

# UN38.3 测试报告

## UN38.3 Test Report

样品名称 : 锂离子聚合物电池 HCP501232W  
3.7V, 145mAh, 0.54Wh

Sample name : Lithium- ion polymer battery HCP501232W  
3.7V, 145mAh, 0.54Wh

委托单位 : 深圳宏赛能源有限公司

Consignor : Shenzhen Honcell Energy Co., Ltd.

深圳信特斯检测股份有限公司  
Shenzhen SEM.Test Technology Co., Ltd.



|   |  |   |                         |                     |     |
|---|--|---|-------------------------|---------------------|-----|
| 样品名称<br>Sample name                           | 中文<br>Chinese  | 锂离子聚合物电池 HCP501232W<br>3.7V, 145mAh, 0.54Wh                     |                         |                     |     |
|   | 英文<br>English  | Lithium- ion polymer battery HCP501232W<br>3.7V, 145mAh, 0.54Wh |                         |                     |     |
| 样品编号<br>Sample No.                            | 01~43  |   |                         |                     |     |
| 委托单位<br>Consignor                             | 深圳宏赛能源有限公司<br>Shenzhen Honcell Energy Co., Ltd.  |   |                         |                     |     |
| 生产单位<br>Manufacturer                          | 深圳宏赛能源有限公司<br>Shenzhen Honcell Energy Co., Ltd.  |   |                         |                     |     |
| 测试方法<br>和判定标准<br>Test method<br>and criterion | 联合国《关于危险货物运输的建议书 实验和标准手册》<br>ST/SG/AC.10/11/Rev.6, 38.3<br>UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS"<br>Manual of Tests and Criteria<br>ST/SG/AC.10/11/Rev.6, 38.3  |   |                         |                     |     |
| 样品外观<br>Appearance                            | 银色棱柱形电池, 尺寸 32.5*10.8*4.5mm<br>Silvery prismatic battery, size 32.5*10.8*4.5mm   |   |                         |                     |     |
| 样品接收日期<br>Accepted date                       | 2018-02-28   | 测试起讫日期<br>Test date   | 2018-03-01 ~ 2018-03-13 |                     |     |
| 测试项目<br>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<br>Altitude simulation, Thermal test, Vibration, Shock, External short circuit, Crush,<br>Overcharge, Forced discharge.  |   |                         |                     |     |
| 测试结论<br>Conclusion                            | <p>经测试, 该样品符合联合国《关于危险货物运输的建议书 实验和标准手册》<br/>ST/SG/AC.10/11/Rev.6, 38.3 标准要求。</p> <p>The sample has passed the test items of UNITED NATIONS "Recommendations<br/>on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria<br/>ST/SG/AC.10/11/Rev.6, 38.3</p> <p style="text-align: right;">签发日期(Issue date): 2018-03-14</p> |   |                         |                     |     |
| 备注<br>Comments                                | /  |   |                         |                     |     |
| 编制<br>Compiler:                               | 李志坚  | 审核<br>Checker:  | 戴春娟                     | 批准<br>Approver<br>: | 莫胜记 |



| 序号<br>No.                              | 测试项目名称<br>Name of test         | 标准要求或标准条款号<br>Standard requirement or the clause number of standard                                 | 测试结果<br>Test result     | 本项结论<br>Test conclusion | 备注<br>Remarks   |   |
|--|--------------------------------|---|-------------------------|-------------------------|-----------------|---|
| 1                                      | 高度模拟<br>Altitude simulation    | 联合国《关于危险货物运输的建议书 实验和标准手册》UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6, 38.3 试验 T.1 Test T.1 | 见附表 1<br>See Appendix 1 | 合格<br>Passed            | /               |   |
| 2                                      | 温度试验<br>Thermal test           | 联合国《关于危险货物运输的建议书 实验和标准手册》UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6, 38.3 试验 T.2 Test T.2 | 见附表 2<br>See Appendix 2 | 合格<br>Passed            | /               |   |
| 3                                      | 振动<br>Vibration                | 联合国《关于危险货物运输的建议书 实验和标准手册》UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6, 38.3 试验 T.3 Test T.3 | 见附表 3<br>See Appendix 3 | 合格<br>Passed            | /               |   |
| 4                                      | 冲击<br>Shock                    | 联合国《关于危险货物运输的建议书 实验和标准手册》UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6, 38.3 试验 T.4 Test T.4 | 见附表 4<br>See Appendix 4 | 合格<br>Passed            | /               |   |
| 5                                      | 外部短路<br>External short-circuit | 联合国《关于危险货物运输的建议书 实验和标准手册》UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6, 38.3 试验 T.5 Test T.5 | 见附表 5<br>See Appendix 5 | 合格<br>Passed            | /               |   |
| 6                                      | 挤压<br>Crush                    | 联合国《关于危险货物运输的建议书 实验和标准手册》UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6, 38.3 试验 T.6 Test T.6 | 见附表 6<br>See Appendix 6 | 合格<br>Passed            | /               |   |
| 7                                      | 过度充电<br>Overcharge             | 联合国《关于危险货物运输的建议书 实验和标准手册》UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6, 38.3 试验 T.7 Test T.7 | 见附表 7<br>See Appendix 7 | 合格<br>Passed            | /               |   |
| 8                                      | 强制放电<br>Forced discharge       | 联合国《关于危险货物运输的建议书 实验和标准手册》UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6, 38.3 试验 T.8 Test T.8 | 见附表 8<br>See Appendix 8 | 合格<br>Passed            | /               |   |
| 测试环境条件<br>Test environment condition   |                                | 环境温度: 20℃ - 25℃; 环境湿度: 45% - 75%<br>Ambient temperature: 20℃ - 25℃, Ambient humidity: 45% - 75%     |                         |                         |                 |   |
| 分包测试情况<br>Subcontracted test condition |                                | 测试项目<br>Test items  | /                       |                         |                 |   |
|  |                                | 分包实验室<br>Subcontracted Laboratory   | 名称<br>Name              | /                       | 邮编<br>Post code | / |
|  |                                |   | 地址<br>Addresses         | /                       | 电话<br>Tel       | / |





附表 2  
Appendix 2

| 序号<br>No.   | 2                             | 测试项目名称<br>Name of Test Items |                   | 温度试验<br>Thermal test |                   |                       |                          |                     |
|---|-------------------------------|------------------------------|-------------------|----------------------|-------------------|-----------------------|--------------------------|---------------------|
| 样品编号<br>Sample No.  | 样品状态<br>Sample status         | 测试前 Before                   |                   | 测试后 After            |                   | 质量损失<br>Mass loss (%) | 剩余电压<br>Residual OCV (%) | 测试结果<br>Test result |
|   |                               | 电池质量<br>$m_1$ (g)            | 开路电压<br>$V_1$ (V) | 电池质量<br>$m_2$ (g)    | 开路电压<br>$V_2$ (V) |                       |                          |                     |
| 01  | 首次完全充电<br>1 CYC Fully Charged | 3.177                        | 4.185             | 3.173                | 4.183             | 0.126                 | 99.95                    | O                   |
| 02  | 首次完全充电<br>1 CYC Fully Charged | 3.143                        | 4.186             | 3.141                | 4.184             | 0.064                 | 99.95                    | O                   |
| 03  | 首次完全充电<br>1 CYC Fully Charged | 3.156                        | 4.188             | 3.153                | 4.186             | 0.095                 | 99.95                    | O                   |
| 04  | 首次完全充电<br>1 CYC Fully Charged | 3.117                        | 4.187             | 3.115                | 4.185             | 0.064                 | 99.95                    | O                   |
| 05  | 首次完全充电<br>1 CYC Fully Charged | 3.152                        | 4.187             | 3.150                | 4.185             | 0.063                 | 99.95                    | O                   |
| 06  | 首次完全充电<br>1 CYC Fully Charged | 3.130                        | 4.185             | 3.128                | 4.182             | 0.064                 | 99.93                    | O                   |
| 07  | 首次完全充电<br>1 CYC Fully Charged | 3.130                        | 4.186             | 3.127                | 4.184             | 0.096                 | 99.95                    | O                   |
| 08  | 首次完全充电<br>1 CYC Fully Charged | 3.150                        | 4.188             | 3.148                | 4.186             | 0.063                 | 99.95                    | O                   |
| 09  | 首次完全充电<br>1 CYC Fully Charged | 3.152                        | 4.189             | 3.150                | 4.186             | 0.063                 | 99.93                    | O                   |
| 10  | 首次完全充电<br>1 CYC Fully Charged | 3.162                        | 4.187             | 3.161                | 4.185             | 0.032                 | 99.95                    | O                   |
| 以下空白  |                               |                              |                   |                      |                   |                       |                          |                     |
|   |                               |                              |                   |                      |                   |                       |                          |                     |
|   |                               |                              |                   |                      |                   |                       |                          |                     |
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|   |                               |                              |                   |                      |                   |                       |                          |                     |
| 注: L-泄露; V-排气; D-解体; R-破裂; F-起火; O-无泄露、无排气、无解体、无破裂、无起火。<br>Note: L-Leakage, V-Venting, D-Disassembly, R-Rupture, F-Fire, O-No leakage, no venting, no disassembly, no rupture & no fire |                               |                              |                   |                      |                   |                       |                          |                     |

附表 3  
 Appendix 3

| 序号<br>No.   | 3                             | 测试项目名称<br>Name of Test Items |                   | 振动<br>Vibration   |                   |                       |                          |                     |
|---|-------------------------------|------------------------------|-------------------|-------------------|-------------------|-----------------------|--------------------------|---------------------|
| 样品编号<br>Sample No.  | 样品状态<br>Sample status         | 测试前 Before                   |                   | 测试后 After         |                   | 质量损失<br>Mass loss (%) | 剩余电压<br>Residual OCV (%) | 测试结果<br>Test result |
|   |                               | 电池质量<br>$m_1$ (g)            | 开路电压<br>$V_1$ (V) | 电池质量<br>$m_2$ (g) | 开路电压<br>$V_2$ (V) |                       |                          |                     |
| 01  | 首次完全充电<br>1 CYC Fully Charged | 3.173                        | 4.183             | 3.172             | 4.180             | 0.032                 | 99.93                    | O                   |
| 02  | 首次完全充电<br>1 CYC Fully Charged | 3.141                        | 4.184             | 3.141             | 4.181             | 0.000                 | 99.93                    | O                   |
| 03  | 首次完全充电<br>1 CYC Fully Charged | 3.153                        | 4.186             | 3.152             | 4.184             | 0.032                 | 99.95                    | O                   |
| 04  | 首次完全充电<br>1 CYC Fully Charged | 3.115                        | 4.185             | 3.114             | 4.183             | 0.032                 | 99.95                    | O                   |
| 05  | 首次完全充电<br>1 CYC Fully Charged | 3.150                        | 4.185             | 3.149             | 4.183             | 0.032                 | 99.95                    | O                   |
| 06  | 首次完全充电<br>1 CYC Fully Charged | 3.128                        | 4.182             | 3.127             | 4.180             | 0.032                 | 99.95                    | O                   |
| 07  | 首次完全充电<br>1 CYC Fully Charged | 3.127                        | 4.184             | 3.126             | 4.181             | 0.032                 | 99.93                    | O                   |
| 08  | 首次完全充电<br>1 CYC Fully Charged | 3.148                        | 4.186             | 3.147             | 4.184             | 0.032                 | 99.95                    | O                   |
| 09  | 首次完全充电<br>1 CYC Fully Charged | 3.150                        | 4.186             | 3.149             | 4.184             | 0.032                 | 99.95                    | O                   |
| 10  | 首次完全充电<br>1 CYC Fully Charged | 3.161                        | 4.185             | 3.160             | 4.182             | 0.032                 | 99.93                    | O                   |
| 以下空白  |                               |                              |                   |                   |                   |                       |                          |                     |
|   |                               |                              |                   |                   |                   |                       |                          |                     |
|   |                               |                              |                   |                   |                   |                       |                          |                     |
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|   |                               |                              |                   |                   |                   |                       |                          |                     |
| 注: L-泄露; V-排气; D-解体; R-破裂; F-起火; O-无泄露、无排气、无解体、无破裂、无起火。<br>Note: L-Leakage, V-Venting, D-Disassembly, R-Rupture, F-Fire, O-No leakage, no venting, no disassembly, no rupture & no fire |                               |                              |                   |                   |                   |                       |                          |                     |

附表 4  
Appendix 4

| 序号<br>No.   | 4                             | 测试项目名称<br>Name of Test Items |                   | 冲击<br>Shock       |                   |                       |                          |                     |
|---|-------------------------------|------------------------------|-------------------|-------------------|-------------------|-----------------------|--------------------------|---------------------|
| 样品编号<br>Sample No.  | 样品状态<br>Sample status         | 测试前 Before                   |                   | 测试后 After         |                   | 质量损失<br>Mass loss (%) | 剩余电压<br>Residual OCV (%) | 测试结果<br>Test result |
|   |                               | 电池质量<br>$m_1$ (g)            | 开路电压<br>$V_1$ (V) | 电池质量<br>$m_2$ (g) | 开路电压<br>$V_2$ (V) |                       |                          |                     |
| 01  | 首次完全充电<br>1 CYC Fully Charged | 3.172                        | 4.180             | 3.171             | 4.178             | 0.032                 | 99.95                    | O                   |
| 02  | 首次完全充电<br>1 CYC Fully Charged | 3.141                        | 4.181             | 3.140             | 4.179             | 0.032                 | 99.95                    | O                   |
| 03  | 首次完全充电<br>1 CYC Fully Charged | 3.152                        | 4.184             | 3.151             | 4.181             | 0.032                 | 99.93                    | O                   |
| 04  | 首次完全充电<br>1 CYC Fully Charged | 3.114                        | 4.183             | 3.113             | 4.181             | 0.032                 | 99.95                    | O                   |
| 05  | 首次完全充电<br>1 CYC Fully Charged | 3.149                        | 4.183             | 3.148             | 4.181             | 0.032                 | 99.95                    | O                   |
| 06  | 首次完全充电<br>1 CYC Fully Charged | 3.127                        | 4.180             | 3.126             | 4.178             | 0.032                 | 99.95                    | O                   |
| 07  | 首次完全充电<br>1 CYC Fully Charged | 3.126                        | 4.181             | 3.125             | 4.179             | 0.032                 | 99.95                    | O                   |
| 08  | 首次完全充电<br>1 CYC Fully Charged | 3.147                        | 4.184             | 3.147             | 4.182             | 0.000                 | 99.95                    | O                   |
| 09  | 首次完全充电<br>1 CYC Fully Charged | 3.149                        | 4.184             | 3.149             | 4.182             | 0.000                 | 99.95                    | O                   |
| 10  | 首次完全充电<br>1 CYC Fully Charged | 3.160                        | 4.182             | 3.159             | 4.180             | 0.032                 | 99.95                    | O                   |
| 以下空白  |                               |                              |                   |                   |                   |                       |                          |                     |
|   |                               |                              |                   |                   |                   |                       |                          |                     |
|   |                               |                              |                   |                   |                   |                       |                          |                     |
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|   |                               |                              |                   |                   |                   |                       |                          |                     |
| 注: L-泄露; V-排气; D-解体; R-破裂; F-起火; O-无泄露、无排气、无解体、无破裂、无起火。<br>Note: L-Leakage, V-Venting, D-Disassembly, R-Rupture, F-Fire, O-No leakage, no venting, no disassembly, no rupture & no fire |                               |                              |                   |                   |                   |                       |                          |                     |









附表 8  
 Appendix 8

| 序号<br>No.          | 8                                   | 测试项目名称<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               | 测试结果<br>Test result          | 备注<br>Remark             |  |
| 24                 | 首次完全放电<br>1 CYC Fully Discharged    | O                            | /                        |  |
| 25                 | 首次完全放电<br>1 CYC Fully Discharged    | O                            | /                        |  |
| 26                 | 首次完全放电<br>1 CYC Fully Discharged    | O                            | /                        |  |
| 27                 | 首次完全放电<br>1 CYC Fully Discharged    | O                            | /                        |  |
| 28                 | 首次完全放电<br>1 CYC Fully Discharged    | O                            | /                        |  |
| 29                 | 首次完全放电<br>1 CYC Fully Discharged    | O                            | /                        |  |
| 30                 | 首次完全放电<br>1 CYC Fully Discharged    | O                            | /                        |  |
| 31                 | 首次完全放电<br>1 CYC Fully Discharged    | O                            | /                        |  |
| 32                 | 首次完全放电<br>1 CYC Fully Discharged    | O                            | /                        |  |
| 33                 | 首次完全放电<br>1 CYC Fully Discharged    | O                            | /                        |  |
| 34                 | 50 次完全放电<br>50 CYC Fully Discharged | O                            | /                        |  |
| 35                 | 50 次完全放电<br>50 CYC Fully Discharged | O                            | /                        |  |
| 36                 | 50 次完全放电<br>50 CYC Fully Discharged | O                            | /                        |  |
| 37                 | 50 次完全放电<br>50 CYC Fully Discharged | O                            | /                        |  |
| 38                 | 50 次完全放电<br>50 CYC Fully Discharged | O                            | /                        |  |
| 39                 | 50 次完全放电<br>50 CYC Fully Discharged | O                            | /                        |  |
| 40                 | 50 次完全放电<br>50 CYC Fully Discharged | O                            | /                        |  |
| 41                 | 50 次完全放电<br>50 CYC Fully Discharged | O                            | /                        |  |
| 42                 | 50 次完全放电<br>50 CYC Fully Discharged | O                            | /                        |  |
| 43                 | 50 次完全放电<br>50 CYC Fully Discharged | O                            | /                        |  |

注: D-解体; F-起火; O-无解体、无起火。  
 Note: D-Disassembly, F-Fire, O-No disassembly & no fire

# 样品照片 Sample photo

- HCP501232H  
3.7V 145mAh 0.54Wh  
+ RF04

