检测报告
TEST REPORT

Sample Name： **样品名称：**	Li-ion Battery 锂离子电池
Model： **型号：**	WLY 502030
Applicant： **申请商：**	Dongguan Wiliyoung Electronics Co.,Ltd. 东莞市威力源电子科技有限公司
Report No.： **报告编号：**	DGWLY20230306UN01
Standard: **检测标准：**	ST/SG/AC.10/11/Rev.7 & Amend.1/Section 38.3

广州三帕认证技术服务有限公司

Guangzhou CPUP Certification Technology Service Co., Ltd.

TEST REPORT
检测报告
UNITED NATIONS *"Manual of Tests and Criteria"* Seventh revised edition & Amendment 1
Section 38.3 – Lithium metal and lithium ion batteries
联合国《试验和标准手册》第七修订版和修正 1
第 38.3 节-锂金属和锂离子电池

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Test date/检测起讫日期 ..... :	2023.03.07~2023.03.17

Product General Information/产品基本信息:

Samples name /样品名称 :	Li-ion Battery 锂离子电池
Model/型号 :	WLY 502030
Ratings/额定参数 :	3.7V, 200mAh, 0.74Wh
Trade mark/商标 :	N/A
Appearance/样品外观 :	Approximate Silver Cuboid 银色近长方体
Dimension/尺寸 :	5.0mm(T) × 20.1mm(W) × 32.9mm(H)
Mass/质量 :	Approx./约 5.6g
Lithium content/锂含量 :	N/A
Classification/类别 :	Single cell lithium ion battery 单电芯锂离子电池

Test items /检测项目:

Clause 条款号	Name of test 检测项目名称	Sample Number 样品编号	Test result 检测结果
38.3.4.1	T.1 Altitude simulation T.1 高度模拟	B1# - B10 #	P 通过
38.3.4.2	T.2 Thermal test T.2 温度试验		P 通过
38.3.4.3	T.3 Vibration T.3 振动		P 通过
38.3.4.4	T.4 Shock T.4 冲击		P 通过
38.3.4.5	T.5 External Short-circuit T.5 外部短路		P 通过
38.3.4.6	T.6 Impact T.6 撞击	C1# - C10#	N/A 不适用
	T.6 Crush T.6 挤压		P 通过
38.3.4.7	T.7 Overcharge T.7 过度充电	B11# - B18#	P 通过
38.3.4.8	T.8 Forced discharge T.8 强制放电	C11#- C30#	P 通过

Test Conclusion/检测结论:

The sample has passed the test items of UNITED NATIONS *"Manual of Tests and Criteria"* seventh revised edition & Amendment 1(ST/SG/AC.10/11/Rev.7 & Amend.1) Section 38.3 .

经检测，该样品符合联合国《试验和标准手册》第七修订版和修正 1（ST/SG/AC.10/11/Rev.7 & Amend.1） 第 38.3 节的要求。

Test Procedure/试验程序:

1.Sample status/样品状态:
B1#~B5#, first cycle, fully charged state /B1#~B5#/第 1 个充电周期，完全充电状态。
B6#~B10#, 25th cycle, fully charged state /B6#~B10#,第 25 个充电周期，完全充电状态.。
C1#~C5#, first cycle , 50% charged state /C1#~C5#,第 1 个充电周期，50% 充电状态。
C6#~C10#, 25th cycle , 50% charged state /C6#~C10#,第 25 个充电周期，50% 充电状态。
B11#~B14#, first cycle, fully charged state /B11#~B14#,第 1 个充电周期，完全充电状态。
B15#~B18#, 25th cycle, fully charged state / B15#~B18#,第 25 个充电周期，完全充电状态。
C11#~C20#, first cycle , fully discharged state / C11#~C20#,第 1 个充电周期，完全放电状态。
C21#~C30#, 25th cycle , fully discharged state / C21#~C30#,第 25 个充电周期，完全放电状态。

2. Tests T.1 to T.5 are conducted in sequence on the same samples.
T.1 至 T.5 试验使用相同样品并按顺序进行。

3. In order to quantify the mass loss, the following procedure is provided:
Mass loss(%)=(M1-M2)/M1×100
为了量化质量损失，用以下公式计算：质量损失(%)=(M1-M2)/M1×100
Where M1 is the mass before the test and M2 is the mass after the test. When mass loss does not exceed the values in Table below, it is considered as "no mass loss".
式中：M1 是试验前的质量，M2 是试验后的质量。如果质量损失不超过下表所列的数值，应视为“无质量损失”。

Mass M of cell or battery 电芯或电池的质量	Mass loss limit 质量损失限值
M＜1g	0.5%
1g≤M≤75g	0.2%
M＞75g	0.1%

4. In test T.1 to T.4, batteries meet this requirement if there is no leakage, no venting, no disassembly, no rupture and no fire and if the open circuit voltage of each test battery after testing is not less than 90% of its voltage immediately prior to this procedure. The requirement relating to voltage is not applicableto test cells and batteries at fully discharged states.
在测试 T.1 至 T.4 中，电池须满足无渗漏、无排气、无解体、无破裂和无起火，并且每个试验电池在试验后的开路电压不小于其在进行这一试验前电压的 90%。有关电压的要求不适用于完全放电状态的试验电芯和电池。

Clause	Requirement + Test	Result - Remark	Verdict
38.3.4.1	**Test T.1: Altitude simulation/高度模拟**		P
	Test cells and batteries shall be stored at a pressure of 11.6kPa or less for at least six hour at ambient temperature (20±5°C)./试验电芯和电池应在压力等于或低于 11.6 千帕和环境温度(20 ± 5°C)下存放至少 6 小时。		P
	Cells and batteries meet this requirement if there is no leakage, no venting, no disassembly,no rupture and no fire and if the open circuit voltage of each test cell or batfery after testing is not less than 90% of its voltage immediately prior to this procedure. The requirement relating to voltage is not applicableto test cells and batteries at fully discharged states./如果无渗漏、无排气、无解体、无破裂和无起火，并且每个试验电芯或电池在试验后的开路电压不小于其在进行这一试验前电压的 90%，电芯和电池即符合这一要求。有关电压的要求不适用于完全放电状态的试验电芯和电池。	No leakage, no venting, no disassembly,no rupture and no fire./无渗漏、无排气、无解体、无破裂和无起火。 The data see table 1./试验数据见表 1。	P
38.3.4.2	**Test T.2: Thermal test/温度试验**		P
	Test cells and batteries are to be stored for at least six hours at a test temperature equal to72±2°C, followed by storage for at least six hours at a test temperature equal to -40±2°C.The maximum time interval between test temperature extremes is 30 minutes. This procedure is to be repeated until 10 total cycles are complete, after which all test cells and batteries are to be stored for 24 hours at ambient temperature(20±5°C). /试验电芯和电池应先在试验温度等于 72±2°C 的条件下存放至少 6 小时，接着再在试验温度等于-40±2°C 的条件下存放至少 6 小时。两个极端试验温度之间的最大时间间隔为 30 分钟。此程序重复进行，共完成 10 次，接着将所有试验电芯和电池在环境温度(20±5°C)下存放 24 小时。		P
	For large cells and batteries the duration of exposure to the test temperature extremes should beat least 12 hours./对于大型电芯和电池，暴露于极端试验温度的时间至少应为 12 小时。		N/A
	Cells and batteries meet this requirement if there is no leakage, no venting, no disassembly,no rupture and no fire and if the open circuit voltage of each test cell or batfery after testing is not less than 90% of its voltage immediately prior to this procedure. The requirement relating to voltage is not applicableto test cells and batteries at fully discharged states./如果无渗漏、无排气、无解体、无破裂和无起火，并且每个试验电芯或电池在试验后的开路电压不小于其在进行这一试验前电压的 90%，电芯和电池即符合这一要求。有关电压的要求不适用于完全放电状态的试验电芯和电池。	No leakage, no venting, no disassembly,no rupture and no fire./无渗漏、无排气、无解体、无破裂和无起火。 The data see table 1./试验数据见表 1。	P
38.3.4.3	**Test T.3: Vibration/振动**		P

Clause	Requirement + Test	Result - Remark	Verdict
	Cells and batteries are firmly secured to the platform of the vibration machine without distorting the cells in such a manner as to faithfully transmit the vibration. The vibration shall be a sinusoidal waveform with a logarithmic sweep between 7 Hz and 200 Hz and back to 7 Hz traversed in 15 minutes. This cycle shall be repeated 12 times for a total of 3 hours for each of three mutually perpendicular mounting positions of the cell. One of the directions of vibration must be perpendicular to the terminal face./ 电芯和电池紧固于振动机平台，但紧固程度不能造成电芯变形以致不能准确传递振动。振动应是正弦波形，对数频率扫描从 7 赫兹到 200 赫兹，再回到 7 赫兹，跨度为 15 分钟。这一振动过程须对三个互相垂直的电芯安装方位的每一方向重复进行 12 次，总共为时 3 小时。其中一个振动方向必须与端面垂直。		P
	The logarithmic frequency sweep shall differ for cells and batteries with a gross mass of not more than 12 kg (cells and small batteries), and for batteries with a gross mass of more than 12 kg (large batteries)./ 作对数式频率扫描，对总质量不足 12 千克的电芯和电池(电芯和小型电池)，和对 12 千克及更大的电池(大型电池)应有所不同。		P
	For cells and small batteries: from 7 Hz a peak acceleration of 1 g_n is maintained until 18 Hz is reached. The amplitude is then maintained at 0.8 mm (1.6 mm total excursion) and the frequency increased until a peak acceleration of 8 g_n, occurs (approximately 50 Hz).A peak acceleration of 8 g_n is then maintained until the frequency is increased to 200 Hz. /对电芯和小型电池:从7赫兹开始，保持 1 g_n的最大加速度，直到频率达到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8 g_n (频率约为50赫兹)。将最大加速度保持在8 gn直到频率增加到200赫兹。		P
	For large batteries: from 7 Hz to a peak acceleration of 1 g_n is maintained until 18 Hz is reached. The amplitude is then maintained at 0.8 mm (1.6 mm total excursion) and the frequency increased until a peak acceleration of 2 g_n, occurs (approximately 25 Hz).A peak acceleration of 2 g_n is then maintained until the frequency is increased to 200 Hz./ 对大型电池:从 7 赫兹开始，保持 1 g_n 的最大加速度，直到频率达到 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 2 g_n (频率约为 25 赫兹)。将最大加速度保持在 2 g_n 直到频率增加到 200 赫兹。		N/A

Clause	Requirement + Test	Result - Remark	Verdict
	Cells and batteries meet this requirement if there is no leakage, no venting, no disassembly,no rupture and no fire and if the open circuit voltage of each test cell or batfery after testing is not less than 90% of its voltage immediately prior to this procedure. The requirement relating to voltage is not applicableto test cells and batteries at fully discharged states./如果无渗漏、无排气、无解体、无破裂和无起火，并且每个试验电芯或电池在试验后的开路电压不小于其在进行这一试验前电压的90%，电芯和电池即符合这一要求。有关电压的要求不适用于完全放电状态的试验电芯和电池。	No leakage, no venting, no disassembly,no rupture and no fire./无渗漏、无排气、无解体、无破裂和无起火。 The data see table 1./试验数据见表 1。	P
38.3.4.4	**Test T.4: Shock/冲击**		P
	Test cells and batteries shall be secured to the testing machine by means of a rigid mount which will support all mounting surfaces of each test battery. /试验电芯和电池用坚固支架紧固在试验机上，支架支撑着每个试验电池的所有安装面。		P
	Small cells : Each cell shall be subjected to a half-sine shock of peak acceleration of 150 g_n and pulseduration of 6 milliseconds. /小型电芯：每个电芯须经受最大加速度150 g_n和脉冲持续时间6毫秒的半正弦波冲击。		P
	Large cells : Each cell shall be subjected to a half-sine shock of peak accelerationof 50 g_n and pulse duration of 11 milliseconds./大型电芯：每个电芯须经受最大加速度 50 g_n和脉冲持续时间 6 毫秒的半正弦波冲击。		N/A
	Each battery shall be subjected to a half-sine shock of peak acceleration depending on the mass of the battery. /每个电池须经受最大加速度取决于电池的质量的半正弦波冲击。		N/A
	small batteries :The pulse duration shall be 6 milliseconds ,acceleration is 150 gn or (g_n)= $\sqrt{100850/mass}$, whichever is smaller。/小型电池：脉冲持续时间 6 毫秒，加速度为 150gn 或 (gn)= $\sqrt{100850/质量}$，取数值较小者。		N/A
	large batteries: The pulse duration shall be 11 milliseconds. acceleration is 50 g_n or (g_n)= $\sqrt{30000/mass}$, whichever is smaller./大型电池：脉冲持续时间 11 毫秒。加速度为 50gn 或 (gn)= $\sqrt{30000/质量}$，取数值较小者。		N/A
	Each cell or battery shall be subjected to three shocks in the positive direction and to three shocks in the negative direction in each of three mutuallyl perpendicular mounting positions of the cell or battery for a total of 18 shocks./ 每个电芯或电池须在三个互相垂直的电芯或电池安装方位的正极方向经受三次冲击，接着在负极方向经受三次冲击，总共经受 18 次冲击。		P

Clause	Requirement + Test	Result - Remark	Verdict
	Cells and batteries meet this requirement if there is no leakage, no venting, no disassembly,no rupture and no fire and if the open circuit voltage of each test cell or batfery after testing is not less than 90% of its voltage immediately prior to this procedure. The requirement relating to voltage is not applicableto test cells and batteries at fully discharged states./如果无渗漏、无排气、无解体、无破裂和无起火，并且每个试验电芯或电池在试验后的开路电压不小于其在进行这一试验前电压的90%，电芯和电池即符合这一要求。有关电压的要求不适用于完全放电状态的试验电芯和电池。	No leakage, no venting, no disassembly,no rupture and no fire./无渗漏、无排气、无解体、无破裂和无起火。 The data see table 1./试验数据见表 1。	P
38.3.4.5	**Test T.5: External short circuit/外部短路**		P
	The cell or battery to be tested shall be heated for a period of time necessary to reach a homogeneous stabilized temperature of 57±4°C, measured on the external case.This period of time depends on the size and design of the cell or battery and should be assessed and documented. / 对于待试电芯或电池，应加温一段必要的时间，使从外壳测量的温度达到均匀的稳定温度 57±4°C。这段时间的长短取决于电芯或电池的大小和设计，对于这个持续时间应加以评估和记录。		P
	If this assessment is not feasible, the exposure time shall be at least 6 hours for small cells and small batteries, and 12 hours for large cells and large batteries./ 如无法进行这种评估，则小型电芯和小型电池的暴露时间应至少 6 小时，大型电芯和小型电池的暴露时间应至少 12 小时。		N/A
	Then the cell or battery at 57±4°C shall be subjected to one short circuit conditionwith a total external resistance of less than 0.1 ohm./ 然后，电芯或电池应在 57±4°C 条件下经受总外电阻小于 0.1 欧姆的短路条件。		P
	This short circuit condition is continued for at least one hour after the cell or battery external case temperature has returned to 57±4°C/这一短路条件应在电芯或电池外壳温度回到 57±4°C 后继续至少 1 小时。		P
	or in the case of the large batteries, has decreased by half of themaximum temperature increase observed during the test and remains below that value./ 或在大型电池的情况下外壳温度降幅达试验中所观察的最高温升幅的二分之一并保持低于该数值。		N/A

Clause	Requirement + Test	Result - Remark	Verdict
	Cells and batteries meet this requirement if their external temperature does not exceed 170°C and there is no disassembly, no rupture and no fire during the test and within six hours after the test./ 如果外壳温度不超过170°C，并且在试验过程中及试验后6小时内无解体、无破裂、无起火，电芯和电池即符合本项要求。	External temperature does not exceed 170°C, No disassembly, no rupture and no fire. /外壳温度不超过170°C，无解体、无破裂、无起火。 The data see table 1./ 试验数据见表1。	P
38.3.4.6	**Test T.6: Impact / Crush/撞击/挤压**	Crush/挤压	P
	Impact (applicable to cylindrical cells not less than 18.0 mm in diameter)./撞击(适用于直径不小于18.0毫米的圆柱形电芯) NOTE: Diameter here refers to the design parameter (for example the diameter of 18650 cells is 18.0 mm). /注: 此处直径指设计参数(例如，18650电芯的直径为18.0毫米)。		N/A
	The test sample cell or component cell is to be placed on a flat smooth surface. A 15.8 mm ±0.1 mm diameter, at least 6 cm long, or the longest dimension of the cell, whichever is greater, Type 316 stainless steel bar is to be placed across the centre of the sample. A 9.1 kg±0.1kg mass is to be dropped from a height of 61 ±2.5 cm 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 shall be oriented 90 degrees from the horizontal supporting surface./ 试样电芯或元件电芯放在平坦光滑的表面上。一根316型不锈钢棒横放在试样中心，钢棒直径15.8毫米±0.1毫米，长度至少6厘米，或电芯最长端的尺寸，取二者之长者。将一块9.1千克±0.1千克的重锤从61±2.5厘米高处跌落到钢棒和试样交叉处，使用一个几乎没有摩擦的、对落体重锤阻力最小的垂直轨道或管道加以控制。垂直轨道或管道用于引导落锤沿与水平支撑表面呈90度落下。		N/A
	The test sample is to be impacted with its longitudinal axis parallel to the flat surface and perpendicular to the longitudinal axis of the 15.8 mm±0.1 mm diameter curved surface lying across the centre of the test sample. Each sample is to be subjected to only a single impact./ 接受撞击的试样，纵轴应与平坦表面平行并与横放在试样中心的直径15.8毫米土0.1毫米弯曲表面的纵轴垂直。每一试样只经受一次撞击。		N/A
	Crush (applicable to prismatic, pouch, coin/button cells and cylindrical cells less than 18.0 mm in diameter)/挤压(适用于棱柱形、袋装、硬币/纽扣电芯和直径小于18.0毫米的圆柱形电芯) NOTE: Diameter here refers to the design parameter (for example the diameter of 18650 cells is 18.0 mm). /注: 此处直径指设计参数(例如，18650电芯的直径为18.0毫米)。		P

Clause	Requirement + Test	Result - Remark	Verdict
	A cell or component cell is to be crushed between two flat surfaces. The crushing is to be gradual with a speed of approximately 1.5 cm/s at the first point of contact. The crushing is to be continued until the first of the three options below is reached./ 将电芯或元件电芯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:		P
	(a) The applied force reaches 13 kN±0.78 kN ; /施加力达到 13 kN±0.78 kN		P
	(b) The voltage of the cell drops by at least 100 mV;/样品的电压下降至少100mV		N/A
	(c) The cell is deformed by 50% or more of its original thickness. /电芯变形达原始厚度的50%以上。		N/A
	A prismatic or pouch cell shall be crushed by applying the force to the widest side. A button/coin cell shall be crushed by applying the force on its flat surfaces. For cylindrical cells, the crush force shall be applied perpendicular to the longitudinal axis./ 棱柱形或袋装电芯应从最宽的一面施压。纽扣/硬币形电芯应从其平坦表面施压。圆柱形电芯应从与纵轴垂直的方向施压。		P
	Each test cell or component cell is to be subjected to one crush only. The test sample shall be observed for a further 6 h. The test shall be conducted using test cells or component cells that have not previously been subjected to other tests./ 每个试样电芯或元件电芯只做一次挤压试验。试样应继续观察6小时。试验应使用之前未做过其他试验的电芯或元件电芯进行。		P
	Cells and component cells meet this requirement if their external temperature does not exceed 170°C and there is no disassembly and no fire during the test and within six hours after this test./ 如果外壳温度不超过170°C，并且在试验过程中及试验后 6小时内无解体、无起火，电芯和元件电芯即符合本项要求。	External temperature does not exceed 170°C , no disassembly and no fire./外壳温度不超过 170°C，无解体、无起火。 The data see table 2./ 试验数据见表 2。	P
38.3.4.7	**Test T.7: Overcharge/过度充电**		P
	The charge current shall be twice the manufacturer's recommended maximum continuous charge current. /充电电流必须是制造商建议的最大持续充电电流的两倍。试验的最小电压如下:		P
	(a) When the manufacturer's recommended charge voltage is not more than 18V, the minimum voltage of the test shall be the lesser of two times the maximum charge voltage of the battery or 22V. /制造商建议的充电电压不大于18伏时，试验的最小电压应是电池最大充电电压的两倍或22伏两者中的较小者。		P

Clause	Requirement + Test	Result - Remark	Verdict
	(b) When the manufacturer's recommended charge voltage is more than 18V, the minimum voltage of the test shall be 1.2 times the maximum charge voltage. /制造商建议的充电电压大于18伏时，试验的最小电压应为最大充电电压的1.2倍。		N/A
	Tests are to be conducted at ambient temperature. The duration of the test shall be 24 hours./试验应在环境温度下进行。进行试验的时间应为24小时。		P
	Rechargeable batteries meet this requirement if there is no disassembly and no fire during the test and within seven days after the test. /可充电电池如在试验过程中和试验后7天内无解体，无起火，即符合本项要求。	No disassembly and no fire. /无解体，无起火。 The data see table 3./试验数据见表3。	P
38.3.4.8	**Test T.8: Forced discharge/强制放电**		P
	Each cell shall be forced discharged at ambient temperature by connecting it in series with a 12V D.C. power supply at an initial current equal to the maximum discharge current specified by the manufacturer. /每个电芯应在环境温度下与12伏直流电源串联在起始电流等于制造商给定的最大放电电流的条件下强制放电。		P
	The specified discharge current is to be obtained by connecting a resistive load of the appropriate size and rating in series with the test cell. Each cell shall be forced discharged for a time interval (in hours) equal to its rated capacity divided by the initial test current (in ampere). /将适当大小和额定值的电阻负荷与试验电芯串联，计算得出给定的放电电流。对每个电芯进行强制放电，放电时间(小时)应等于其额定容量除以初始试验电流(安培) 。		P
	Primary or rechargeable cells meet this requirement if there is no disassembly and no fire during the test and within seven days after the test./ 原电芯或可充电电芯如在试验过程中和试验后7天内无解体，无起火，即符合本项要求。	No disassembly and no fire. /无解体，无起火。 The data see table 4./ 试验数据见表4。	P

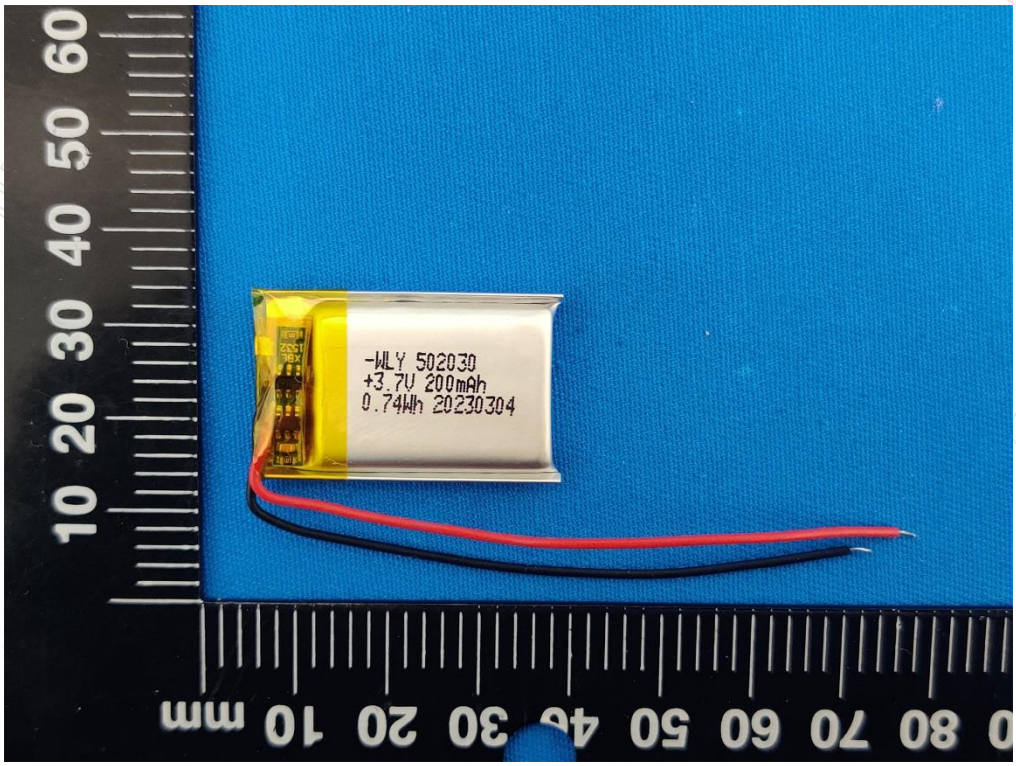
Table 1: T.1~T.5 / 表 1. 试验 T.1~试验 T.5											
Sample No. 样品编号	Mass prior to Test (g)/ 试验前质量	OCV prior to test (V)/ 试验前电压	Test 1: Altitude Simulation/ 试验 1：高度模拟		Test 2: Thermal test/ 试验 2：温度试验		Test 3: Vibration/ 试验 3：振动		Test 4 : Shock/ 试验 4：冲击		Test 5 :External Short Circuit/ 试验5：外部短路
			Mass loss(%) 质量损失(%)	Change ratio 电压比(%)	Mass loss(%) 质量损失(%)	Change ratio 电压比(%)	Mass loss(%) 质量损失(%)	Change ratio 电压比(%)	Mass loss(%) 质量损失(%)	Change ratio 电压比(%)	Max.Temp. (°C) 最大温度(°C)
B1#	5.497	4.157	0.018	99.90	0.055	99.01	0.000	99.95	0.000	99.98	57.6
B2#	5.502	4.158	0.018	99.88	0.073	99.04	0.018	99.95	0.000	100.00	57.8
B3#	5.467	4.157	0.000	99.88	0.073	99.01	0.018	99.98	0.000	99.98	57.5
B4#	5.588	4.158	0.018	99.90	0.054	98.99	0.000	99.95	0.018	100.00	57.7
B5#	5.523	4.156	0.000	99.90	0.054	99.06	0.000	99.95	0.000	99.98	57.8
B6#	5.520	4.158	0.018	99.88	0.072	99.01	0.000	99.95	0.000	99.98	57.6
B7#	5.511	4.157	0.000	99.90	0.054	98.99	0.018	99.98	0.000	99.98	57.7
B8#	5.475	4.159	0.000	99.88	0.073	99.01	0.000	99.95	0.018	100.00	57.7
B9#	5.516	4.157	0.018	99.90	0.054	99.04	0.018	99.95	0.000	100.00	57.8
B10#	5.469	4.157	0.018	99.88	0.055	99.04	0.000	99.98	0.018	99.98	57.5

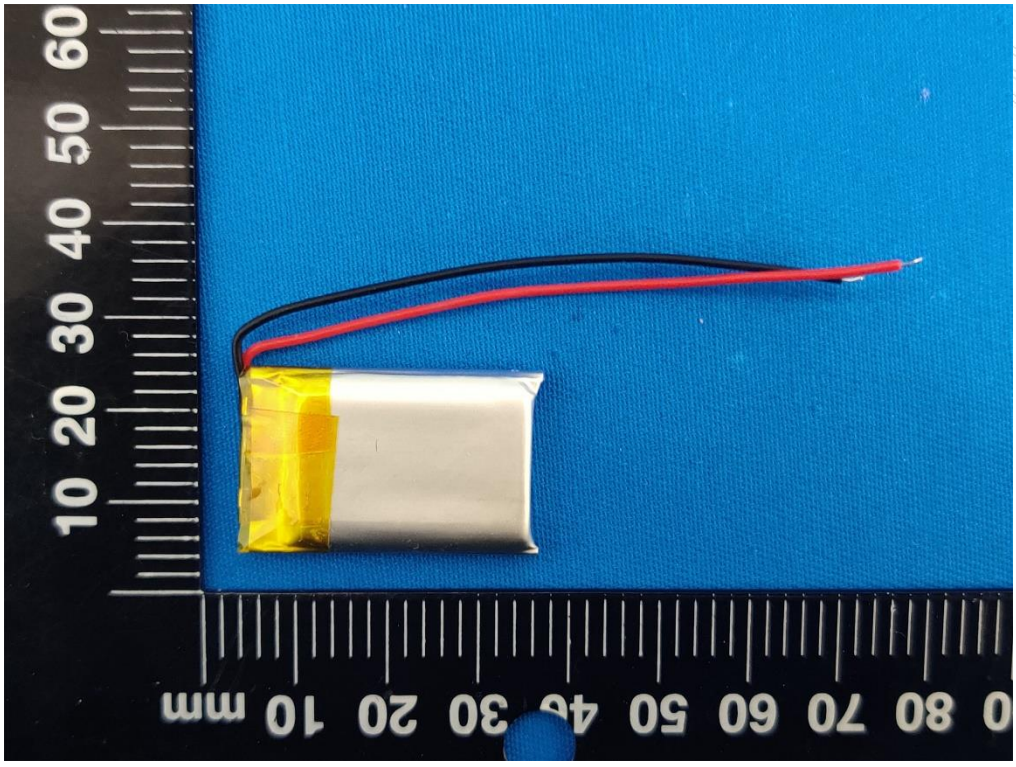
Table 2: Crush / 表 2：挤压						
Test 6: Crush / 试验 6: 挤压	Sample No. 样品编号	C1#	C2#	C3#	C4#	C5#
	Max.Temp. (°C) 最大温度(°C)	23.7	23.7	23.8	23.8	23.6
	Sample No. 样品编号	C6#	C7#	C8#	C9#	C10#
	Max.Temp. (°C) 最大温度(°C)	23.7	23.6	23.8	23.8	23.7

Table 3：Overcharge / 表 3：过度充电									
Test 7: Overcharge/ 试验 7 过度充电	Sample No. 样品编号	B11#	B12#	B13#	B14#	B15#	B16#	B17#	B18#
	Test voltage 试验电压(V)	8.4							
	Test current 试验电流(mA)	400							
	Provided by the applicant/申请商提供: 1.Maximum charging voltage/最大充电电压:4.20V 2.Maximum charging current/最大充电电流:400mA								

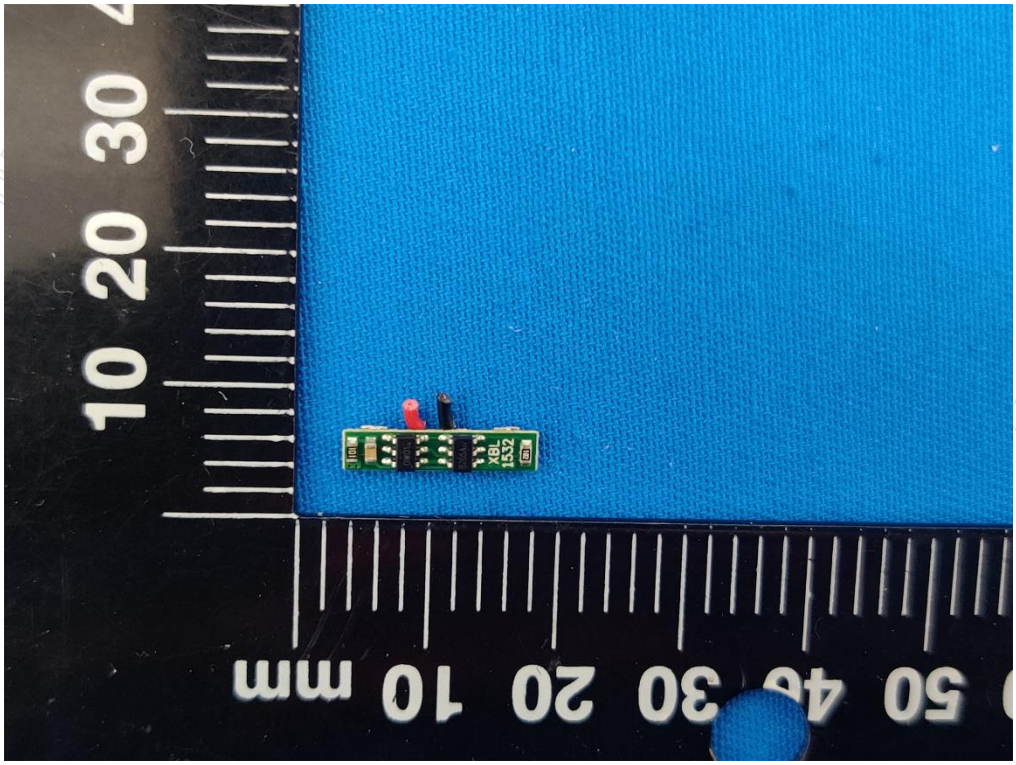
Table 4：Force discharge / 表 4：强制放电											
Test 8: Forced discharge/ 试验 8 强制放电	Sample No. 样品编号	C11#	C12#	C13#	C14#	C15#	C16#	C17#	C18#	C19#	C20#
	Test initial current 试验初始电流(mA)	200									
	Sample No. 样品编号	C21#	C22#	C23#	C24#	C25#	C26#	C27#	C28#	C29#	C30#
	Test initial current 试验初始电流(mA)	200									
	Provided by the applicant/申请商提供: Maximum discharging current of cell/电芯最大放电电流:200mA										

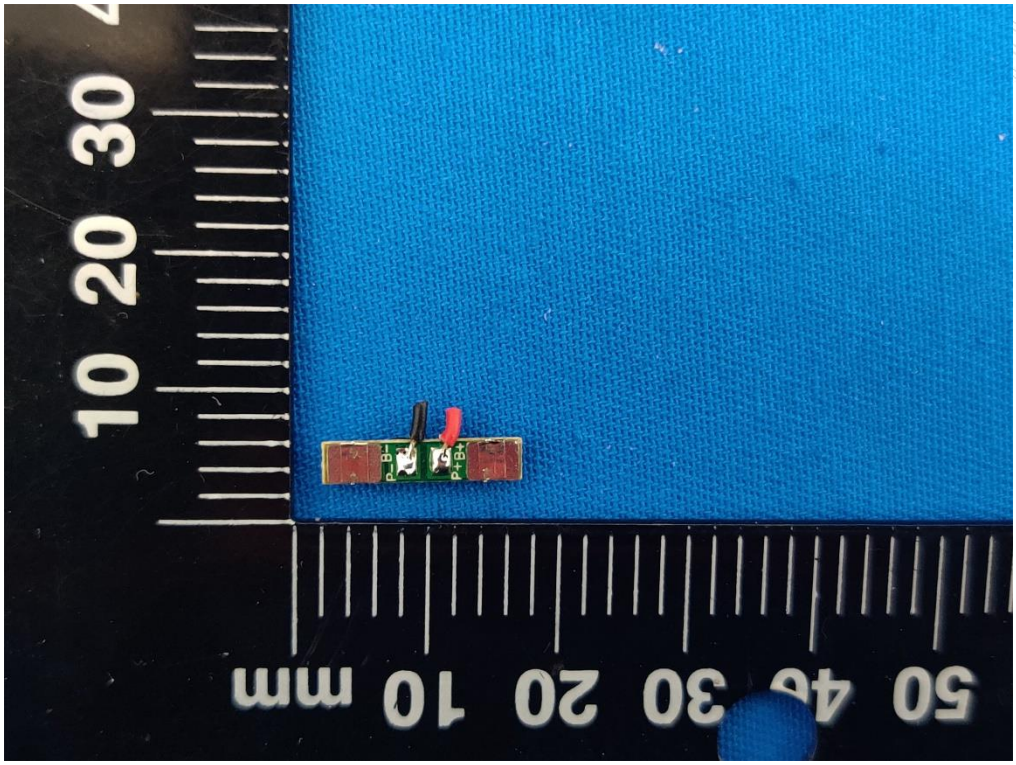
Photos /照片



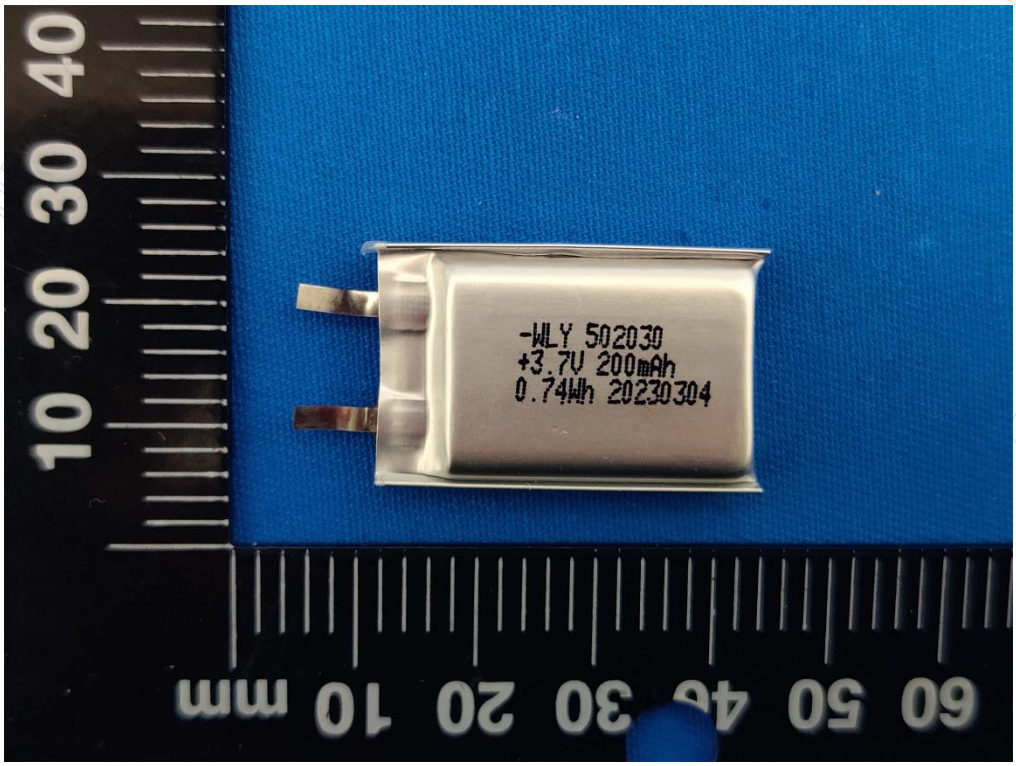


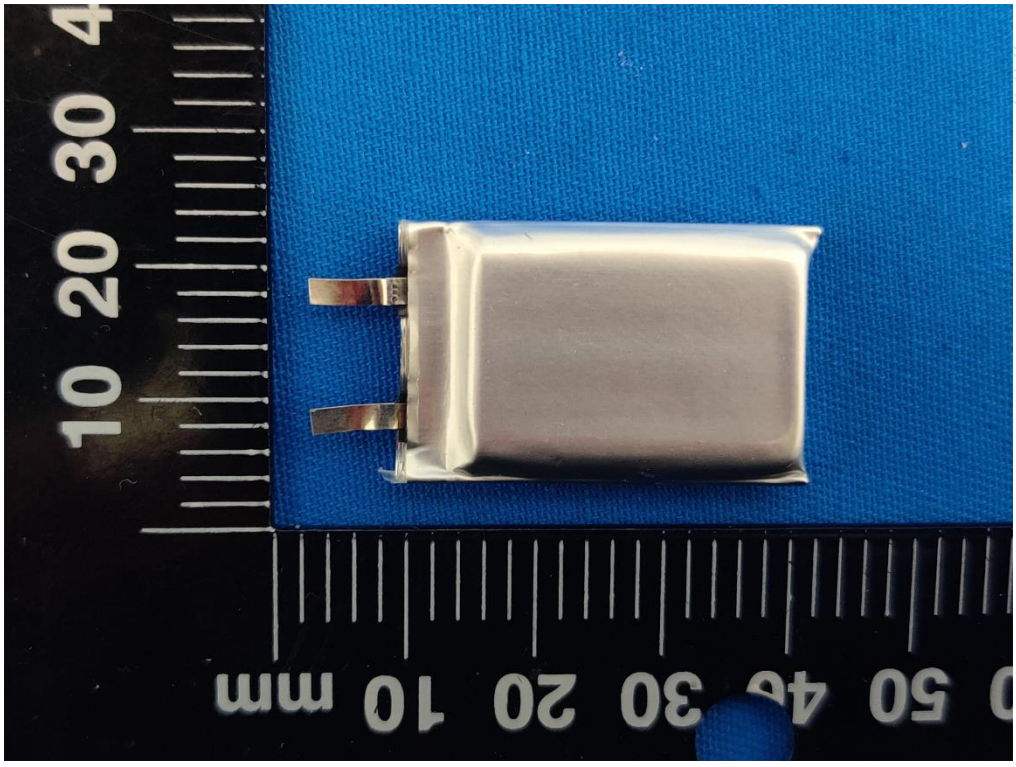
Photos /照片





Photos /照片





注 意 事 项
Notice

1. 本报告无检测单位检测章无效。

   The test report is invalid without the testing stamp of Guangzhou CPUP Certification Technology Service Co., Ltd..

2. 未经本试验室书面同意，不得部分地复制本报告。

   Nobody is allowed to photocopy or partly photocopy this test report without written permission of Guangzhou CPUP Certification Technology Service Co., Ltd..

3. 本报告无批准人、审核人及检测人签名无效。

   The test report is invalid without the signatures of Approver, Checker and Tester.

4. 本报告涂改无效。

   The test report is invalid if altered.

5. 对检测报告若有异议，应于收到报告之日起十五天内向检测单位提出。

   Objections to the test report must be submitted to Guangzhou CPUP Certification Technology Service Co., Ltd. Within 15 days.

6. 本报告仅对被测样品负责。

   The test report is responsible for the tested samples only.

7. 检测结论中“N/A”表示“不适用”，“P”表示“通过”，“F”表示“不通过”, “N/T” 表示“未测试”。

   As for the test conclusion, “N/A” means “not applicable”, “P” means “pass” and “F” means “fail”, “N/T” means “not tested”

8. 申请商提供的资料，若因存在真实性问题而影响检测结果的有效性，本试验室不承担任何相关责任。

   The information provided by the applicant. Our lab shall not take any responsibility if the information is fake and exaggerated, which may influence the validity of the testing result.

9. 检测数据和结果不具备社会证明性作用。

   The test data and results do not have social proof function.

===END OF TEST REPORT===

===报告结束===