



NO.1121120376

# 检 测 报 告

## Test Report

样品名称： 可充电锂离子电芯 ICR18650 2200mAh 3.7V 2200mAh

Name of Sample: Lithium-ion Rechargeable Cell ICR18650 2200mAh 3.7V 2200mAh

委托单位： 江苏天鹏电源有限公司

Consignor: Jiangsu Tenpower Lithium Co., Ltd

上海化工院检测有限公司

Shanghai Institute of Chemical Industry Testing Co., Ltd.



# 上海化工院检测有限公司

## 检测报告

Shanghai Institute of Chemical Industry  
Testing Co., Ltd. Test Report

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|                             |                                                                                                                                                                                                    |                                                             |                             |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------|
| 样品名称<br>Name of Sample      | 中文<br>Chinese                                                                                                                                                                                      | 可充电锂离子电池 ICR18650 2200mAh 3.7V 2200mAh                      |                             |
|                             | 英文<br>English                                                                                                                                                                                      | Lithium-ion Rechargeable Cell ICR18650 2200mAh 3.7V 2200mAh |                             |
| 样品编号<br>Sample No.          | 1121120376                                                                                                                                                                                         |                                                             |                             |
| 委托单位<br>Consignor           | 江苏天鹏电源有限公司<br>Jiangsu Tenpower Lithium Co., Ltd                                                                                                                                                    |                                                             |                             |
| 生产单位<br>Manufacturer        | 江苏天鹏电源有限公司<br>Jiangsu Tenpower Lithium Co., Ltd.                                                                                                                                                   |                                                             |                             |
| 检测方法<br>Test method         | 联合国《试验和标准手册》<br>ST/SG/AC.10/11/Rev.7 38.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7<br>Section 38.3                                                                                     |                                                             |                             |
| 判定标准<br>Criterion           | 联合国《试验和标准手册》<br>ST/SG/AC.10/11/Rev.7 38.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7<br>Section 38.3                                                                                     |                                                             |                             |
| 样品外观<br>Appearance          | 蓝色 圆柱型塑料薄膜外壳<br>Blue Cylinder plastics film shell                                                                                                                                                  |                                                             |                             |
| 样品接受日期<br>Accepted Date     | 2021-12-12                                                                                                                                                                                         | 检测起迄日期<br>Test Date                                         | 2021-12-16 ~ 2022-01-06     |
| 检测项目<br>Test Items          | 高度模拟;热测试;振动;冲击;外短路;撞击;强制放电<br>Altitude simulation, Thermal test, Vibration, Shock, External short<br>circuit, Impact, Forced discharge                                                             |                                                             |                             |
| 检测结论<br>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 38.3标准要求。<br>The sample has passed the test items of UN Manual of Tests and Criteria<br>ST/SG/AC.10/11/Rev.7 Section 38.3<br><br>生效日期(Date): 2022-01-07 |                                                             |                             |
| 备注<br>Comment               | 可充电锂电池芯Rechargeable Lithium Cell./                                                                                                                                                                 |                                                             |                             |
| 委托单位地址<br>Consignor Address | /                                                                                                                                                                                                  |                                                             | 邮政编码<br>Post Code<br>215600 |

批准  
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| 序号<br>No.                              | 检测项目名称<br>Name of Test Items  | 标准要求或标准条款号<br>Standard requirement or The Clause Number of Standard                                                      | 检测结果<br>Test Result     | 本项结论<br>Conclusion | 备注<br>Remark    |
|----------------------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------|-----------------|
| 1                                      | 高度模拟<br>Altitude simulation   | 联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7 38.3 试验T1<br>UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7 Section 38.3 Test T1  | 见附表 1<br>See Appendix 1 | 合格<br>Passed       | /               |
| 2                                      | 热测试<br>Thermal test           | 联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7 38.3 试验T2<br>UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7 Section 38.3 Test T2  | 见附表 2<br>See Appendix 2 | 合格<br>Passed       | /               |
| 3                                      | 振动<br>Vibration               | 联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7 38.3 试验T3<br>UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7 Section 38.3 Test T3  | 见附表 3<br>See Appendix 3 | 合格<br>Passed       | /               |
| 4                                      | 冲击<br>Shock                   | 联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7 38.3 试验T4<br>UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7 Section 38.3 Test T4  | 见附表 4<br>See Appendix 4 | 合格<br>Passed       | /               |
| 5                                      | 外短路<br>External short circuit | 联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7 38.3 试验T5<br>UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7 Section 38.3 Test T.5 | 见附表 5<br>See Appendix 5 | 合格<br>Passed       | /               |
| 6                                      | 撞击<br>Impact                  | 联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7 38.3 试验T6<br>UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7 Section 38.3 Test T.6 | 见附表 6<br>See Appendix 6 | 合格<br>Passed       | /               |
| 7                                      | 强制放电<br>Forced discharge      | 联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7 38.3 试验T8<br>UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7 Section 38.3 Test T.8 | 见附表 7<br>See Appendix 7 | 合格<br>Passed       | /               |
| 8                                      | 以下空白                          | This space intentionally left blank                                                                                      |                         |                    |                 |
| 检测环境条件<br>Test Environment Condition   |                               | 环境温度:20℃-21℃;环境湿度:/%<br>Ambient temperature:20℃-21℃;Ambient humidity:/%                                                  |                         |                    |                 |
| 分包检验情况<br>Subcontracted Test Condition |                               | 检测项目<br>Test Item                                                                                                        | /                       |                    |                 |
|                                        |                               | 分包实验室<br>Subcontracted Laboratory                                                                                        | 名称<br>Name              | /                  | 邮编<br>Post Code |
|                                        |                               |                                                                                                                          | 地址<br>Address           | /                  | 电话<br>Tel       |

### 检测报告-附表1

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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.



### 检测报告-附表2

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[illegible]

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.

### 检测报告-附表3

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[illegible]

备注: L-泄漏 V-漏气 D-解体 R-破裂 F-起火 0-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.



## 检测报告-附表4

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| 序号<br>No.                     | 4                                   | 检测项目名称<br>Name of Test Items |                       | 冲击<br>Shock          |                       |                             |                                   |                            |
|-------------------------------|-------------------------------------|------------------------------|-----------------------|----------------------|-----------------------|-----------------------------|-----------------------------------|----------------------------|
| 样品<br>编号<br><br>Sample<br>No. | 样品状态<br>Sample Status               | 试验前 Before                   |                       | 试验后 After            |                       | 质量损失<br>Mass Loss<br><br>/% | 剩余电压<br>Residual<br>OCV<br><br>/% | 其他<br>现象<br>Other<br>Event |
|                               |                                     | 质量<br>Mass<br><br>/g         | 开路电压<br>OCV<br><br>/V | 质量<br>Mass<br><br>/g | 开路电压<br>OCV<br><br>/V |                             |                                   |                            |
| 001                           | 1CYC完全充电<br>1CYC Fully charged      | 43.4114                      | 4.09                  | 43.4096              | 4.09                  | 0.00                        | 100.00                            | O                          |
| 002                           | 1CYC完全充电<br>1CYC Fully charged      | 43.2453                      | 4.15                  | 43.2438              | 4.15                  | 0.00                        | 100.00                            | O                          |
| 003                           | 1CYC完全充电<br>1CYC Fully charged      | 43.2767                      | 4.15                  | 43.2757              | 4.15                  | 0.00                        | 100.00                            | O                          |
| 004                           | 1CYC完全充电<br>1CYC Fully charged      | 43.3679                      | 4.14                  | 43.3669              | 4.14                  | 0.00                        | 100.00                            | O                          |
| 005                           | 1CYC完全充电<br>1CYC Fully charged      | 43.1632                      | 4.15                  | 43.1618              | 4.15                  | 0.00                        | 100.00                            | O                          |
| 006                           | 25CYC完全充电<br>25CYC Fully charged    | 43.0307                      | 4.14                  | 43.0290              | 4.14                  | 0.00                        | 100.00                            | O                          |
| 007                           | 25CYC完全充电<br>25CYC Fully charged    | 43.2147                      | 4.14                  | 43.2138              | 4.14                  | 0.00                        | 100.00                            | O                          |
| 008                           | 25CYC完全充电<br>25CYC Fully charged    | 43.0436                      | 4.14                  | 43.0429              | 4.14                  | 0.00                        | 100.00                            | O                          |
| 009                           | 25CYC完全充电<br>25CYC Fully charged    | 43.1175                      | 4.14                  | 43.1181              | 4.14                  | 0.00                        | 100.00                            | O                          |
| 010                           | 25CYC完全充电<br>25CYC Fully charged    | 43.3215                      | 4.15                  | 43.3205              | 4.15                  | 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.

| 序号<br>No.          | 5                                   | 检测项目名称<br>Name of Test Items                 | 外短路<br>External short circuit |
|--------------------|-------------------------------------|----------------------------------------------|-------------------------------|
| 样品编号<br>Sample No. | 样品状态<br>Sample Status               | 样品表面最高温度<br>Max. External Temperature<br>/°C | 其他现象<br>Other Event           |
| 001                | 1CYC完全充电<br>1CYC Fully charged      | 106.7                                        | O                             |
| 002                | 1CYC完全充电<br>1CYC Fully charged      | 111.1                                        | O                             |
| 003                | 1CYC完全充电<br>1CYC Fully charged      | 109.5                                        | O                             |
| 004                | 1CYC完全充电<br>1CYC Fully charged      | 108.6                                        | O                             |
| 005                | 1CYC完全充电<br>1CYC Fully charged      | 108.5                                        | O                             |
| 006                | 25CYC完全充电<br>25CYC Fully charged    | 105.7                                        | O                             |
| 007                | 25CYC完全充电<br>25CYC Fully charged    | 106.8                                        | O                             |
| 008                | 25CYC完全充电<br>25CYC Fully charged    | 107.8                                        | O                             |
| 009                | 25CYC完全充电<br>25CYC Fully charged    | 105.6                                        | O                             |
| 010                | 25CYC完全充电<br>25CYC Fully charged    | 106.6                                        | O                             |
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|                    |                                     |                                              |                               |

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 Rapture.



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检测报告-附表6  
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| 序号<br>No.          | 6                                   | 检测项目名称<br>Name of Test Items             | 撞击<br>Impact        |
|--------------------|-------------------------------------|------------------------------------------|---------------------|
| 样品编号<br>Sample No. | 样品状态<br>Sample Status               | 样品表面最高温度<br>Max. External Temperature /℃ | 其他现象<br>Other Event |
| 011                | 1CYC 50%容量<br>1CYC 50% Capacity     | 126.4                                    | O                   |
| 012                | 1CYC 50%容量<br>1CYC 50% Capacity     | 116.2                                    | O                   |
| 013                | 1CYC 50%容量<br>1CYC 50% Capacity     | 104.9                                    | O                   |
| 014                | 1CYC 50%容量<br>1CYC 50% Capacity     | 125.2                                    | O                   |
| 015                | 1CYC 50%容量<br>1CYC 50% Capacity     | 124.0                                    | O                   |
| 016                | 25CYC 50%容量<br>25CYC 50% Capacity   | 134.1                                    | O                   |
| 017                | 25CYC 50%容量<br>25CYC 50% Capacity   | 126.9                                    | O                   |
| 018                | 25CYC 50%容量<br>25CYC 50% Capacity   | 129.3                                    | O                   |
| 019                | 25CYC 50%容量<br>25CYC 50% Capacity   | 111.6                                    | O                   |
| 020                | 25CYC 50%容量<br>25CYC 50% Capacity   | 118.2                                    | 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  
检测报告-附表7  
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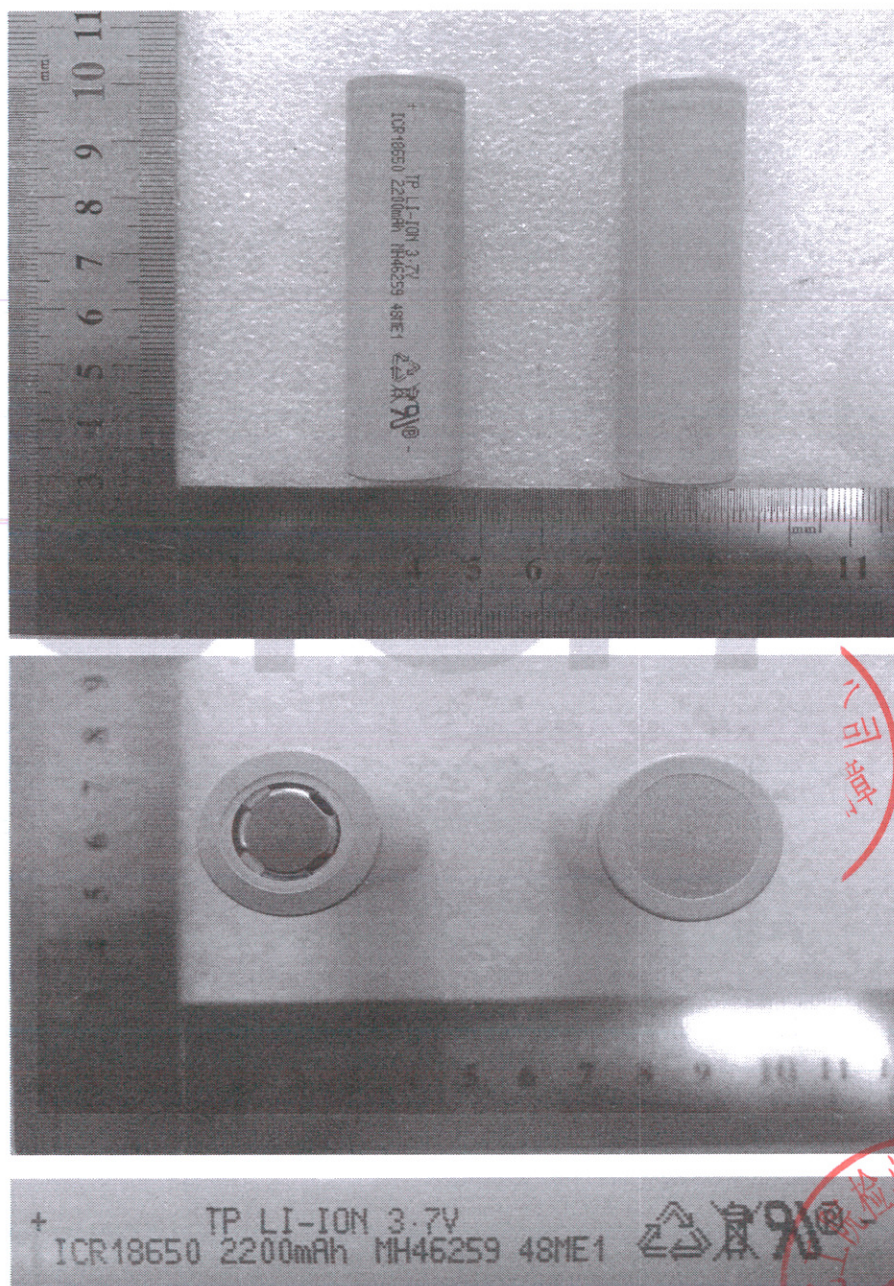
| 序号<br>No.                                                                         | 7                                   | 检测项目名称<br>Name of Test Items | 强制放电<br>Forced discharge |
|-----------------------------------------------------------------------------------|-------------------------------------|------------------------------|--------------------------|
| 样品编号<br>Sample No.                                                                | 样品状态<br>Sample Status               | 其他现象<br>Other Event          |                          |
| 021                                                                               | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 022                                                                               | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 023                                                                               | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 024                                                                               | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 025                                                                               | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 026                                                                               | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 027                                                                               | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 028                                                                               | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 029                                                                               | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 030                                                                               | 1CYC完全放电<br>1CYC Fully discharged   | O                            |                          |
| 031                                                                               | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 032                                                                               | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 033                                                                               | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 034                                                                               | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 035                                                                               | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 036                                                                               | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 037                                                                               | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 038                                                                               | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 039                                                                               | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 040                                                                               | 25CYC完全放电<br>25CYC Fully discharged | O                            |                          |
| 备注：D-解体 F-起火 O-无解体、无起火。<br>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\*\*\*

