Report No. ATSU260604511

中国认可
国际互认
检测
TESTING
CNAS L9762

UN38.3 测试报告

UN38.3 Test Report

产品名称	：	**SolarFlow 4000 Mix Pro 储能一体机**
Product name	：	**SolarFlow 4000 Mix Pro Power Station**
型号规格	：	**ZDA2501, 25.6V, 314Ah, 8038.4Wh**
Model/Type	：	**ZDA2501, 25.6V, 314Ah, 8038.4Wh**
委托方	：	征途科技有限公司
Client	：	**ZENDURE TECHNOLOGY CO., LIMITED**

东莞市全测电子科技有限公司

ATS Electronic Technology Co., Ltd.

测试总览 Test Summary			
产品名称 Product name	SolarFlow 4000 Mix Pro 储能一体机 SolarFlow 4000 Mix Pro Power Station	型号规格 Model/Type	ZDA2501 25.6V, 314Ah, 8038.4Wh
商标 Trade mark	不适用 N/A	锂含量 Lithium Content	不适用 N/A
质量 Mass	Approx. 82.572kg	尺寸 Size	(460*235*820) mm
样品外观颜色 Appearance	黑灰杂色 Black and grey		
委托方 Client	征途科技有限公司 ZENDURE TECHNOLOGY CO., LIMITED		
委托方地址 Client Address	新界屯門新平街 2 號屯門工業中心 F 座 2 樓 02 室(277A)單位 RM 77A, 2/F, BLK F, TUEN MUN INDUSTRIAL CENTRE, 2 SAN PING CIRCUIT, TUEN MUN, NT, HONGKONG		
制造商 Manufacturer	征途科技有限公司 ZENDURE TECHNOLOGY CO., LIMITED		
制造商地址 Manufacturer Address	新界屯門新平街 2 號屯門工業中心 F 座 2 樓 02 室(277A)單位 RM 77A, 2/F, BLK F, TUEN MUN INDUSTRIAL CENTRE, 2 SAN PING CIRCUIT, TUEN MUN, NT, HONGKONG		
生产厂家 Factory	广东汇创新能源有限公司 Guangdong Huichuang New Energy Co., Ltd.		
生产厂家地址 Factory's address	广东省东莞市麻涌镇麻涌新港中路1号 NO.1, Xingang Middle Road, Machong Town, DongguanCity, Guangdong Province		
测试标准 Testing standard	联合国《试验和标准手册》第八修订版，第38.3节：锂金属，锂离子和钠离子电池组 UNITED NATIONS "Manual of Tests and Criteria", Eighth revised edition (ST/SG/AC.10/11/Rev.8), Section 38.3: Lithium metal, lithium ion and sodium ion batteries		
样品数量 Quantity of sample	电池：8pcs 电芯：30pcs	样品编号 Sample No.	ATSP2606045A A-001~A-008 ATSP2606045A A-009~A-038
接样日期 Received date	2026-05-25	测试周期 Test period	2026-05-26 to 2026-06-17
备注 Remark: SolarFlow 4000 Mix Pro 储能一体机，型号ZDA2501, 25.6V, 314Ah, 8038.4Wh，由八串一并电芯组成，电芯型号为72H4L8B-C，该电芯由浙江冠宇电池有限公司制造。 The SolarFlow 4000 Mix Pro Power Station, Model ZDA2501, 25.6V, 314Ah, 8038.4Wh, consists of 8S-1P Cells, Model 72H4L8B-C, Cell manufactured by Zhejiang CosMX Battery Co., Ltd.			

测试结论 Test Conclusion					
章节 Clause	测试项目名称 Name of test	样品编号 Sample No.	样品状态 Sample Condition	结论 Conclusion	备注 Remarks
38.3.4.1	试验T.1 高度模拟 Test T.1 Altitude simulation	ATSP2606045A A-001~A-002	第一个交替充电放电周期完全充电 First cycle in fully charged states	通过 Pass	--
		ATSP2606045A A-003~A-004	第二十五个交替充电放电周期完全充电 After 25 cycles ending in fully charged states		
38.3.4.2	试验T.2 温度试验 Test T.2 Thermal test	ATSP2606045A A-001~A-002	第一个交替充电放电周期完全充电 First cycle in fully charged states	通过 Pass	--
		ATSP2606045A A-003~A-004	第二十五个交替充电放电周期完全充电 After 25 cycles ending in fully charged states		
38.3.4.3	试验T.3 振动 Test T.3 Vibration	ATSP2606045A A-001~A-002	第一个交替充电放电周期完全充电 First cycle in fully charged states	通过 Pass	--
		ATSP2606045A A-003~A-004	第二十五个交替充电放电周期完全充电 After 25 cycles ending in fully charged states		
38.3.4.4	试验T.4 冲击 Test T.4 Shock	ATSP2606045A A-001~A-002	第一个交替充电放电周期完全充电 First cycle in fully charged states	通过 Pass	--
		ATSP2606045A A-003~A-004	第二十五个交替充电放电周期完全充电 After 25 cycles ending in fully charged states		
38.3.4.5	试验T.5 外部短路 Test T.5 External Short circuit	ATSP2606045A A-001~A-002	第一个交替充电放电周期完全充电 First cycle in fully charged states	通过 Pass	--
		ATSP2606045A A-003~A-004	第二十五个交替充电放电周期完全充电 After 25 cycles ending in fully charged states		
38.3.4.6	试验T.6 撞击/挤压 Test T.6 Impact/Crush	ATSP2606045A A-009~A-013	第一个交替充电放电周期充电至标称容量的50%状态 At first cycle at 50% of the design rated capacity	通过 Pass	棱柱电芯/ Prismatic Cell
		ATSP2606045A A-014~A-018	第二十五个交替充电放电周期充电至标称容量的50%状态 After 25 cycles ending at 50% of the design rated capacity		

38.3.4.7	试验T.7 过度充电 Test T.7 Overcharge	ATSP2606045A A-005~A-006	第一个交替充电放电周期完全充电 First cycle in fully charged states	通过 Pass	--
		ATSP2606045A A-007~A-008	第二十五个交替充电放电周期完全充电 After 25 cycles ending in fully charged states		
38.3.4.8	试验T.8 强制放电 Test T.8 Forced discharge	ATSP2606045A A-019~A-028	第一个交替充电放电周期完全放电 First cycle in fully discharged states	通过 Pass	--
		ATSP2606045A A-029~A-038	第二十五个交替充电放电周期完全放电 After 25 cycles, ending in fully discharged states		

检验结论/ Test Conclusion:

由征途科技有限公司送检的SolarFlow 4000 Mix Pro 储能一体机，型号ZDA2501，依据联合国《试验和标准手册》第八修订版，第38.3节：锂金属，锂离子和钠离子电池组进行测试。当采用准确度方法判定规则时，被测样品符合规范的要求。

The SolarFlow 4000 Mix Pro Power Station, Model ZDA2501, submitted by ZENDURE TECHNOLOGY CO., LIMITED is tested according to UNITED NATIONS “Manual of Tests and Criteria”, Eighth revised edition (ST/SG/AC.10/11/Rev.8), Section 38.3: Lithium metal, lithium ion and sodium ion batteries. The sample received complies with Specification when Accuracy Method decision rule is applied.

测试结果：通过。

The test results: Pass.

签发日期：
Date of issue: 2026-06-18

检测：
Tested by: 赵振
签字：
Signature:

审核：
Reviewed by: 潘海峰
签字：
Signature:

批准：
Approved by: 张振杰
签字：
Signature:

T.1 高度模拟
Altitude simulation

测试方法/ Test Method

将测试样品放在温度为20±5°C，大气压力为不大于11.6kPa的环境中贮存不少于6个小时。对样品在测试前后进行称重，并记录电压。
The samples were stored for at least 6 hours at a pressure of 11.6kPa or less and a temperature of 20±5°C. The samples were weighed before and after the exposure. The samples voltage was also determined before and after the test.

测试结果/ Test Results

样品编号 Sample No.	测试前质量（千克） Weight Before Test (kg)	测试后质量（千克） Weight After Test (kg)	质量损失% Percentage of Weight Loss	测试前电压（伏） Voltage Before Test (V)	测试后电压（伏） Voltage After Test (V)	残余电压% Percentage of Residual Voltage	结果 Results
ATSP2606045AA-001	82.411	82.404	0.008	27.5	27.4	99.64	(6) (7)
ATSP2606045AA-002	82.572	82.563	0.011	27.6	27.5	99.64	(6) (7)
ATSP2606045AA-003	81.998	81.990	0.010	27.5	27.4	99.64	(6) (7)
ATSP2606045AA-004	82.235	82.230	0.006	27.6	27.5	99.64	(6) (7)

结果/ Result:
(1) 漏液/ Leakage
(2) 排气/ Venting
(3) 解体/ Disassembly
(4) 破裂/ Rupture
(5) 起火/ Fire
(6) 无漏液、无排气、无解体、无破裂、无起火/ No leakage, no venting, no disassembly, no rupture and no fire
(7) 开路电压不低于试验前开路电压的90%/ The open circuit voltage of each cell after testing was greater than 90%

T.2 温度试验
Thermal test

测试方法/ Test Method

测试样品将进行如下温度循环测试。样品测试前后进行称重，并记录电压。
The samples were subjected to temperature cycling consisting of the following. The samples were weighed before and after the exposure. The samples voltage was also determined before and after the test.

样品进箱 Samples In	烤箱温度在30分钟内上升到72±2°C，并维持此温度X*小时 The chamber temperature was raised to 72±2°C within 30 minutes and maintained at this temperature for X* hours.
	烤箱温度在30分钟内降低到-40±2°C，并维持此温度X*小时 The chamber temperature was reduced to -40±2°C within 30 minutes and maintained at this temperature for X* hours.
	重复此顺序测试额外9个循环（总共10个循环） Repeat the sequence for 9 additional cycles (total of 10 cycles).
样品出箱 Samples Out	在第10个循环后，于20±5°C环境下储存24小时，然后检查其状态 After the 10th cycle, store the batteries at ambient temperature 20±5°Cfor 24 hours prior to examination.

注：样品承受极端温度的持续时间（X*）按如下确定：
Note: The duration of exposure to the test temperature extremes(X*) was determined as below:
[ ] 小电芯和小电池为6小时/ Small cells and small batteries: 6 hours
[X] 大电芯和大电池为12小时/ Large cells and large batteries: 12 hours

测试结果/ Test Results

样品编号 Sample No.	测试前质量（千克） Weight Before Test (kg)	测试后质量（千克） Weight After Test (kg)	质量损失% Percentage of Weight Loss	测试前电压（伏） Voltage Before Test (V)	测试后电压（伏） Voltage After Test (V)	残余电压% Percentage of residual Voltage	结果 Results
ATSP2606045AA-001	82.404	82.393	0.013	27.4	27.3	99.64	(6) (7)
ATSP2606045AA-002	82.563	82.551	0.015	27.5	27.3	99.27	(6) (7)
ATSP2606045AA-003	81.990	81.977	0.016	27.4	27.2	99.27	(6) (7)
ATSP2606045AA-004	82.230	82.216	0.017	27.5	27.4	99.64	(6) (7)

结果/ Result:
(1) 漏液/ Leakage
(2) 排气/ Venting
(3) 解体/ Disassembly
(4) 破裂/ Rupture
(5) 起火/ Fire
(6) 无漏液、无排气、无解体、无破裂、无起火/ No leakage, no venting, no disassembly, no rupture and no fire
(7) 开路电压不低于试验前开路电压的90%/ The open circuit voltage of each cell after testing was greater than 90%

T.3 振动
Vibration

测试方法/ Test Method

测试样品将进行如下振动测试。样品测试前后进行称重，并记录电压。
The samples were subjected to vibration tests consisting of the following. The samples were weighed before and after the exposure. The samples voltage was also determined before and after the test.

测试样品牢固地安装在振动台上。振动以正弦波形式，以7Hz增加至200Hz，然后在减少回到7Hz为一个循环，一个循环持续15分钟的对数前移传送。以振动的其中一个方向必须是垂直样品极性，对每个样品从三个互相垂直的方向上循环12次，每个方向3个小时。
The samples were firmly secured to the platform of the vibration machine without distorting the sample in such a manner as to faithfully transmit the vibration. The vibration was a sinusoidal waveform with a logarithmic sweep between 7 Hz and 200 Hz and back to 7 Hz traversed in 15 minutes. This cycle was repeated 12 times for a total of 3 hours for each of three mutually perpendicular mounting positions of the sample. One of the directions of vibration was perpendicular to the terminal face.

对数扫频如下/ The logarithmic frequency sweep was as follows:

[ ] 对于电芯和小电池：7赫兹开始保持1gn的最大加速度直到频率为18赫兹，然后将振幅保持在0.8毫米（总偏移1.6毫米）并增加频率直到最大加速度达到8gn（频率约为50赫兹），将最大加速度保持在8gn直到频率增加到200赫兹。
For cells and small batteries: From 7Hz a peak acceleration of 1gn was maintained until 18Hz is reached. The amplitude was then maintained at 0.8mm (1.6mm total excursion) and the frequency increased until a peak acceleration of 8gn occurred (approximately 50Hz). A peak acceleration of 8gn was then maintained until the frequency was increase to 200Hz.

[X] 对大电池：7赫兹开始保持1gn的最大加速度直到频率为18赫兹，然后将振幅保持在0.8毫米（总偏移1.6毫米）并增加频率直到最大加速度达到2gn（频率约为25赫兹），将最大加速度保持在2gn直到频率增加到200赫兹。
For large batteries: From 7Hz a peak acceleration of 1gn was maintained until 18Hz is reached. The amplitude was then maintained at 0.8mm (1.6mm total excursion) and the frequency increased until a peak acceleration of 2gn occurred (approximately 25Hz). A peak acceleration of 2gn was then maintained until the frequency was increase to 200Hz.

测试结果/ Test Results

样品编号 Sample No.	测试前质量（千克） Weight Before Test (kg)	测试后质量（千克） Weight After Test (kg)	质量损失% Percentage of Weight Loss	测试前电压（伏） Voltage Before Test (V)	测试后电压（伏） Voltage After Test (V)	残余电压% Percentage of residual Voltage	结果 Results
ATSP2606045AA-001	82.393	82.389	0.005	27.3	27.3	100.00	(6) (7)
ATSP2606045AA-002	82.551	82.549	0.002	27.3	27.3	100.00	(6) (7)
ATSP2606045AA-003	81.977	81.973	0.005	27.2	27.2	100.00	(6) (7)
ATSP2606045AA-004	82.216	82.213	0.004	27.4	27.4	100.00	(6) (7)

结果/ Result:
(1) 漏液/ Leakage
(2) 排气/ Venting
(3) 解体/ Disassembly
(4) 破裂/ Rupture
(5) 起火/ Fire
(6) 无漏液、无排气、无解体、无破裂、无起火/ No leakage, no venting, no disassembly, no rupture and no fire
(7) 开路电压不低于试验前开路电压的90%/ The open circuit voltage of each cell after testing was greater than 90%

T.4 冲击
Shock

测试方法/ Test Method

样品将进行如下冲击测试。对样品在测试前后进行称重，并记录电压。以稳固的托架固定住每个电芯和电池样品的全部配件表面。每个样品将进行如下半正弦冲击测试：
The samples were subjected to shock. The samples were weighed before and after the exposure. The samples voltage was also determined before and after the test. The sample was secured to the testing machine by means of a rigid mount, which supports all mounting surfaces of the sample. Each sample was subjected to a half-sine shock as below:

[ ] 小电芯：峰值为150gn，脉冲持续6毫秒。
For cells: Peak acceleration of 150gn and pulse duration of 6 milliseconds.

[ ] 大电芯：峰值为50gn，脉冲持续11毫秒。
For large cells: Peak acceleration of 50gn and pulse duration of 11 milliseconds.

[ ] 小电池：取如下较小值为峰值，脉冲持续6毫秒。
For small batteries: Peak acceleration of the smaller of the following, and pulse duration of 6 milliseconds.

Battery	Minimum peak acceleration	Pulse duration
Small batteries	150gn or result of formula Acceleration (gn) = $\sqrt{\left(\frac{100850}{mass*}\right)}$ Whichever is smaller	6ms

[X] 大电池：取如下较小值为峰值，脉冲持续11毫秒。
For large batteries: Peak acceleration of the smaller of the following, and pulse duration of 11 milliseconds.

Battery	Minimum peak acceleration	Pulse duration
Large batteries	50gn or result of formula Acceleration (gn) = $\sqrt{\left(\frac{30000}{mass*}\right)}$ Whichever is smaller	11ms

每个测试样品须在三个互相垂直的电池安装方位的正方向经受三次冲击，接着在反方向经受三次冲击，总共经受18次冲击。
Each sample was 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 for a total of 18 shocks.

测试结果/ Test Results

样品编号 Sample No.	测试前质量（千克） Weight Before Test (kg)	测试后质量（千克） Weight After Test (kg)	质量损失% Percentage of Weight Loss	测试前电压（伏） Voltage Before Test (V)	测试后电压（伏） Voltage After Test (V)	残余电压% Percentage of residual Voltage	结果 Results
ATSP2606045A A-001	82.389	82.389	0.000	27.3	27.3	100.00	(6) (7)
ATSP2606045A A-002	82.549	82.549	0.000	27.3	27.3	100.00	(6) (7)
ATSP2606045A A-003	81.973	81.973	0.000	27.2	27.2	100.00	(6) (7)
ATSP2606045A A-004	82.213	82.213	0.000	27.4	27.4	100.00	(6) (7)

结果/ Result:
(1) 漏液/ Leakage
(2) 排气/ Venting
(3) 解体/ Disassembly
(4) 破裂/ Rupture
(5) 起火/ Fire
(6) 无漏液、无排气、无解体、无破裂、无起火/ No leakage, no venting, no disassembly, no rupture and no fire
(7) 开路电压不低于试验前开路电压的90%/ The open circuit voltage of each cell after testing was greater

than 90%

T.5 外部短路
External short circuit

测试方法/ Test Method

为使样品达到均匀稳定的初始温度：57±4°C，样品需在此环境下暴露一段时间。
The samples were shall be heated for a period of time noted below, to reach a homogeneous stabilized temperature of 57±4°C, measured on the external case:

[ ] 小电芯和小电池至少暴露6小时。Small cells and small batteries: 6 hours.
[X] 大电芯和大电池至少暴露12小时。Large cells and large batteries: 12 hours.

然后将样品正负极用小于0.1欧姆的总电阻回路进行短路，直到：
The samples were then subjected to a short circuit condition with a total external resistance of less than 0.1 ohm, until:

[ ] 对于电芯和小电池： 样品外表温度恢复到57±4°C之后保持短路状态1小时以上。
For cells and small batteries: 1 hour after the external case temperature of sample has returned to 57±4°C.
[X] 对于大电池：样品表面温度下降所测最大温升的一半，并保持低于该数值。
For large batteries: After the external case temperature of sample has decreased by half of the maximum temperature increase observed during the test and remains below that value.

测试结果/ Test Results

样品编号 Sample No.	测试前电压（伏） Voltage Before Test(V)	最高温度(°C) Maximum Temperature, °C	结果 Results
ATSP2606045A A-001	27.3	58.7	(4) (5)
ATSP2606045A A-002	27.3	58.8	(4) (5)
ATSP2606045A A-003	27.2	58.6	(4) (5)
ATSP2606045A A-004	27.4	58.8	(4) (5)

结果/ Result:
(1) 解体/ Disassembly
(2) 破裂/ Rupture
(3) 起火/ Fire
(4) 测试后6小时内无解体，无破裂，无起火/ No disassembly, no rupture, no fire within 6 hours after the test
(5) 最高温度不超过170摄氏度/ The maximum temperature did not exceed 170°C

T.6 撞击/挤压
Impact/Crush

测试方法/ Test Method

[ ] 撞击（适用于直径不小于18毫米的圆柱形电芯）
Impact (for cylindrical cells greater not less than 18mm in diameter)
将试验样品放在一个平坦光滑的平面上。将一条316型不锈钢棒，其直径为15.8mm±0.1mm，长度为至少6cm，或电芯的最长边长度（两者中较大者），放置在样品中心。将一质量为9.1kg±0.1kg的物体于61cm±2.5cm的高度, 无摩擦地从垂直滑轨落向样品。垂直滑轨与横向支承面互相垂直，保持90度。
A test sample was placed on a flat surface. A 15.8mm±0.1mm diameter, at least 6cm long, or the longest dimension of the cell, whichever is greater, Type 316 stainless steel bar was placed across the center of the sample. A 9.1kg±0.1kg mass was dropped from a height of 61cm±2.5cm at the intersection of the bar and sample in a controlled manner, using a near frictionless, vertical sliding track or channel with minimal drag on the falling mass. The vertical track or channel used to guide the falling mass was oriented 90 degrees from the horizontal supporting surface.
接受撞击的试样，纵轴应与平坦的表面平行并与横放在试样中心的直径15.8mm±0.1mm弯曲表面的纵轴垂直。每一个试样只经受一次撞击。
The test sample was impacted with its longitudinal axis parallel to the flat surface and perpendicular to the longitudinal axis of a 15.8mm±0.1mm diameter curved surface lying across the center of the test sample. Separate samples were used for each test.

[X] 挤压（适用于棱柱形、袋装、硬币/纽扣电池和直径小于18毫米的圆柱形电芯）
Crush (for prismatic, pouch, coin/button cells and cylindrical cells less than 18mm in diameter)
将样品放在两个平面之间挤压。挤压力度逐渐加大，在第一个接触点上的速度大约为1.5厘米/秒。挤压持续进行，直到出现以下三种情况之一：
A sample was crushed between two flat surfaces. The crushing was gradual with a speed of approximately 1.5 cm/s at the first point of contact. The crushing was continued until the first of the three options below has reached:
- 施加的力达到13kN±0.78kN;
  The applied force reaches 13kN±0.78kN
- 电池的电压下降至少100毫伏，或者
  The voltage of the cell drops by at least 100mV; or
- 电池变形达到原始厚度的50%以上
  The cell is deformed by 50% or more of its original thickness.

棱柱形或袋装电池应从最宽的一面施压。纽扣/硬币形电池应从其平坦表面施压。圆柱形应从与纵轴垂直的方向施压。
A prismatic or pouch cell was crushed by applying the force to the widest side. A button/coin cell was crushed by applying the force on its flat surfaces. For cylindrical cells, the crush force was applied perpendicular to the longitudinal axis

测试样品进一步观察6小时。未进行过其他测试的样品用于此测试。
The test sample was observed for a further 6 hours. Separate samples that have not previously been subjected to other tests were used for each test

测试结果/ Test Results

样品编号 Sample No.	测试前电压（伏） Voltage Before Test (V)	最高温度(°C) Maximum Temperature, °C	结果 Results
ATSP2606045A A-009	3.224	23.5	(3) (4)
ATSP2606045A A-010	3.237	23.6	(3) (4)
ATSP2606045A A-011	3.229	23.7	(3) (4)
ATSP2606045A A-012	3.244	23.4	(3) (4)
ATSP2606045A A-013	3.225	23.3	(3) (4)
ATSP2606045A A-014	3.233	23.5	(3) (4)

ATSP2606045A A-015	3.220	23.7	(3) (4)
ATSP2606045A A-016	3.227	23.9	(3) (4)
ATSP2606045A A-017	3.235	23.8	(3) (4)
ATSP2606045A A-018	3.229	23.6	(3) (4)

结果/ Result:
(1) 解体/ Disassembly
(2) 起火/ Fire
(3) 测试后6小时内无解体，无起火/ No disassembly, no fire within 6 hours after the test
(4) 最高温度不超过170摄氏度/ The maximum temperature did not exceed 170°C

T.7 过度充电
Overcharge

测试方法/ Test Method

2倍制造厂推荐的最大持续充电电流对样品充电。
Batteries were subjected to a charge current of twice the manufacturer's recommended maximum continuous charge current.
最小的测试电压由按如下决定/ The minimum voltage of the test was as follows:

[ ] 如果厂家推荐的充电电压不超过18V，本测试的最小充电电压应是厂家标定最大充电电压的两倍或者是22V之中的较小者。
When the manufacturer's recommended charge voltage is not more than 18V, the minimum voltage of the test was the lesser of 2 times the maximum charge voltage of the battery or 22V.

[X] 如果厂家推荐的充电电压超过18V，本测试的最小充电电压应是厂家标定的最大充电电压的1.2倍
When the manufacturer's recommended charge voltage is more than 18V, the minimum voltage of the test was 1.2 times the maximum charge voltage.

测试在20±5°C的环境温度下进行，试验持续24小时。
Tests were conducted at ambient temperature 20±5°C. The duration of the test was 24 hours.

过充电流/ Overcharge Current	370.4A
过充电压/ Overcharge Voltage	35.04V

测试结果/ Test Results

样品编号 Sample No.	测试前电压（伏） Voltage Before Test(V)	测量的过充电流（安） Measured Overcharge Current (A)	结果 Results
ATSP2606045A A-005	27.5	370.4	(3)
ATSP2606045A A-006	27.6	370.4	(3)
ATSP2606045A A-007	27.5	370.4	(3)
ATSP2606045A A-008	27.6	370.4	(3)

结果/Result:
(1) 解体/ Disassembly
(2) 起火/ Fire
(3) 测试后7天内无解体，无起火/ No disassembly, no fire within seven days after the test

T.8 强制放电
Forced discharge

测试方法/ Test Method

在常温环境下，将单个电芯连接在12V的直流电源上进行强制放电，此直流电源提供给每个电芯初始电流为制造厂指定的最大放电电流。
Each cell was forced discharged at ambient temperature by connecting it in series with a 12V DC power supply at an initial current equal to the maximum discharge current specified by the manufacturer.
指定的放电电流通过串联在测试电芯上的合适大小和功率的负载来获得，每个电芯的强制放电时间（小时）为额定容量除以初始电流（安培）
The specified discharge current was obtained by connecting a resistive load of the appropriate size and rating in series with the test cell. Each cell was forced discharged for a time interval (in hours) equal to its rated capacity divided by the initial test current (in amperes).

测试结果/ Test Results

样品编号 Sample No.	测试前电压（伏） Voltage Before Test (V)	测试后电压（伏） Voltage After Test (V)	结果 Results
ATSP2606045A A-019	2.870	0.025	(3)
ATSP2606045A A-020	2.847	0.049	(3)
ATSP2606045A A-021	2.835	0.033	(3)
ATSP2606045A A-022	2.850	0.075	(3)
ATSP2606045A A-023	2.869	0.062	(3)
ATSP2606045A A-024	2.839	0.060	(3)
ATSP2606045A A-025	2.862	0.055	(3)
ATSP2606045A A-026	2.846	0.099	(3)
ATSP2606045A A-027	2.866	0.102	(3)
ATSP2606045A A-028	2.877	0.012	(3)
ATSP2606045A A-029	2.842	0.043	(3)
ATSP2606045A A-030	2.836	0.071	(3)
ATSP2606045A A-031	2.840	0.069	(3)
ATSP2606045A A-032	2.868	0.038	(3)
ATSP2606045A A-033	2.844	0.042	(3)
ATSP2606045A A-034	2.877	0.007	(3)
ATSP2606045A A-035	2.873	0.093	(3)
ATSP2606045A A-036	2.839	0.077	(3)
ATSP2606045A A-037	2.850	0.025	(3)
ATSP2606045A A-038	2.871	0.011	(3)

结果/ Result:
(1) 解体/ Disassembly
(2) 起火/ Fire
(3) 测试后7天内无解体，无起火/ No disassembly, no fire within seven days after the test

样品照片
Photos of Samples

SolarFlow 4000 Mix Pro 储能一体机 / SolarFlow 4000 Mix Pro Power Station (25.6V, 314Ah, 8038.4Wh)



Figure 1 Front view of battery



Figure 2 Back view of battery

样品照片
Photos of Samples

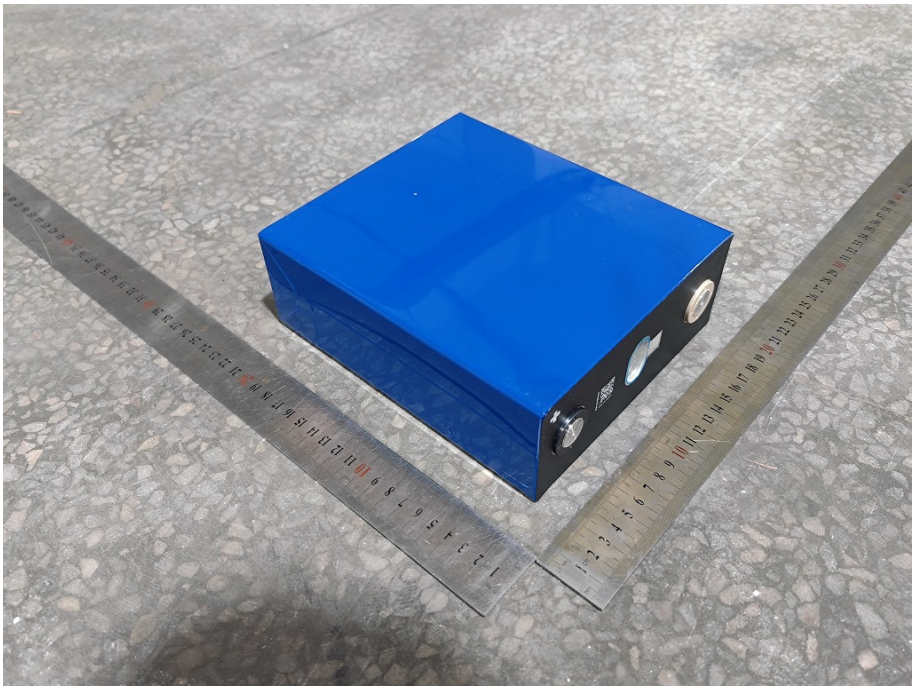


Figure 3 Front view of cell

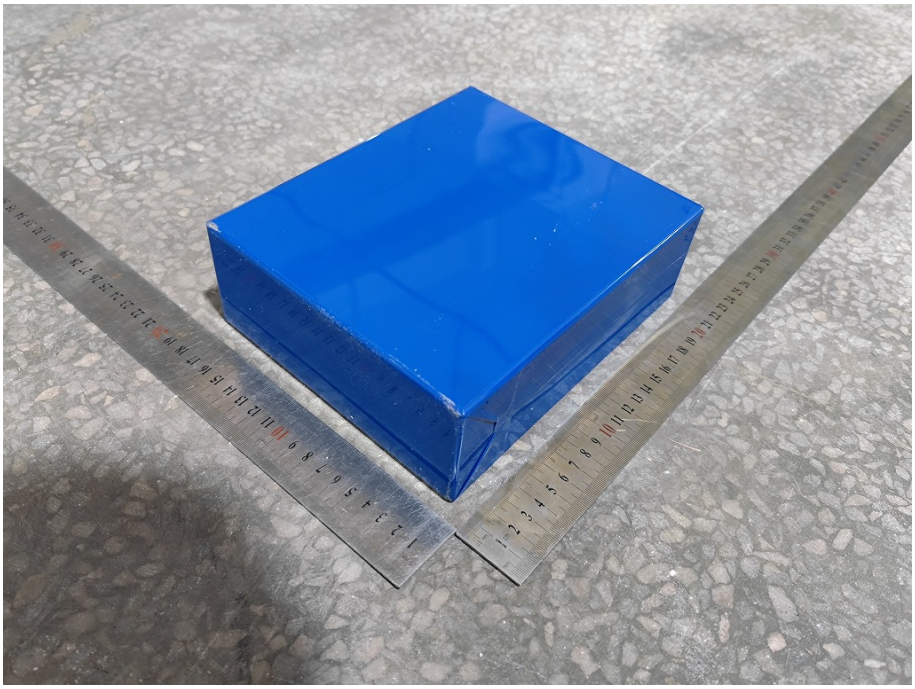


Figure 4 Back view of cell

样品照片
Photos of Samples

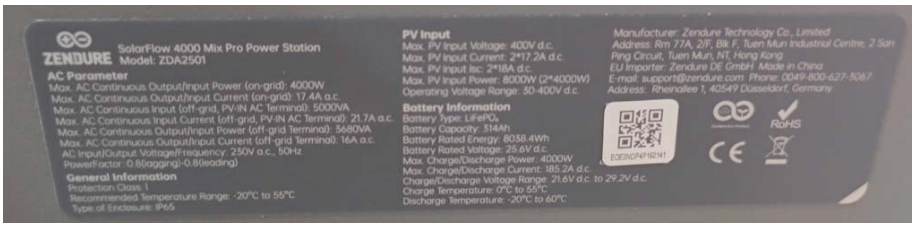


Figure 3 Battery label

注 意 事 项
Important

1. 未经本实验室书面同意，不得复制或部分地复制本报告。
   Nobody is allowed to photocopy or partly photocopy this test report without written permission of ATS Electronic Technology Co., Ltd.

2. 本报告无批准人、审核人及检测人签名无效。
   This test report is invalid without the signatures of Approver, Reviewer and Tester.

3. 本报告涂改无效。
   The test report is invalid if altered.

4. 本报告结果仅对送检样品负责。
   The test report is valid for the tested samples only.

5. 本报告中以点号代替小数点。
   Throughout this report a point is used as the decimal separator.

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