UN 38.3 TEST REPORT
UN 38.3 检 测 报 告

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Applicant's name/ 申请商名称.....:	FPR Connectivity Technology Inc. 路华置富电子（东莞）有限公司
Address/ 申请商地址.....:	No.6 North Industry 3 Rd, Songshan Lake, Dongguan, Guangdong, China 广东省东莞市松山湖园区工业北三路6号
Test Standard/ 检测标准.....:	**ST/SG/AC.10/11/Rev.8 Subsection 38.3** **联合国《关于危险货物运输的建议书》试验和标准手册（第8版） 38.3节**
Testing Laboratory/ 检测实验室...:	Shenzhen Safe Win Testing Technology Co., Ltd. 深圳市赛为检测技术有限公司
Testing location/ 检测地点.....:	Room 106, 401, Building A, Jinfeng Zhihuigu, No. 45 Yonghe Road, Heping Community, Fuhai Street, Bao 'an District, Shenzhen City, Guangdong Province, China 深圳市宝安区福海街道和平社区永和路45号金丰智汇谷A栋厂房106、401
Test Conclusion/ 检测结论.....:	**PASS/ 合格**

General disclaimer / 一般声明:

The test results presented in this report relate only to the object tested.
本报告中显示的测试结果仅与被测试对象相关。
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Tested by/测试:	**Reviewed by/审核:**	**Approved by/批准:**
Jack Zhou/ Test Engineer 周书原 / 测试工程师	Royer.Yang/ Director 杨泽群 / 主管	Simon.Guan/ Manager 关世强 / 经理

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Test item information/ 测试项目信息：	
Information for Battery/ 电池组信息	
Description/ 产品描述……..……..:	Secondary Lithium Ion Battery/二次锂电池组
Trademark/商标……..……..:	N/A
Model/ 型号……..……..:	ABL-LD
Classification/ 类别……..……..:	Li-ion Battery / 锂离子电池
Ratings/ 额定参数……..……..:	12.8V, 4700mAh, 60.16Wh
Limited charging voltage/ 充电限制电压....:	14V
Recommendation charging current/ 推荐充电电流……..……..:	2350mA
Maximum charging current/ 最大充电电流:	4700mA
Recommendation discharge current/ 推荐放电电流……..……..:	2350mA
End of discharge voltage/ 放电终止电压...:	11V
Sample Shape/ 样品形状……..……..:	☐ Prismatic/棱柱形；☐ Cylindrical/圆柱形； ☒ Approximate Cuboid/ 近长方体；☐ Silver button/银色扣式； ☐ Others/其他：Irregular Solid/不规则形状
Sample size/ 样品尺寸……..……..:	T/厚(31.0mm) * W/宽(54.0mm) * L/长(146.0mm)
Weight/ 样品重量……..……..:	418.5g
Appearance color/ 样品外观颜色……..……..:	Blue 蓝色
Cell quantity/ 组成电池数量……..……..:	4 pcs (4串1并)
Quantity of sample/ 测试样品数量……..……..:	30cells+16batteries/ 30 个电池+16 个电池组
Sample code/ 样品编码……..……..:	Cells: 2407330823B03-C1~2407330823B03-C30 Batteries: 2407330823B03-B1~2407330823B03-B16
Sample No./ 样品编号……..……..:	Cells: C1#~C30#; Batteries: B1#~B16#
Test environment condition/ 检测环境……..:	Ambient temperature: 20°C±5°C, Ambient humidity: 45%-75%Rh 环境温度：20°C±5°C, 环境湿度：45%-75%Rh
Factory/ 生产工厂……..……..:	FPR Connectivity Technology Inc. 路华置富电子（东莞）有限公司
Factory's Address/ 生产工厂地址……..……..:	No.6 North Industry 3 Rd, Songshan Lake, Dongguan, Guangdong, China 广东省东莞市松山湖园区工业北三路6号
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Factory's E-mail/ 生产工厂邮箱……..……..:	katen.kong@fprconn.com
Factory's Web./ 生产工厂网址……..……..:	N/A
Manufacturer/ 制造商……..……..:	Same as factory 同生产工厂
Manufacturer's Address/ 制造商地址……..……..:	Same as factory 同生产工厂

Information for Cell/ 电池信息	
Cell model/ 电池型号.....:	ITR26/70-50E（R6）
Cell ratings/ 电池额定参数.....:	3.2V, 5.0Ah, 16.0Wh
Limited charging voltage/ 充电限制电压....:	3.65V
Recommendation charging current/ 推荐充电电流.....:	2500mA
Maximum charging current/ 最大充电电流:	5000mA
Recommendation discharge current/ 推荐放电电流.....:	2500mA
End of discharge voltage/ 放电终止电压...:	2.0V
Factory/ 生产工厂.....:	EVPS Anhui Power Battery Co.,Ltd. 安徽利维能动力电池有限公司
Factory's Address/ 生产工厂地址.....:	Intersection of Huangqinghu Road and Yuanshan Road, Nanqiao District, Chuzhou,P.R.China 滁州市南谯区黄庆湖路与元山路交叉口

Possible test case verdicts/ 可能的检测情况判定：

- test case does not apply to the test object.....: N/A 不适用
检测情况不适用本检测产品

- test object does meet the requirement.....: P (Pass) / 合格
检测样品满足要求

- test object does not meet the requirement.....: F (Fail) / 不合格
检测样品不满足要求

Testing/ 测试:

Date of receipt of test item/接样日期.....: 2024-08-23

Date (s) of performance of tests/测试日期.....: 2024-08-25 to 2024-09-06

General remarks/ 一般注解：

Throughout this report a point is used as the decimal separator.
在整个报告中，使用点号作为小数分隔符。

Revision notes/修订说明:
N/A

Remarks 备注：

The test report is invalid if not affixed the official seal of the laboratory to it, without the signatures of Approve, Reviewer and tester, and if it blotted out.
检测报告无本实验室公章（或检测报告专用章）无效，无检测人员、审核人员、批准人员签字无效，涂改无效。

Tests performed/ 测试执行：

The sample's status is good.
样品状况良好。

Name of test 测试项目	Sample number 样品编号	Sample state 样品状态	Test Result 测试结果
T.1, T.2, T.3, T.4, T.5	B1#-B4#	At first cycle, in fully charged states 第1次循环充放电周期，完全充电状态	Pass 合格
T.1, T.2, T.3, T.4, T.5	B5#-B8#	After 25 cycles ending in fully charged states 第25次循环充放电周期后，完全充电状态	Pass 合格
T.6	C1#-C5#	At first cycle at 50% of the design rated capacity states 第1个充放电周期，充电至标称容量的50%状态	Pass 合格
T.6	C6#-C10#	After 25 cycles ending at 50% of the design rated capacity states 第25次循环充放电周期后，充电至标称容量的50%状态	Pass 合格
T.7	B9#-B12#	At first cycle, in fully charged states 第1次循环充放电周期，完全充电状态	Pass 合格
T.7	B13#-B16#	After 25 cycles ending in fully charged states 第25次循环充放电周期后，完全充电状态	Pass 合格
T.8	C11#-C20#	At first cycle, in fully discharged states 第1次循环充放电周期，完全放电状态	Pass 合格
T.8	C21#-C30#	After 25 cycles ending in fully discharged states 第25次循环充放电周期后，完全放电状态	Pass 合格

1.Tests T.1 to T.5 are conducted in sequence on the same battery. Tests T.6 and T.8 are conducted using not otherwise tested cells. Test T.7 may be conducted using undamaged batteries previously used in Tests T.1 to T.5 for purposes of testing on cycled batteries.

电池组必须按顺序在同一组电池组上依次进行T.1至T.5的试验。试验T.6和T.8应使用全新的电池进行试验。T.7可以使用之前在T.1至T.5中使用过的未损坏电池组进行，所选电池组其中4个为第一次循环后，另外4个为经过25次循环后的电池组。

2.In order to quantify the mass loss, the following procedure is provided:

为了量化质量损失，可用以下公式计算：

$$\text{Mass loss (\%)} = \frac{(M1 - M2)}{M1} \times 100$$

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”。

Table 38.3.1 Mass loss limit

Mass M of cell or battery	Mass loss limit
M <1 g	0.5%
1 g ≤ M ≤ 75 g	0.2%
M > 75 g	0.1%

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ST/SG/AC.10/11/Rev.8 Subsection 38.3			
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 11.6 kPa or less for at least six hours at ambient temperature(20±5°C) 电池和电池组在温度为20±5℃、大气压力不大于11.6 kPa的环境中贮存不少于6个小时。		P
	Cells and batteries meet this requirement if there is no mass loss, no leakage, no venting no disassembly , no rupture and no fire and if the open circuit voltage of each test cell or battery after testing is not less than 90% of its voltage immediately prior to this procedure .the requirement relating to voltage is not applicable to test cells and batteries at fully discharged states./ 电池和电池组符合要求：无质量损失、无漏液、无冒烟、无分解、无破裂以及无着火现象：电池或电池组测试后的开路电压不低于测试前开路电压的90%。此项关于电压方面的要求不适用于完全放电后的电池和电池组。	No mass loss, No leakage, no venting, no disassemby, no rupture and no fire./ 无质量损失、无漏液、无冒烟、无分解、无破裂以及无着火现象。 The data see table T.1./测试数据见表T.1	P
38.3.4.2	**Test T.2: Thermal test/温度测试**		P
	Test cells and batteries are to be stored for at least six hours at a test temperature equal to 72±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 10 times, after which all test cells and batteries are to be stored for 24 hours at ambient temperature(20±5°C). /首先将样品放在72 ±2°C的环境中放置至少6个小时，然后放在-40±2℃的环境中放置至少6个小时，温度暂缓的最大间隔时间为30分钟。如此循环10次，最后将样品放在20±5°C的环境中静置24小时。		P
	For large cells and batteries the duration of exposure to the test temperature extremes should be at least 12 hours./对于大电池，在高温和低温中放置的时间最少为12小时。		N/A
	Cells and batteries meet this requirement if there is no mass loss no leakage, no venting, disassembly, no repture and no fire and if the open circuit voltage of each cell or battery after testing is not less than 90% of its voltage immediately prior to this procedure. /电池和电池组符合要求：无质量损失、无漏液、无冒烟、无分解、无破裂以及无着火现象：电池和电池组测试后的开路电压不低于测试前开路电压的90%。	No mass loss, No leakage, no venting, no disassemby, no rupture and no fire./ 无质量损失、无漏液、无冒烟、无分解、无破裂以及无着火现象。 The data see table T.2./测试数据见表T.2	P

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ST/SG/AC.10/11/Rev.8 Subsection 38.3			
Clause	Requirement + Test	Result - Remark	Verdict
38.3.4.3	**Test T.3: Vibration/振动**		P
	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./样品必须牢固的安装在振动台面上。振动以正弦波形式，以7Hz增加至200Hz，然后减少回到7Hz为一个循环，一个循环持续15分钟。对样品从三个互相垂直的方向上循环12次，共3个小时。其中一个振动方向必须是垂直样品的极性平面。		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 witn a gross mass of more than 12 kg(large batteries)./对于质量不大于12kg的样品（电池和电池组）和质量超过12kg的电池组（大电池组），对数扫频不同。		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. /对于电池和小电池组，对数扫频为：从7Hz开始保持1g_n的最大加速度直到频率为18Hz，然后将振幅保持在0.8mm (总偏移1.6mm) 并增加频率直到最大加速度达到8g_n (频率约为50Hz)，将最大加速度保持在8g_n直到频率增加到200Hz。		P
	For large 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 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. /对于大电池组，对数扫频为：从7Hz开始保持1g_n的最大加速度直到频率为18Hz，然后将振幅保持在0.8mm (总偏移1.6mm) 并增加频率直到最大加速度达到2g_n (频率约为25Hz)，将最大加速度保持在2g_n直到频率增加到200Hz。		N/A

ST/SG/AC.10/11/Rev.8 Subsection 38.3			
Clause	Requirement + Test	Result - Remark	Verdict
	Cells and batteries meet this requirement if there isno leakage, no venting, no disassembly, no ruptureand no fire during the test and after the test and ifthe open circuit voltage of each test cell or batterydirectly after testing in its third perpendicular mounting position is not less than 90% of its voltage immediately prior to this procedure. The requirement relating to voltage is not applicable to test cells and batteries at fully discharged states./ 电池和电池组符合要求：无质量损失、无漏液、无冒烟、无分解、无破裂以及无着火现象；电池或电池组测试后的开路电压不低于测试前开路电压的90%。此项关于电压方面的要求不适用于完全放电后的电池和电池组。	No mass loss, No leakage, no venting, no disassemby, no rupture and no fire./ 无质量损失、无漏液、无冒烟、无分解、无破裂以及无着火现象。 The data see table T.3./测试数据见表T.3	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. Each cell or battery shall be subjected to a half-sine shock of peak acceleration of 150 g_n and pulse duration of 6 milliseconds. Each cell or battery shall be 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 or battery for a total of 18 shocks. /以稳固的托架固定住每个样品。对每个样品以峰值为150g_n的半正弦的加速度撞击，脉冲持续6ms。每个样品必须在三个互相垂直的电池组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。		P
	However, large cells and large batteries shall be subjected to a half-sine shock of peak acceleration of 50gn and pulse duration of 11 milliseconds. Each cell or battery is subjected to three shocks in the positive direction followed by three shocks in the negative direction of each of three mutually perpendicular mounting positions of the cell for a total of 18 shocks. /大电池和大电池组须经受最大加速度50gn和脉冲持续时间11ms的半正弦波冲击。每个样品必须在三个互相垂直的电池组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。		N/A

ST/SG/AC.10/11/Rev.8 Subsection 38.3			
Clause	Requirement + Test	Result - Remark	Verdict
	Cells and batteries meet this requirement if there is no mass loss, no leakage, no venting, no disassembly, no rupture and no fire and if the open circuit voltage of each test cell or battery after testing is not less than 90% of its voltage immediately prior to this procedure. The requirement relating to voltage is not applicable to test cells and batteries at fully discharged states. / 电池和电池组符合要求：无质量损失、无漏液、无冒烟、无分解、无破裂以及无着火现象；电池或电池组测试后的开路电压不低于测试前开路电压的90%。此项关于电压方面的要求不适用于完全放电后的电池和电池组。	No mass loss, No leakage, no venting, no disassemby, no rupture and no fire./ 无质量损失、无漏液、无冒烟、无分解、无破裂以及无着火现象。 The data see table T.4./测试数据见表T.4	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 temperature stabilized so that its external case temperature reaches 57±4°C and then the cell or battery shall be subjected to a short circuit condition with a total external resistance of less than 0.1 ohm at 57±4°C. 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. /保持测试环境温度稳定在57±4°C，以便样品外表温度达到57±4°C，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，样品的外表温度恢复到57±4°C之后保持短路状态1小时以上。		P
	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./电池和电池组符合要求：在测试过程中，外表温度不超过170°C，并且在测试过程中以及之后6个小时内，无分解、无破裂和无着火现象发生。	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./外表温度不超过170°C，并且在测试过程中以及之后6个小时内，无分解、无破裂和无着火现象发生。 The data see table T.5./测试数据见表T.5	P

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ST/SG/AC.10/11/Rev.8 Subsection 38.3			
Clause	Requirement + Test	Result - Remark	Verdict
38.3.4.6	**Test T.6: Impact / Crush /撞击/挤压**		P
	Test procedure – Impact (applicable to cylindrical cells greater than or equal to 18 mm in diameter) /撞击(适合于直径大于或等于18mm的圆柱形电池)。		P
	The sample cell or component cell is to be placed on a flat smooth surface. A 15.8 mm±0.1mm 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 center of the sample. A 9.1 kg±0.1 kg 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. /将样品放在一个平坦的光滑平面上。将一直径为15.8 mm± 0.1mm，长度不小于6cm的316不锈钢棒横过样品中部放置后，将一质量为9.1 kg±0.1kg的重物从61±2.5 cm的高度落向样品。		P
	The test sample is to be impacted with its longitudinal axis parallel to the flat surface and perpendicular to the longitudinal axis of the 15.8mm±0.1mm diameter curved surface lying across the center of the test sample. Each sample is to besubjected to only a single impact. /接受撞击的样品，纵轴应与平坦的表面平行并与横放在样品中心的直径15.8 mm±0.1mm弯曲表面的纵轴垂直。每一个样品只接受一次撞击。		P
	Test Procedure – Crush (applicable to prismatic, pouch, coin/button cells and cylindrical cells not more than 18 mm in diameter). /挤压 (适用于棱柱形、袋状、硬币/纽扣电池和直径不超过18mm的圆柱形电池)。		N/A
	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1.5cm/s。挤压持续进行，直到出现以下三种情况之一。		N/A
	(a) The applied force reaches 13 kN±0.78 kN; /施加力达到13 kN±0.78 kN。		N/A
	(b) The voltage of the cell drops by at least 100 mV; /样品的电压下降至少100mV。		N/A

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ST/SG/AC.10/11/Rev.8 Subsection 38.3			
Clause	Requirement + Test	Result - Remark	Verdict
	(c) The cell is deformed by 50% or more of its original thickness. /电池变形达原始厚度的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. /棱柱形或袋状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。		N/A
	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./每个样品都是全新样品，并且只经受一次施压。施压结束后样品应静置观察6小时。		N/A
	Cells and component cells 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 this test. /电池满足要求：在测试过程中，外表温度不超过170°C，并且在测试过程中以及之后6个小时内无分解、无破裂和无着火现象发生。	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 this test. /外表温度不超过170°C，并且在测试过程中以及之后6个小时内无分解、无破裂和无着火现象发生。 The data see table T.6./测试数据见表T.6	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. Tests are to be conducted at ambient temperature. The duration of the test shall be 24 hours. The minimum voltage of the test shall be as follows: /在室温下，以2倍的制造商宣称的最大持续充电电流对样品充电，测试时间为24小时。测试的最小电压如下：		P

ST/SG/AC.10/11/Rev.8 Subsection 38.3			
Clause	Requirement + Test	Result - Remark	Verdict
	(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. /如果制造商宣称的充电电压不超过18V，本测试的最小充电电压应是制造商宣称的最大充电电压的两倍或者是22V之中的较小者。		P
	(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. /如果制造商宣称的充电电压超18V，本测试的最小充电电压应该是制造商宣称的最大充电电压的1.2倍。		N/A
	There is no disassembly and no fire during the test and within seven days after the test. /在测试中和测试完成后7天内，样品无分解和无着火现象。	No disassembly and no fire during the test and within seven days after the test./在测试中和测试完成后7天内，样品无分解和无着火现象发生。 The data see table T.7./测试数据见表T.7	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. /在室温下，将单个电池连接在12V的直流电源上进行强制放电，此直流电源供给每个电池初始电流为制造商宣称的最大放电电流。 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). /指定的放电电流通过串联在测试电池上的合适大小和功率的负载来获得，每个电池的强制放电时间(小时)为额定容量除以初始电流(安培)。		P

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ST/SG/AC.10/11/Rev.8 Subsection 38.3			
Clause	Requirement + Test	Result - Remark	Verdict
	There is no disassembly and no fire during the test and within seven days after the test./在测试中和测试完成后7天内，样品无分解和无着火现象发生	No disassembly and no fire during the test and within seven days after the test./在测试中和测试完成后7天内，样品无分解和无着火现象发生。 The data see table T.8./测试数据见表T.8	P

Table T.1: Altitude Simulation/ 表T.1：高度模拟							
Sample No. 样品编号	Weight Before Test 测试前质量（g）	Voltage Before Test 测试前电压（V）	Weight After Test 测试后质量（g）	Voltage After Test 测试后电压（V）	Mass Loss 质量损失 (%)	Residual OCV剩余电压比(%)	Test Result 测试结果
B1#	420.3	13.485	420.3	13.484	0.01%	99.99%	Pass/合格
B2#	416.6	13.496	416.6	13.495	0.01%	99.99%	Pass/合格
B3#	418.3	13.473	418.3	13.473	0.00%	100.00%	Pass/合格
B4#	417.5	13.485	417.5	13.485	0.00%	100.00%	Pass/合格
B5#	418.5	13.499	418.5	13.499	0.00%	100.00%	Pass/合格
B6#	418.2	13.513	418.2	13.512	0.01%	99.99%	Pass/合格
B7#	419.0	13.467	419.0	13.467	0.00%	100.00%	Pass/合格
B8#	417.3	13.485	417.3	13.482	0.01%	99.98%	Pass/合格
Notes注释： After the test, there is no mass loss, no leakage, no venting, no disassembly, no rupture and no fire, and change ratio is not less than 90%. 测试后，样品无质量损失、无漏液、无冒烟、无分解、无破裂以及无着火，电压比不小于90%。							

Table T.2: Thermal test/ 表T.2：温度试验					
Sample No. 样品编号	Weight After Test 测试后质量（g）	Voltage After Test 测试后电压（V）	Mass Loss 质量损失(%)	Residual OCV 剩余电压比(%)	Test Result 测试结果
B1#	420.0	13.343	0.07%	98.96%	Pass/合格
B2#	416.3	13.358	0.06%	98.99%	Pass/合格
B3#	418.0	13.336	0.06%	98.98%	Pass/合格
B4#	417.2	13.349	0.07%	98.99%	Pass/合格
B5#	418.2	13.357	0.06%	98.95%	Pass/合格
B6#	417.9	13.370	0.07%	98.95%	Pass/合格
B7#	418.7	13.331	0.07%	98.99%	Pass/合格
B8#	417.0	13.343	0.06%	98.97%	Pass/合格
Notes注释： After the test, there is no mass loss, no leakage, no venting, no disassembly, no rupture and no fire, and change ratio is not less than 90%. 测试后，样品无质量损失、无漏液、无冒烟、无分解、无破裂以及无着火，电压比不小于90%。					

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Table T.3: Vibration/ 表T.3：振动					
Sample No. 样品编号	Weight After Test 测试后质量（g）	Voltage After Test 测试后电压（V）	Mass Loss 质量损失(%)	Residual OCV 剩余电压比(%)	Test Result 测试结果
B1#	419.9	13.342	0.01%	99.99%	Pass/合格
B2#	416.3	13.356	0.01%	99.98%	Pass/合格
B3#	418.0	13.336	0.00%	100.00%	Pass/合格
B4#	417.2	13.347	0.01%	99.99%	Pass/合格
B5#	418.2	13.356	0.01%	99.99%	Pass/合格
B6#	417.9	13.370	0.00%	100.00%	Pass/合格
B7#	418.7	13.331	0.00%	100.00%	Pass/合格
B8#	417.0	13.342	0.01%	99.99%	Pass/合格
Notes注释： After the test, there is no mass loss, no leakage, no venting, no disassembly, no rupture and no fire, and change ratio is not less than 90%. 测试后，样品无质量损失、无漏液、无冒烟、无分解、无破裂以及无着火，电压比不小于90%。					

Table T.4: Shock/ 表T.4：冲击					
Sample No. 样品编号	Weight After Test 测试后质量（g）	Voltage After Test 测试后电压（V）	Mass Loss 质量损失(%)	Residual OCV 剩余电压比(%)	Test Result 测试结果
B1#	419.9	13.339	0.01%	99.98%	Pass/合格
B2#	416.2	13.354	0.01%	99.99%	Pass/合格
B3#	418.0	13.334	0.01%	99.99%	Pass/合格
B4#	417.1	13.346	0.01%	99.99%	Pass/合格
B5#	418.2	13.355	0.01%	99.99%	Pass/合格
B6#	417.8	13.367	0.01%	99.98%	Pass/合格
B7#	418.7	13.330	0.01%	99.99%	Pass/合格
B8#	416.9	13.341	0.01%	99.99%	Pass/合格
Notes注释： After the test, there is no mass loss, no leakage, no venting, no disassembly, no rupture and no fire, and change ratio is not less than 90%. 测试后，样品无质量损失、无漏液、无冒烟、无分解、无破裂以及无着火，电压比不小于90%。					

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Table T.5: External Short Circuit/ 表T.5：外部短路								
Sample No. 样品编号	B1#	B2#	B3#	B4#	B5#	B6#	B7#	B8#
OCV prior to test 试验前电压 (V)	13.339	13.354	13.334	13.346	13.355	13.367	13.330	13.341
Maximum Temperature 最高温度 (°C)	57.3	57.5	57.1	57.2	57.0	57.2	57.3	57.5
Test Result 测试结果	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格
Notes注释： Test sample 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. 检测样品表面温度不超过170°C，并且在测试过程中以及之后6小时内无分解、无破裂、无着火。								

Table T.6: Crush or impact/ 表T.6：挤压或撞击										
Sample No. 样品编号	C1#	C2#	C3#	C4#	C5#	C6#	C7#	C8#	C9#	C10#
OCV prior to test 试验前电压 (V)	3.736	3.734	3.735	3.732	3.735	3.734	3.732	3.735	3.734	3.733
Applied force 挤压力值 (kN)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Height 撞击高度 (cm)	61.3	61.1	61.1	61.0	61.3	61.2	61.1	61.3	61.0	61.2
Maximum Temperature 最高温度 (°C)	23.5	23.3	23.1	23.2	23.0	23.2	23.3	23.4	23.5	23.1
Test Result 测试结果	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格
Notes注释： Test sample 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. 检测样品表面温度不超过170°C，并且在测试过程中以及之后6小时内无分解、无破裂、无着火。										

Table 7: Overcharge / 试验T.7：过度充电								
Sample No. 样品编号	B9#	B10#	B11#	B12#	B13#	B14#	B15#	B16#
OCV prior to test 试验前电压 (V)	13.447	13.511	13.488	13.499	13.477	13.488	13.477	13.456
Test Result 测试结果	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格
Notes注释： Test sample is no disassembly and no fire during the test and within seven days after the test. 检测样品在检测中与检测后7天内无解体、无着火。								

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Table T.8: Force discharge / 表T.8：强制放电										
Sample No. 样品编号	C11#	C12#	C13#	C14#	C15#	C16#	C17#	C18#	C19#	C20#
OCV prior to test 试验前电压 (V)	2.335	2.333	2.336	2.334	2.335	2.333	2.331	2.334	2.334	2.331
Test Result 测试结果	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格
Sample No. 样品编号	C21#	C22#	C23#	C24#	C25#	C26#	C27#	C28#	C29#	C30#
OCV prior to test 试验前电压 (V)	2.332	2.333	2.331	2.336	2.335	2.335	2.334	2.331	2.332	2.334
Test Result 测试结果	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格	Pass 合格
Notes注释： Test sample is no disassembly and no fire during the test and within seven days after the test. 检测样品在检测中与检测后7天内无解体、无着火。										

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Photo documentation/ 图片文档

Details of: Front view of Secondary Lithium Ion Battery
Remark: Model: ABL-LD

Figure 1

Details of: Back view of Secondary Lithium Ion Battery
Remark: Model: ABL-LD

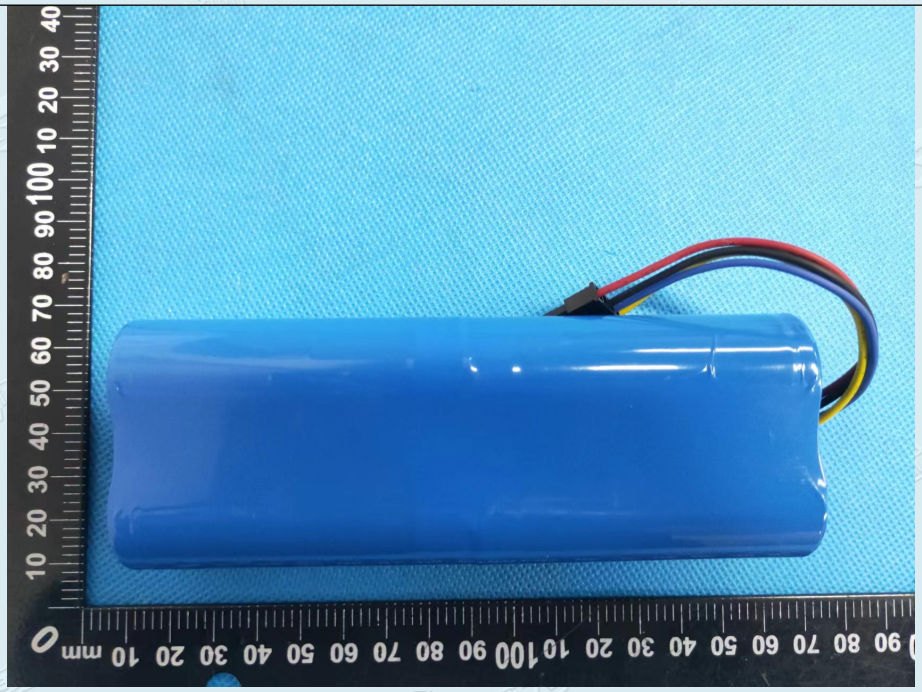

Figure 2

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Photo documentation/ 图片文档

Details of: Internal view of Secondary Lithium Ion Battery
Remark: Model: ABL-LD

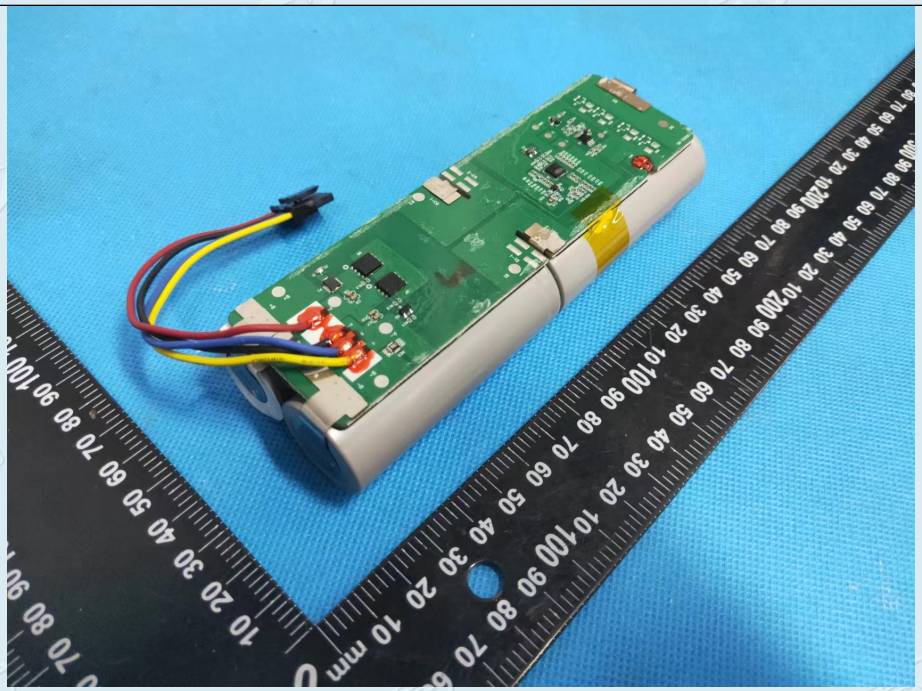

Figure 3

Details of: Front view of PCB
Remark: Model: ABL-LD

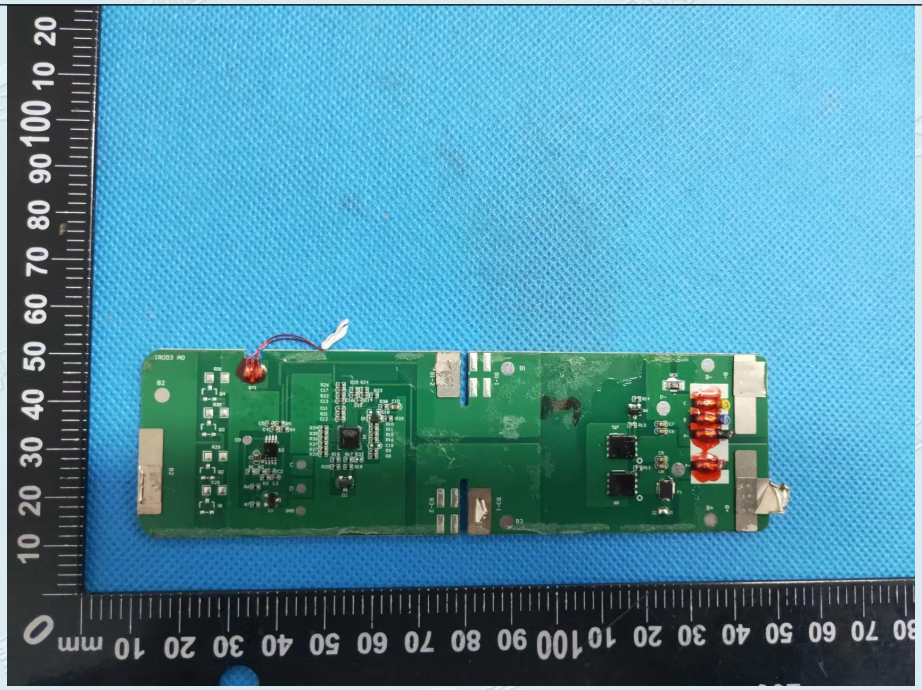

Figure 4

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Photo documentation/ 图片文档

Details of: Back view of PCB
Remark: Model No.: ABL-LD

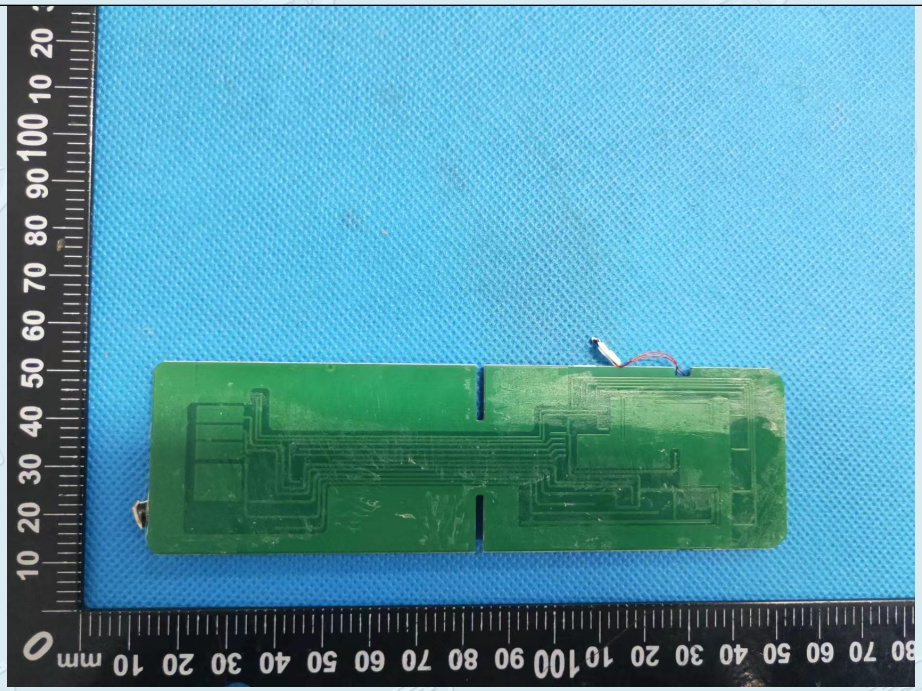

Figure 5

Details of: Front view of cell
Remark: Model No.: ITR26/70-50E（R6）

Figure 6

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Photo documentation/ 图片文档

Details of: Back view of cell
Remark: Model No.: ITR26/70-50E（R6）

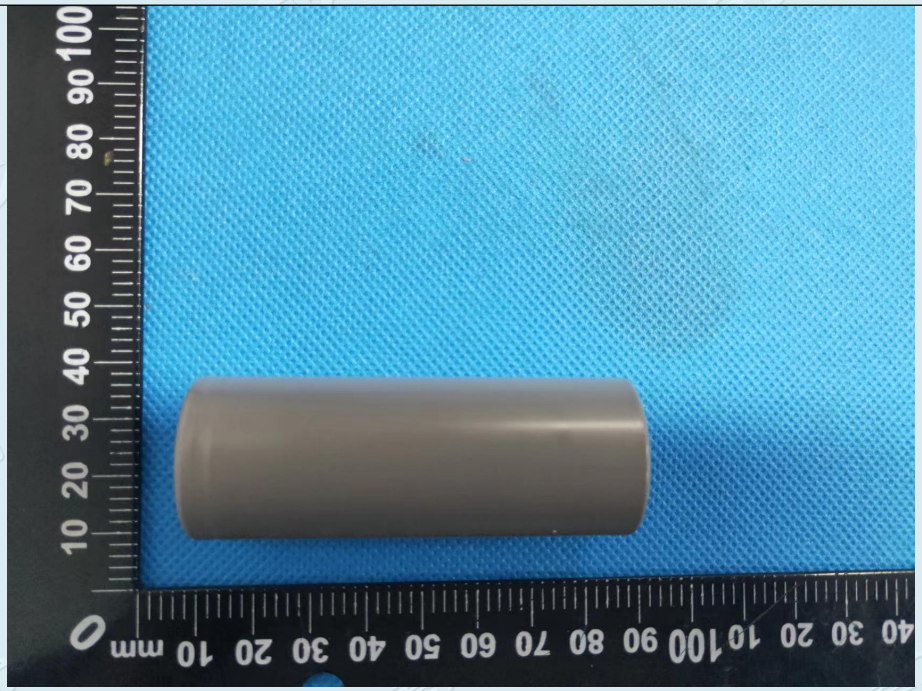

Figure 7

Details of: Label view of Secondary Lithium Ion Battery
Remark: Model: ABL-LD

Figure 8

---------- END OF TEST REPORT ----------
---------- 检测报告结束 ----------