样 品 承 认 书

APPROVED SHEET

客户料号(P/O) ： 0T-007-002500-05

品名(MATERIAL)： 锂充电电池

规格(SPECIFICATION)： 锂充电电池 2500MAH/7.2V/18650X2S/机型 MP230

承认说明：

东莞市金赛尔电池科技有限公司	EDIFIER 漫步者
承认签核（CUSTOMER APPROVAL）	承认签核（CUSTOMER APPROVAL）
制作(ORIGINATED BY)：	检验（INSPECTED BY）：李永明 2022.4.22
确认（CHECKED BY）：	确认（CHECKED BY）：2022.4.24
核准（APPROVED BY）：	核准（APPROVED BY）：

CEL SPECIFICATION FOR APPROVAL

CEL 产品规格承认书

Customer Code 客户代码: C254

Customer material number 客户料号:

Product Model 产品型号: 2*18650

Product Capacity 产品容量: 2500mAh/7.2V

Cell type 电芯类型: 钢壳/圆柱

Part Code 产品编码:

Total Page 文件页数: 18

The company acknowledges 公司承认 (Stamp) （盖章）	Registered 编制	Checked by 审核	Approved 批准
	冯文武	刘成	黄建
	2021-07-15	2021-07-15	2021-07-15

Approved by customer 客户承认 (Stamp) （盖章）	Tested by 测试	Checked by 审核	Approved 批准

Remark: CEL Battery may, at any time, at its sole discretion, make changes to the technical and functional!

备注：本公司保留在未通知客户的情况下，对规格书进行修改的权利!

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Product Modified Record List
产品变更履历表

Revision 版本	Description 内容描述	Registered 编制	Approval 审批人	Date 日期
A0	First sample delivery of new design 新设计 首次送样	冯文武	刘成	2021-07-15

Content 目录

1. SCOPE 概述

The specification shall be applied to Rechargeable Lithium-ion battery which is manufactured by Dongguan Golden CEL Battery Co.LTD., which is the basis for product design, production and inspection, and its purpose is to let the customer know the quality standard and the instruction.

本产品承认书描述东莞市金赛尔电池科技有限公司（CEL）,设计制造的可充电锂离子电池，它是产品设计、生产和检验的依据。其目的是让客户了解产品的质量标准及正确使用方法。

2. Product basic information 产品基本信息

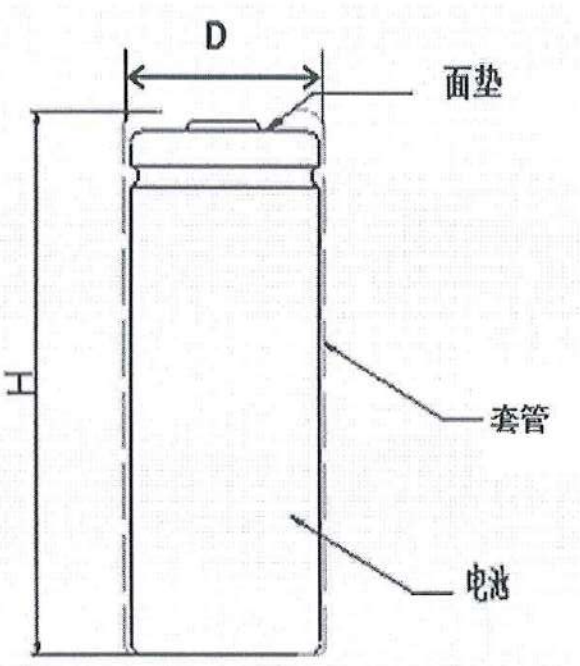
No.序号	Items 项 目			Parameter 参 数	
2.1	Battery model 电池型号			2*18650	
2.2	Shipment voltage 出货电压			≥7.4V	
2.3	Inner Impedance 内阻（交流阻抗 AC 1kHz）			Cell/电芯≤30mΩ	Battery/电池≤200mΩ
2.4	pack weight 成品重量			Approx(约)：96g	
2.5	Typical capacity 典型容量			2500mAh	0.2C Discharge 0.2C 放电
	Nominal capacity 标称容量			2500mAh	
	Minimal capacity 最小容量			2475mAh	
2.6	Nominal voltage 标称电压			7.2V	
	Fully charge voltage(FC)满充电压			8.4V	Defined in this DOC: FC = 8.4V
	Fully discharge voltage(FD)满放电压			5.5V	Defined in this DOC: FD = 5.5V
2.7	Standard charge current 标准充电电流			0.2C	
	Max continuous charge current 最大充电持续电流			0℃~55℃	1C max to 8.2V, then CV to 0.05Cmin
2.8	Max continuous discharge current 最大放电持续电流			-10℃~60℃	2C
2.9	Cycle life 循环寿命			300 次充放电后，电池能恢复 80%的容量 （详见 6.5 项) After 300cycles charge/discharge, battery can recover 80% of its capacity (Detail in 6.5)	
2.10	Storage temperature 储存温度	-20℃~50℃	≤7 day	The recovery capacity shall not be less than80% of the capacity 恢复容量不低于容量的 80%,Recommended storage temperature is 25±2℃ of half charge state (3.7~3.95v), humidity 45 to 85%。推荐储存温度 25±2℃，电芯为半电状态 (3.7~3.95v)储存，湿度 45 ～ 85%。	
		-20℃~40℃	≤1 month		
		-20℃~30℃	≤1 year		

Remarks :2.2,2.5 test results are subject to test within 7 days of receipt of goods ;2.6,2.7,2.8 items are recommended use parameters, different from actual protection parameters.

注：2.2、2.5 项测试结果以收到货 7 天内测试为准；2.6、2.7、2.8 项为建议使用参数，与实际保护参数有别。

3. Cell 电芯参数

3.1.Cell outline drawing 电芯外形尺寸(Not In Scale 未按比例)

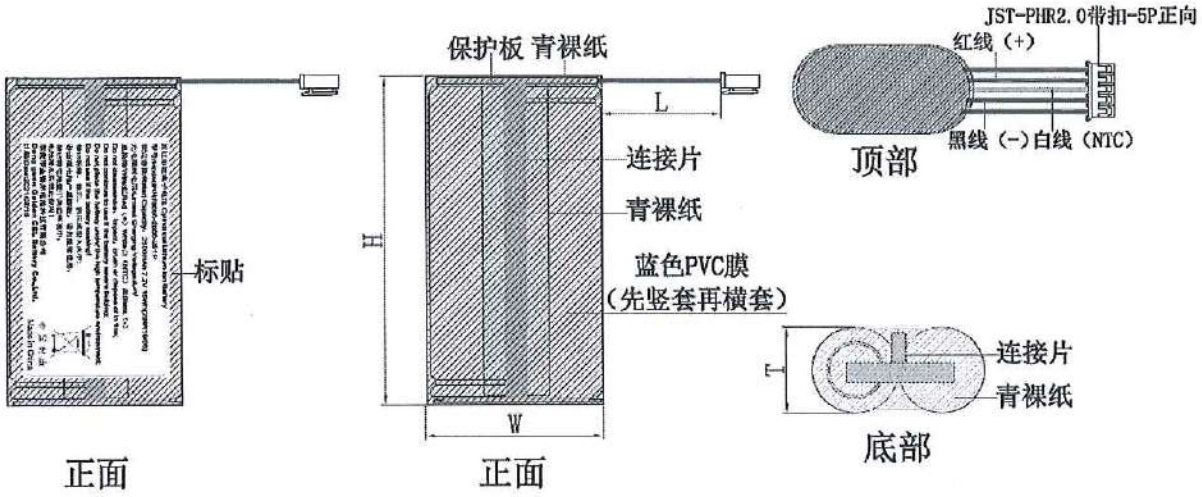


3.2.Cell Performance parameters 电芯性能参数

NO. 编号	Item项目		Specification规格	Unit 单位	Remarks备注
1	Edgefold require折边要求		-	-	-
2	Dimensions 外形尺寸	D	Max 18.65	mm	Diameter 直径
3		H	Max 65.35	mm	Cell length 电芯长度

4. Battery Outline Drawing 电池组外形尺寸

4.1.Battery Outline Drawing 电池组外形尺寸(Not In Scale 未按比例)



4.2. Label 标贴:

1. 尺寸：50*30*0.08mm,
2. 银底黑字，附哑膜，边框不印刷，单面带胶,
3. 标贴内容居中，用手触摸，不可掉墨,
4. 标贴内容中：2021/07/15年月日随时间变化。

4.3.Battery Performance parameters 电池组性能参数

NO.序号	Item 项目	Specification 规格
1	thickness size Max 厚度 T	19.5mm
2	width size Max 宽度 W	38mm
3	Height size Max 高度 H	70mm
4	Exposed line length 外露线长 L	70±2mm
5	Wiring method 出线方式	See figure 见图
6	Remark 备注	测量尺寸时需加 300 克力（gf）

4.4.BOM 1(Bill of materials)电池物料清单

NO.序号	Material Name 零件名称)	Specification(规格型号)	Qty 用量(PCS)
1	Cell 电芯	18650-2500mAh（金赛尔）	2
2	Protection board 保护板（点焊板）	S-8252AAH+DP8205AX3+NTC （LP34216-A）	1
3	Red wire 红色导线	UL1007-22#	2
4	Black wire 黑色导线	UL1007-22#	2
5	White wire 白色导线	UL1007-22#	1
6	Connector 连接器	JST-PHR2.0 带扣-5P 正向	1
7	Barley paper 青稞纸	青稞纸	3
8	Blue PVC film 蓝色 PVC 膜	蓝色 PVC 膜	2
9	Connector 连接片	连接片	3

10	Label 标贴	见图	1

5. Battery protection characteristics 电池保护特性(n=1)

5.1.Performance Parameter 性能参数表

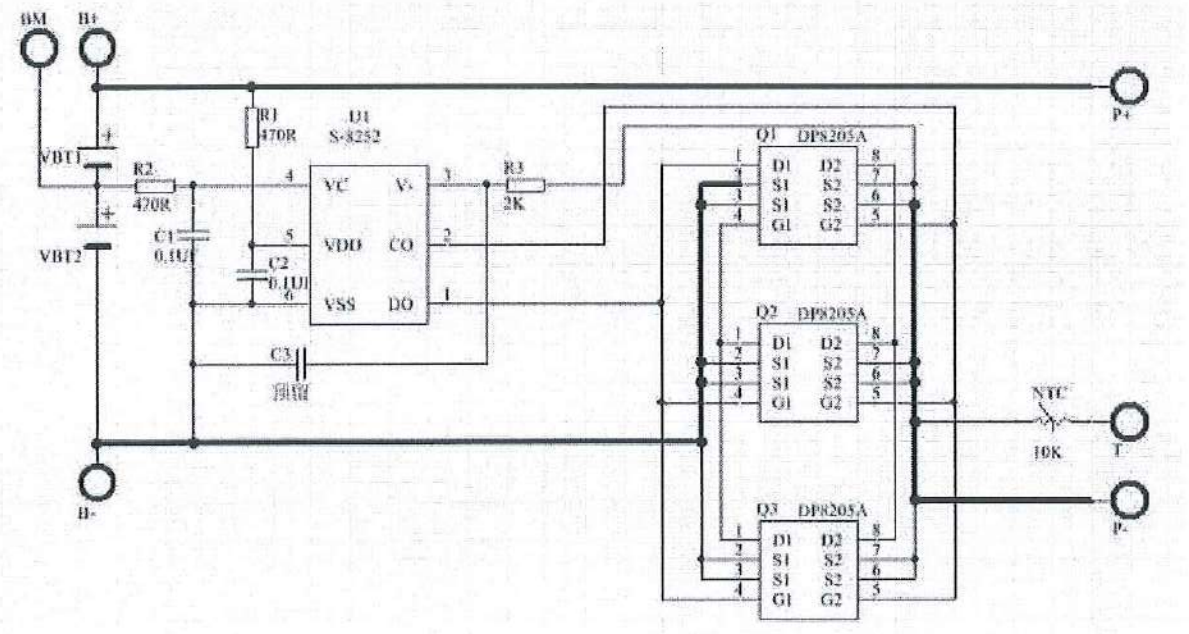
以下检测项目中,※表示批量生产必测项；◎表示品质管控项； ○表示该产品无此项功能或不管控

Protection scheme 保护方案		S-8252AAH+DP8205AX3+NTC: 10K±1%,B=3435	Parameter Values/参数 Normal temperature 25 ℃ 常温 25℃				
No. 序号	Item 项目		Min 最小值	Type 典型值	Max 最大值	Unit 单位	检测度
1	Overcharge 过充电	Detection voltage/保护电压	4.230	4.250	4.270	V	※
2		Release voltage/恢复电压	4.070	4.100	4.130	V	◎
3		Detection delay time/保护延迟时间	0.8	1.0	1.2	s	◎
4	Over discharge 过放电	Detection voltage/保护电压	2.950	3.000	3.050	V	※
5		Release voltage/恢复电压	2.950	3.000	3.050	V	◎
6		Detection delay time/保护延迟时间	102.4	128	153.6	ms	◎
7	Discharge overcurrent current 放电过流	Detection overcurrent /保护电流	11	-	23	A	※
8		Detection delay time/保护延迟时间	6.4	8	9.6	ms	◎
9	Charge overcurrent 充电过流	Detection overcurrent /保护电流	11	-	24	A	◎
10		Detection delay time/保护延迟时间	6.4	8	9.6	ms	◎
11	短路保护 Short protection	Short detection delay time/短路保护延时	224	280	336	us	◎
12		Release Conditions/恢复条件	Cut off load/断开负载				◎
13	Consume electricity while working/工作时自耗电		-	-	8	uA	※
14	IR of PCM/PCM 内阻		-	-	65	mΩ	※
15	suggest working temperature/建议工作温度		-40		+85	℃	
16	0V Charging function/OV 充电功能		Availble 允许				◎
17	NTC Resistor(25℃)/NTC 电阻		9	10	11	KΩ	◎

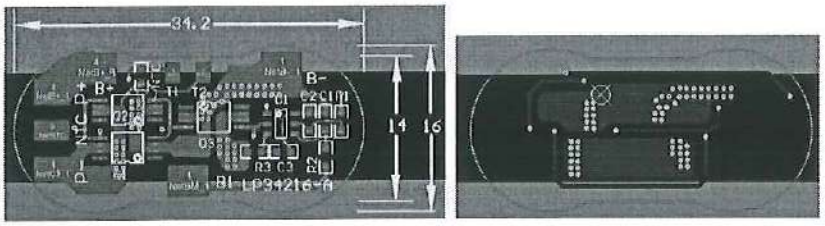
5.2.PCB Bom PCB 物料清单

NO. 序号	Name of material 物料名称	Symbol 代号	Spec./Model 规格型号	Size 尺寸/封装	Q'ty 数量	Unit 单位	供应商 Vendor	Remarks 备注
1	Protection IC	U1	S-8252AAH-M6TIU	SOT-23-6	1	PCS	ABLIC 艾普凌科	
2	MOS Tube	Q1.Q2 Q3	DP8205A	TSSOP8	3	PCS	德普微	
3	PCB	PCB	34.2*16*1.0mm	/	1	PCS	精维进	
4	SMD Resistance 贴片电阻	R1.R2	470Ω±5%	0603	2	PCS	国巨	
5	SMD Resistance 贴片电阻	R3	2K±5%	0603	1	PCS	国巨	
6	SMD Capacitance 贴片电容	C1.C2	0.1uF-20+80% 16- 25V	0603	2	PCS	国巨	
7	SMD Resistance 贴片电阻	NTC	10K±1%,B=3435	0603	1	PCS	卓英社	

5.3.Schematic circuit diagram 电路原理图



5.4.PCB Layout PCB 布线图



6.Electrical Characteristics and reliability requirements 电气特性和可靠性要求

No.	Items 项目	Test Method 测试方法	Criteria 标准
1	standard charge 标准充电	0.2C CC（constant current）charge to FC, then CV(constant voltage FC)charge till charge current decline to ≤ 0.01C 0.2C CC（恒流）充电至 FC，再 CV（恒压 FC）充电直至充电电流≤0.01C。	约 300min(分钟)
2	0.2C Capacity 0.2C 容量	At standard testing condition，after standard charging, rest battery for 10min, then discharging at 0.2C to voltage FD, recording the discharging time. 在标准测试环境下，标准充饱电后,搁置 10 分钟,然后用 0.2C 电流放电至 FD，所记录放电时间	≥300min(分钟)
3	0.5C Capacity 0.5C 容量	At standard testing condition，after standard charging, rest battery for 10min, then discharging at 0.5C to voltage FD, recording the discharging time. 在标准测试环境下，标准充饱电后,搁置 10 分钟,然后用 0.5C 电流放电至 FD，所记录放电时间	≥114min(分钟)
4	1C Capacity 1C 容量	At standard testing condition，after standard charging, rest battery for 10min, then discharging at 1C to voltage FD, recording the discharging Capacity 在标准测试环境下，标准充饱电后,搁置 10 分钟,然后用 1C 电流放电至 FD,记录容量	≥56min（分钟）
5	Cycle Life 循环寿命	At standard testing condition，constant current 0.2C charge to FC, then constant voltage charge to current declines to 0.01C, rest 10min，constant current 0.2C discharge to FD，rest 10min. Repeat above steps till continuously discharging capacityHigher than 80% of the Initial Capacities of the Cells 在标准测试环境下，先用 0.2 C 恒流充电至 FC，再恒压 FC 充电直至充电电流≤0.01C,搁置 10 分钟,再用 0.2C 电流放电至 FD;又搁置 10 分钟,重复以上步骤,直到放电容量是初始容量的 80%。	≥300 times(次)
6	Capability of keeping electricity 荷电保持能力	After the battery is fully charged according to the charging method specified in 6.1, without external load line, the battery combination is put aside for 28 days, and then discharged to FD with 0.2C, and the discharge time is recorded。 将电池按照 6.1 规定的充电方法充满电后，无外接负载线路，电池组合搁置 28 天,然后用 0.2C 放电至 FD,所记录放电时间。	≥270min（分钟）

7	High Temperature Retention Capability 高温荷电保持能力	After full charging, storing the battery 7 days with 60 ± 2° C condition , and then stayin g 2 hours with 23 ± 2° C condition. Then me asure the cell thickness and Capacity test. The Voltage ,IR and thickness messured before and after test shall be tested every 24h. 将满电电芯放入60℃±2℃的烘箱中存放7 天；从恒温箱中取出电芯后，常温恢复2 小时后，测量电芯厚度。再对电芯进行容量测试。容测前后测量电压、内阻和厚度，试验后每24H 测试一次电压、内阻和厚度；	Residual Capacity/ Initial Capacity ≥80% 剩余容量/初始容量≥80%; Recovery Capacity/ Initial Capacity ≥90% 恢复容量/初始容量≥90%; Voltage drop <0.1V 电压下降<0.1V; Thickness change rate ≤ 8% 厚度变化率≤8% The Cell appearance compared to no obvious difference. 电芯外观相比实验前无明显差异。
8	low Temperature 低温性能	After the battery is fully charged according to the chargi ng method specified in 6.1, measure the capacity of the battery discharged to 3.0 (V) with 0.2 C5a current at d ifferent temperatures (compared with the initial capacity). 将电池按照 6.1 规定的充电方法充满电后，测量电池在不同温度下用 0.2 C5A 电流放电至 3.0 (V)所放出的容量（与初始容量作为较）。	在-10℃时 ≥70% At -10℃is ≥70%
9	High Temperature 高温性能	After the battery is fully charged according to the charging method specified in 6.1, measure the capacity of the battery discharged to 3.0 (V) with 0.2 C5a current at different temperatures (compared with the initial capacity). 将电池按照6.1规定的充电方法充满电后，测量电池在不同温度下用0.2 C5A 电流放电至3.0 (V)所放出的容量（与初始容量作为较）。	在 55℃时 ≥95% At 55℃is ≥95%
10	Constant temperature and Humidity 恒定湿热	After put the battery in the invariableness humid and hot box of 40℃±2℃ and relative humidity of 90～95% for 48 hours, and with discharging current 0.2C till 3.0*n(V) cut off voltage. 将电池放入40℃±2℃及相对湿度为90～95%的恒温恒湿箱中48 小时后，再以0.2C 电流放电至3.0*n(V)。	No visible distortion, fire or explosion, the discharging time ≥3h. 无泄漏、冒烟、起火或爆炸； 放电时间≥3h。

7.Battery safety performance 电芯安全性能

No.	Items 项目	Test Method 测试方法	Criteria 标准
1	Overcharge Test 过充电测试	After discharged at a constant current of 0.2C5A to the cut-off voltage, the battery shall be charged at 1.0C/4.6V for 7.0hrs.(0.2C 放电至截止电压后，电池用 1C /4.6V 恒流恒压充电 7.0h)。	No explosion, No fire (无起火、无爆炸)

2	Short test 短路测试	The fully charged battery is to be short-circuited by con necting the positive and negative terminals of the batter y with resistance load 80±20 mΩ Tests are to be cond ucted at room temperature 20~25℃. 在室 温 20~25℃ 把充满电的电池的正负极用 80±20 mΩ 的负载连接起来，连接起来使电池外部短路。	No fire, no explosion Cell surface temperature does not exceed 150 ℃ 无起火，无爆炸 电池表面温度不超过 150℃
3	High Temperature external short circuit test 高温外部短路	After the battery is fully charged according to the charging method specified in 6.1, the battery is placed in the environ ment of 55 ± 5 ℃, and then placed for 30 minutes after the surface temperature of the battery reaches 55 ± 5 ℃. Then connect the positive and negative terminals of the battery wi th wires, and ensure that all external resistance is 80 m Ω± 20 m Ω. During the test, the battery temperature change is monitored, and the test is terminated when one of the follow ing two situations occurs: a) The temperature of the battery dropped to 20% below th e peak value; b) The short-circuit time was 24 hours. 将电池按照 6.1 规定的充电方法充满电后，将电池放置在 55 ℃±5 ℃的环境中，待电池表面温度达到 55 ℃±5 ℃ 后，再放置 30 min。然后用导线连接电池正负极端，并确保全部外部电阻为 80 mΩ±20mΩ。试验过程中监测电池温度变化，当出现以下两种情形之一时，试验终止： a）电池温度下降到比峰值低 20%； b）短接时间达到 24 h。	No fire, no explosion Cell surface temperature does not exceed 150 ℃ 无起火，无爆炸 电池表面温度不超过 150℃
4	Heating 热冲击	After standard charging, put cell in the baking oven and start , the temperature of the oven is to be raised at a rate of 5℃ per minute to a temperature of 130±2℃ , remain for 30minutes at that temperature. 将电芯满充电后，放置于热箱中，温度以（5±2℃）/ min 的速率 升至 130℃±2℃并保温 30min。	No fire, no explosion 无起火、无爆炸
5	Forced Discharge test 强制放电	A discharged cell is subjected to a reverse charge at 1C for 90 min. 电池先以 0.2C 放电至终止电压，再以 1C 电流，对电池进行反向充电，90min 以上	No fire, No explosion 无起火，无爆炸

6	Low pressure 低气压测试	Each fully charged cell is placed in a vacuum chamber, in an ambient temperature of 20~25℃.Once the chamber has been sealed, its internal pressure is gradually reduced to a pressure equal to or less than 11.6 kPa (this simulates an altitude of 15240 m) held at that value for 6 h.电池放在一个模拟真空的空间放置 6 小时，环境温度为 20~25℃，真空环境压力≤11.6kpa，模拟 15240m 高空低压环境	No leakage, No fire, No explosion 无泄漏，不起火，不爆炸
7	Temperature cycling test 温度循环	After the battery is fully charged according to the charging method specified in 6.1, the battery is placed in a box with controllable temperature of 20 ± 5 ℃ for the following steps: a) Put the sample into the test chamber at 72 ℃± 2 ℃ for 6h; b) After that, the temperature of the test chamber was reduced to - 40 ℃± 2 ℃ for 6 h, and the temperature conversion time was not more than 30 min; c) The temperature of the test chamber is raised to 72 ℃± 2 ℃ again, and the temperature conversion time is not more than 30 min; d) Repeat steps a) ～ C) for 10 times; 将电池按照6.1规定的充电方法充满电后，放置在温度为20±5 ℃的可控温的箱体中进行如下步骤： a）将样品放入温度为72 ℃±2 ℃的试验箱中保持6h； b）后将试验箱温度降为-40 ℃±2 ℃，并保持6 h；温度转换时间不大于30 min； c）再次将试验箱温度升为72 ℃±2 ℃，温度转换时间不大于30 min； d）重复步骤a）～c），共循环10次；	No fire, No explosion, No leakage 无起火、无爆炸、无漏液
8	Free fall 自由跌落	After the battery is fully charged according to the method specified in 6.1, drop the battery from a height of 1.5m to the concrete slab, once on each side, and conduct 6 tests in total. After the test, continue one discharge charging cycle according to the specified charging and discharging method. 按照 6.1 规定的方法充满电后,将电池从 1.5 米高处自由跌落到混凝土板上， 每个面各跌落 1 次，共进行 6 次试验，试验后按照规定的充放电方法继续进行一次放电充电循环	No fire, No explosion, No leakage 无起火、无爆炸、无漏液

9	Vibration 振动	After the battery is fully charged according to the chargi ng method specified in 6.1, the battery is vibrated in thr ee mutually perpendicular directions in the form of 0.8m m resonance. The frequency varies from 10-55hz at the rate of 1Hz / min, and the reciprocating vibration is 90 -100min. 将电池按照 6.1 规定的充电方法充满电后，在三个相互垂直的方向按振 0.8mm 的谐振形式进行振动，频率在 10-55HZ 以 1Hz/min 的速率变化，往复振动 90 至 100min.	The battery has no distorti on, no visible evidence of leakage fume fire or expl osion the battery voltage ≥ n×90% initial voltage.电池外观无变形，无漏液、冒烟、起火或爆炸电压≥n×90%初始电压（V)
10	Acceleration impact test 加速度冲击	After the battery is fully charged according to the charging method specified in 6.1, the battery is fixed on the shock table for half sine pulse impact test. Within the first 3 ms, the minimum average acceleration is 75 GN, the peak acceleration is 150 GN ± 25 GN, and the pulse duration is 6 ms ± 1 ms. Three acceleration impact tests were conducted in each direction of the battery. Cylindrical and button type batteries were tested in axial and radial directions, while square and flexible packaging batteries were tested in three perpendicular directions. 将电池按照6.1规定的充电方法充满电后，固定在冲击台上，进行半正弦脉冲冲击试验，在最初的3ms内，最小平均加速度为75 gn，峰值加速度为150 gn±25 gn，脉冲持续时间为6 ms±1 ms。电池每个方向进行三次加速度冲击试验。圆柱型和纽扣型电池按照其轴向和径向两个方向进行冲击试验，方型和软包装电池按照三个相互垂直的方向依次进行冲击试验。	No fire, No explosion, No leakage 无起火、无爆炸、无漏液
11	Soak Test 浸泡测试	Put the fully charged batteries into clean water, be soaked for 24 hours. 把满充电的电池放进清水中浸泡 24 小时	No break, No fire 无破裂，无起火

8. Agency approvals 承认机构

The safety performance of the battery is formulated according to the requirements of GB31241,UL1642 and IEC62133.The products characteristics can meet the requirements of GB31241,UL1642, IEC62133 and UN38.3 latest version.

电芯的安全性能是根据 GB31241,UL1642、IEC62133 要求制定.产品的特性均能满足 GB31241,UL1642、IEC62133 和 UN38.3 最新版本要求。

9. Testing requirements 测试要求（无特别注明时，试验环境应符合此项要求）

9.1 Cell test environment 电池试验环境

Temperature 温度：25±2℃

Relative humidity 相对湿度：40～80% RH

Atmospheric pressure 大气压力：86～106 KPa

9.2 Measuring instrumentation requirements 测量仪表要求

Dimension instrumentation requirements: Measuring the dimension meter accuracy no less than 0.01mm scale

尺寸仪表要求：测量尺寸的仪表的精确度在 0.01mm 内

Voltage instrumentation requirements: Measuring the voltage meter accuracy class no less than class 0.5

电压仪表要求：测量电压的仪表的精确度不低于 0.5 级

Current instrumentation requirements: Measuring the current meter accuracy class no less than class 0.5

电流仪表要求：测量电流的仪表精确度不低于 0.5 级

Time instrumentation requirements: Measuring the time meter accuracy no less than 0.1%

时间仪表要求：测量时间的仪表精确度不低于 0.1%

Temperature instrumentation requirements: Measuring the temperature meter accuracy no less than 0.5 ℃

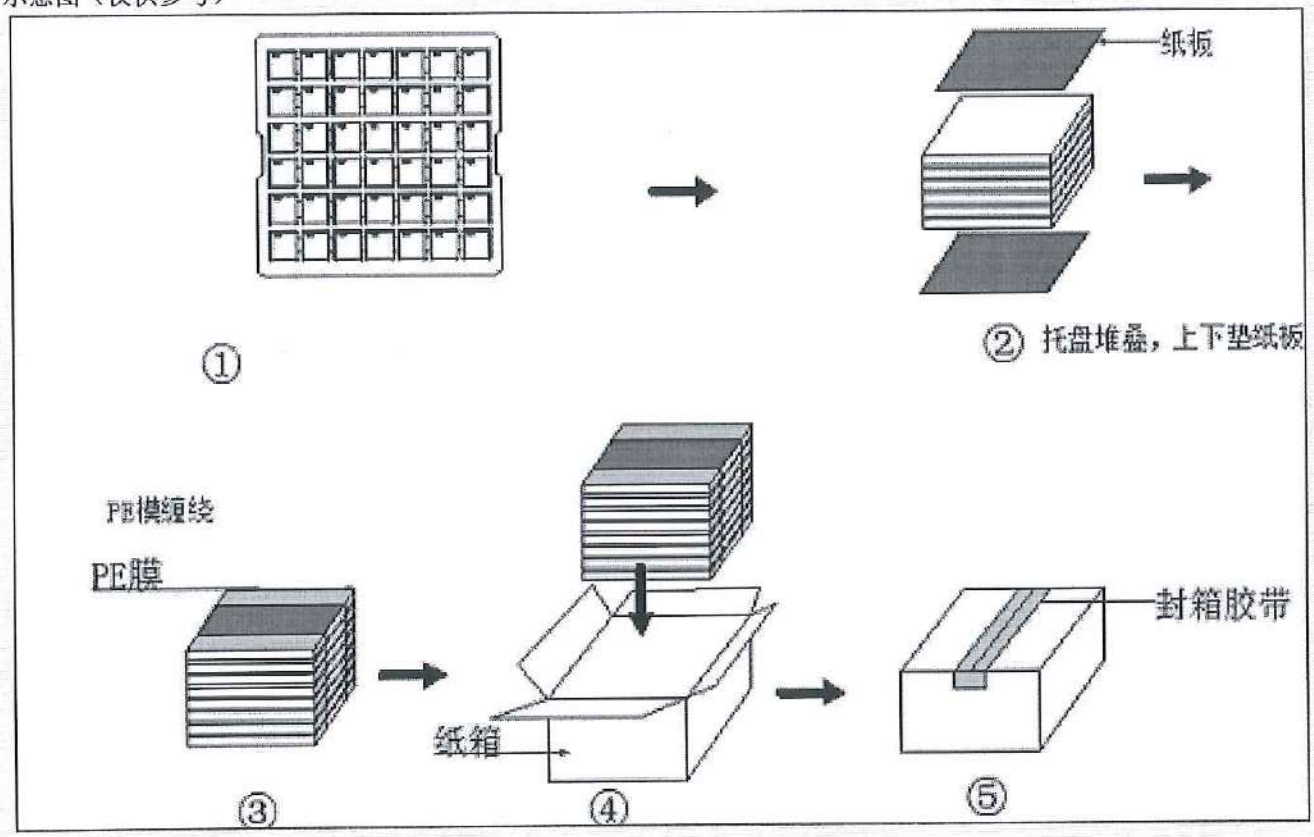
温度仪表要求：测量温度的仪表准确度不低于 0.5℃

Impedance instrumentation requirements: Measuring impedance should by sinusoidal alternating (1 KHZ) test

内阻仪表要求：测量内阻应由正弦交变(1KHZ)进行测试。

10. Packaging 包装

示意图（仅供参考）



The sketch, sizes, color of marking should match GB/T191-2016 requests.

标志的图形、尺寸、颜色应符合 GB/T 191－2016 的要求.

The manner of packing should match 2019 IATA DGR 60th Edition requests.

包装方式符合 2019 IATA DGR 60 的要求。

11.Warnings 警告

To prevent the possibility of the pack from leaking, heating, fire .please observe the following precautions:

☆为防止电池组合可能发生的泄漏,发热,起火,请注意以下预防措施:

The soft aluminum packing foil is very easily damaged by sharp edge parts such as Ni-tabs, pins and needles .Do not strike at pack with any sharp edge parts.

☆电池组合外包装膜易被镍片,尖针等尖锐部件损伤,禁止用尖锐部件碰伤电池.

Do not immerse the battery in liquid such as water, beverages, or other fluids.

☆严禁将电池组合浸入水或饮料或其它液体中。.

Do not use and leave the pack near a heat source as fire or heater

☆禁止将电池组合放在热高温源旁,如火,加热器等使用设备.

When recharging, use the battery charger specifically for that purpose

☆充电时请选用锂离子电池专用充电器.

Do not reverse the positive and negative terminals

☆禁止颠倒正负极使用电池组合

Do not connect the pack to an electrical outlet

☆禁止将电池组合直接接入电源插座

Do not discard the pack in fire or heat it

☆禁止将电池组合丢入火或加热器中

Do not short-circuit the pack by directly connecting the positive and negative terminal with metal object such as wire

☆禁止用金属直接将电池组合的正负极进行短路连接.

Do not transport and store the battery together with metal objects such as necklaces, hairpins etc.

☆禁止将电池组合与金属,如发夹,项链等一起运输或贮存.

Do not strike or throw the pack.

☆禁止敲击或抛掷,踩踏电池组合等.

Do not directly solder the pack or battery and pierce the battery with a nail or other sharp object.

☆禁止直接焊接电池组合或电芯，禁止用钉子或其它利器刺穿电池组合或电芯.

12. Cautions 注意

It is prohibited to use or place the battery combination at high temperature (beyond the range of 2.7,2.8,2.10), or it may cause the battery to overheat, catch fire or function failure, which may result in the short battery life.

△禁止在高温下(超出 2.7,2.8,2.10 范围)使用或放置电池组合,否则可能会引起电池过热,起火或功能失效,从而导致电池组合寿命减短。

The battery can only be charged within the scope of clause 2.7. Exceeding this temperature range may lead to battery leakage, heating, or serious damage. It can also lead to deterioration of battery performance and life.

△电池只能在条款 2.7 范围充电。超出此温度范围可能导致电池漏液、发热，或导致电池严重的损坏。它也可能导致电池的性能和寿命的恶化。

It is forbidden to use in the place with strong static electricity and strong magnetic field, otherwise it is easy to damage the safety protection device of battery combination and bring unsafe hidden danger。

△禁止在强静电和强磁场的地方使用,否则易破坏电池组合的安全保护装置,带来不安全隐患。

If the pack leaks and the electrolyte get into the eyes, do not rub eyes, instead, rinse the eyes, with clean running water, and immediately seek medical attention. Otherwise, eye injury can result.

△如果电池发生泄漏,电解液进入眼睛,请不要揉擦,应用清水冲洗眼睛,并立即送医院治疗,否则会伤害眼睛。

If the pack takes off an odor, generates heat, becomes discolored or deformed, or in any way appear abnormal during use, recharging or storage, immediately remove it from the device or battery charge and stop using it.

△如果电池组合在使用或贮存中发出异味,发热,变色,变形,或者是在充电过程中出现任何异常现象,立即将电池从充电器或

装置中移开,并停止使用。

In case the pack terminals are dirt, clean the terminals with a dry cloth before use. Otherwise power failure or charge failure may occur due to the poor connection with the instrument.

△如果电池组合的连接点弄脏,使用前应用干布抹净,否则可能会因接触不良而影响性能失效。

Be aware discharged battery may cause fire or smoke, tape the terminals to insulate them.

△废弃之电池应用绝缘纸包住电极,以防起火,冒烟.

The battery combination shall be stored in accordance with Clause 2.10. In order to prevent over discharge of the battery, it is recommended to charge every 6 months. If the storage time is more than one year, it is recommended to charge and discharge once a year to activate the battery.

△电池组合应按 2.10 条款存放。为防止电池过放，建议每 6 个月进行一次充电，如储存时间超过一年，建议每年进行一次充、放电以激活。

13. Handling of Cells 电池操作注意事项

1.Soft Aluminum foil（铝箔软包装）

Easily damaged by sharp edge parts such as pins and needles, Ni-tabs, comparing with metal-can-cased LIB.

相对于金属壳的方形电池，铝箔软包装比较容易被锐利部件刺损，如针尖、镍带。

△Don't strike battery with any sharp edge parts 勿用尖锐处撞击电池。

△Trim your nail or wear glove before taking battery 剪掉指甲，或者戴手套。

△Clean worktable to make sure no any sharp particle 清理工作台，避免尖锐零部件。

2.Sealed edge may be damaged by heat above 100°C, bend or fold sealed edge.

封边被加热到 100°C 以上以及弯折封边都容易使封边受损。

3. Prohibition short circuit（禁止电池短路）

Never make short pack circuit. It generates very high current which causes heating of the cells and may cause electrolyte leakage, gassing or explosion that are very dangerous.The LIP tabs may be easily short-circuited by putting them on conductive surface.Such outershort circuit may lead to heat generation and damage of the cell.

避免电池短路。短路会产生很高的电流而使电池发热以及电解液泄漏，产生气体或爆炸是非常危险的。极片连接在导电物体表面很容易短路，外部短路会导致发热及损害电池。

4 .Mechanical shock（机械撞击）

△LIP cells have less mechanical endurance than metal-can-cased LIB.

△Falling, hitting, bending, etc. may cause degradation of LIP characteristics.

聚合物电池比金属壳方形电池的机械耐久性更小。

跌落、碰撞、弯曲等等都可能会降低聚合物电池的性能。

14.Period of Warranty 保质期

The period of warranty is one yearfrom the date of shipment.CEL Batteryguarantees to give a replacement in case of battery with defects proven due to manufacturing process instead of the customer abuse and misuse.

电池的保质期从出货之日起为一年。如果证明电池的缺陷是在我们公司制造过程中造成的而不是客户滥用或错误使用造成，本公司负责退换电池。

15. Others 其它事项

1. The customer is requested to contact CEL Battery in advance, if and when the customer needs other applications or operating conditions than those described in this document. Additional experimentation may be required to verify performance and safety under such conditions.
客户若需要将电池用于超出文件规定以外的应用，或在文件规定以外的使用条件下使用电池，应事先联系赛尔电池，因为需要进行特定的实验测试以核实电池在该使用条件下的性能及安全性。
2. CEL Battery will take no responsibility for any accident when the battery is used under other conditions than those described in this Document.
对于在超出文件规定以外的条件下使用电池而造成的任何意外事故，赛尔电池概不负责。
3. CEL Batterywill inform, in a written form, the customer of improvement(s) regarding proper use and handing of the battery, if it is deemed necessary.
如有必要，赛尔电池会以书面形式告之客户有关正确操作使用电池的改进措施。
4. Any matters that this specification does not cover should be conferred between the customer and CEL Battery
任何本说明书中未提及的事项，须经双方协商确定。