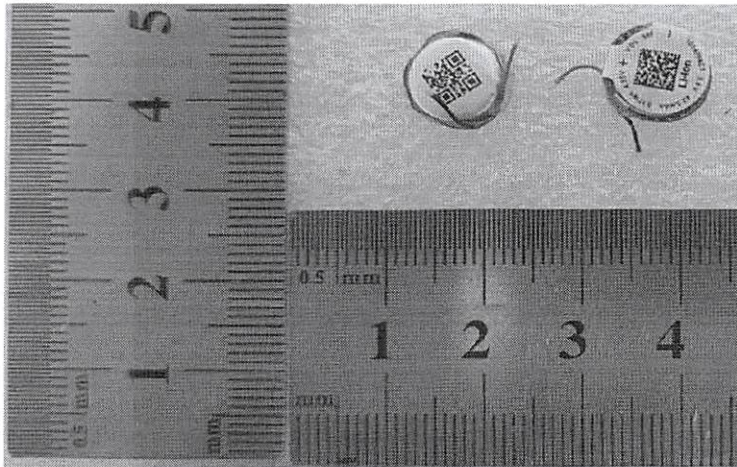
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序号 No.	7	检测项目名称 Name of Test Items	强制放电 Forced discharge
样品编号 Sample No.	样品状态 Sample Status	其他现象 Other Event	
021	1CYC完全放电 1CYC Fully discharged		O
022	1CYC完全放电 1CYC Fully discharged		O
023	1CYC完全放电 1CYC Fully discharged		O
024	1CYC完全放电 1CYC Fully discharged		O
025	1CYC完全放电 1CYC Fully discharged		O
026	1CYC完全放电 1CYC Fully discharged		O
027	1CYC完全放电 1CYC Fully discharged		O
028	1CYC完全放电 1CYC Fully discharged		O
029	1CYC完全放电 1CYC Fully discharged		O
030	1CYC完全放电 1CYC Fully discharged		O
031	25CYC完全放电 25CYC Fully discharged		O
032	25CYC完全放电 25CYC Fully discharged		O
033	25CYC完全放电 25CYC Fully discharged		O
034	25CYC完全放电 25CYC Fully discharged		O
035	25CYC完全放电 25CYC Fully discharged		O
036	25CYC完全放电 25CYC Fully discharged		O
037	25CYC完全放电 25CYC Fully discharged		O
038	25CYC完全放电 25CYC Fully discharged		O
039	25CYC完全放电 25CYC Fully discharged		O
040	25CYC完全放电 25CYC Fully discharged		O
备注：D-解体 F-起火 O-无解体、无起火。 Note: D-Disassembly F-Fire O-No Disassembly & No Fire.			

上海化工院检测有限公司  
检测报告—附图  
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\*\*\*报告结束\*\*\*