SPECIFICATION APPROVAL SHEET

产 品 承 认 书

Customer Name 客户代码: _____

Customer Product Model 客户产品型号: 10100

Product Model 产品型号: 10100

Product Capacity 产品容量: 60mAh

Number Of Samples 样品数量: _____

Date 送样日期: _____

Prepared 编制	Checked 审核	Approved 批准
陈 东	/	许天军

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

Remark: HJ may, at any time, at its sole discretion, make changes to the technical and functional specifications, the design, process, materials or other features of any of the batteries.

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!

广 东 弘 捷 新 能 源 有 限 公 司

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Product Revision History

产品变更履历表

Revision 版本	Date 日期	Mark 标记	Revision Description 变更描述	Originator 编制人
A/0	2021-06-25		First issue 首次发行	ChenDong

Contents
目 录

1. Scope 概述

This specification shall be applied to Lithium-ion Polymer rechargeable battery pack which is manufactured by Guangdong Hongjie New Energy Co., Ltd., which is the basis for product design, production and inspection.

本产品承认书描述广东弘捷新能源有限公司（以下简称弘捷新能源电池）生产的可充电锂离子电池的产品性能指标。

Reference standard 参考标准:

GB/T 18287-2013 中华人民共和国国家标准《蜂窝电池用锂离子电池总规范》

UL1642 美国锂电池安全标准

IEC/EN61960 欧盟锂电池安全标准

2. Description and Model 产品类型及型号

2.1 Description:Lithium-ion polymer rechargeable battery

产品类型：锂离子聚合物可充电电池

2.2 Model:HJ10100

产品型号：HJ10100 HJ-广东弘捷新能源有限公司

3 Specification 产品规格

No.	Items 项目	Specifications 规格	Test tools 测试工具	Comments 备注
3.1	Charge voltage 充电电压	4.2V	Electronic voltage meter 数字万用表	Exactitude ±0.01V 数字电压表用最少 3 位显示，20V 以下，精度±0.01V
3.2	Nominal voltage 标称电压	3.7V		
3.3	Discharge cut-off voltage 放电截止电压	3.0V		
3.4	Nominal capacity 标称容量	60mAh（标称） 56mAh（最小）	Secondary batteries test equipment 二次电池检测设备	0.2C Discharge(放电)
3.5	AC Impedance 交流内阻	≤ 550 mΩ	Impedance test equipment 内阻测试仪	AC 1000HZ，Impedance exactitude ±1 mΩ 1000HZ 交流阻抗，精确到±1 mΩ
3.6	Charge current 充电电流	Standard Charging 标准充电：0.2C Rapid charge 快速充电：1.0C	Secondary batteries test equipment 二次电池检测设备	/
3.7	Discharge current 放电电流	Standard discharging 标准放电：0.2C Rapid discharging 快速放电：1.0C		
3.8	Standard Charging method 标准充电方法	0.2C CC（constant current）charge to4.2V,then CV(constant voltage 4.2V)charge till charge current decline to ≤0.01C 0.2C CC（恒流）充电至 4.2V，再 CV（恒压 4.2V）充电直至充电电流≤0.01C	Electronic voltage meter 数字万用表 Secondary batteries test equipment 二次电池检测设备	Exactitude ±0.01V 数字电压表用最少 3 位显示，20V 以下，精度±0.01V
3.9	Charging time 充电时间	Standard Charging 标准充电：5.5 hours (Ref.)（参考值）	Secondary batteries test equipment 二次电池检测设备	/
3.10	Standard discharge method 标准放电方法	0.2C CC（constant current）discharge to Min Discharge cut-off voltage(3.3) 0.2C CC（恒流）放电至最低放电截止电压(3.3)	Electronic voltage meter 数字万用表 Secondary batteries test equipment 二次电池检测设备	Exactitude ±0.01V 数字电压表用最少 3 位显示，20V 以下，精度±0.01V
3.11	Operating temperature 工作温度	Charging 充电： 0℃~45℃ Discharging 放电：-20℃~60℃	Thermometer 量温仪	/
3.12	Storage temperature 储存温度	-20℃~ +45℃		
3.13	Storage humidity 储存湿度	45~85%RH	Hygrometer 湿度计	/
3.14	PACK Weight 电池重量	Approx 约：1.3g	Electronic says 电子称	/

4. Battery PACK Performance Criteria 电池性能检查及测试

4.1 Electrical characteristics 充放电性能

No.	Items 项目	Test Method and Condition 测试方法/环境	Test tools 测试工具	Criteria 标准
4.1.1	Rated Capacity 初始容量	discharge the cell with Standard discharge(3.8) ,let stand for 5min, after Standard Charge(3.10) 该容量是指标准充电(3.8)后，搁置5min，然后按照标准放电(3.10)所放出的容量。	Electronic voltage meter 数字万用表 Secondary batteries test equipment 二次电池检测设备	⩾Standard capacitance 90% ⩾标称容量 90%
4.1.2	Cycle Life 循环寿命	the cell shall be test as Rated Capacity method(4.1.1), repeat 300 times 电池用测试电池容量（4.1.1）的方法，记录放电容量,重复 300 次.		300 time of discharge capacities keep 80% 300 次放电容量保持率⩾80%
4.1.3	Self-discharge 自放电	After the standard charge(3.8), storied the cells under the condition as 23±2℃ for 28 days, then measured the capacity with standard discharge(3.10) 标准充电（3.8）后，在 23±2℃条件下贮存 28 天，再以标准放电（3.10）方法所放出的容量。		Residual capacity: ⩾90% 容量保持: ⩾90%
4.1.4	Initial impedance of cell 初始内阻	Internal resistance measured at AC 1KHz after 50% charge 半充状态下，测量其 AC 1KHz 下的交流阻抗	Impedance test equipment 内阻测试仪	⩽AC Impedance （3.5） ⩽交流内阻（3.5）
4.1.5	Cell Voltage 电池电压	As of shipment. 出货状态	Electronic voltage meter 数字万用表	⩾3.90V

4.2 Environment Performance 环境适应性

No.	Items 项目	Test Method and Condition 测试方法/环境	Test tools 测试工具	Criteria 标准
4.2.1	High/low Temperature 高/低温性能	1. According to item 3.8, at 23±2℃. 2. Capacity comparison at each temperature, measured with standard discharge(3.10). Percentage as an index of the capacity compared with 100% at20℃ 1.在 23±2℃条件下,用 3.8 方法充电。 2.在不同温度条件下，用 3.10 方法放电。以 20℃时放电容量为基准计算百分比。	Electronic voltage meter 数字万用表 Secondary batteries test equipment 二次电池检测设备	-10℃: ⩾60% 20℃: 100% 50℃: ⩾85%

4.2.2	High Temperature high humidity test 高温高湿测试	cell shall be charged in stored under 40℃±2℃ and 90%RH-95%RH for 48 hours. 标准充电后，将电池放入 40℃±2℃，相对湿度为 90%-95%的恒温恒湿箱中搁置 48h。	Thermometer Hygrometer 测温仪 湿度计	Discharge time≥ 36mins 放电时间大于 36mins No distortion No explosion 不变形,不爆炸
4.2.3	Vibration Test 振动测试	After standard charge, fixed the cell to vibration table and subjected to vibration cycling that the frequency is to be varied at the rate of 1Hz per minute between 10Hz and 55Hz, the excursion of the vibration is 1.6mm.The cell shall be vibrated for 30 minutes per axis of XYZ axes. 将标准充电后的电池固定在振动台上，沿 X、Y、Z 三个方向各振动 30 分钟，振幅 1.6 mm，振动频率为 10Hz~55Hz，每分钟变化为 1Hz。	Secondary batteries test equipment、Vibration platform 二次电池检测设备、振动台	The battery has no visible evidence of leakage,fume,fire or explosion,the battery voltage≥90% initial voltage. 电池无漏液、冒烟、起火或爆炸
4.2.4	Free fall 自由跌落	The battery fall from a height of 1m free fall into the cement floor,from X、Y、Z positive and negative direction of each direction free fall time,and with discharging current 1.0C till 3.0(V) cut off voltage. 电池将从 1 米高处自由跌落到水泥地板上，从 X、Y、Z 正负方向每个方向自由跌落一次,再以 1.0C 放电至 3.0V	Secondary batteries test equipment 二次电池检测设备	The battery has no visible evidence of leakage,fume,fire or explosion,the battery voltage≥90% initial voltage. 电池无漏液、冒烟、起火或爆炸 电压≥90%初始电压
4.2.5	Heating Test 热冲击	The temperature of the oven is to be raised at a rate of 5±2℃/min. to a temperature of 120±2℃, and remains for 30 minutes at this temperature. 电池置于热箱中、温度以（5±2）℃/min 升到 120±2℃并保温 30 分钟	Hot box 热箱	The battery has no visible evidence of leakage,fume,fire or explosion 电池无漏液、冒烟、起火或爆炸

4.3 Safety Performance 安全性能

No.	Items 项目	Test Method 测试方法	Criteria 标准
4.3.1	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 放电至截止电压，再以 1C 电流，对电池进行反向充电 90min	No fire,No explosion 不起火，不爆炸

4.3.2	Overcharge test 过充电测试	After discharged at a constant current of 0.2C to the cut-off voltage,the battery shall be charged at 1.0C/4.6V for 7.0 hrs. 0.2C 放电至截止电压后，电池用 1.0C/4.6V 恒流恒压充电 7 小时	No fire,No explosion 不起火，不爆炸
4.3.3	Low pressure test 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 11.6kPa(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 无泄露,不起火,不爆炸
4.3.4	Short test 短路测试	The fully charged battery is to be short-circuited by connecting the positive and negative terminals of the battery with resistance load 80±20mΩ Tests are to be conducted at room temperature 20~ 25℃. 在室温 20~ 25℃把充满电的电池的正、负极用 80±20mΩ的负载连接起来，连接起来使电池外部短路	No fire,No explosion, The temperature of the battery surface not exceeded than 150℃. 不起火，不爆炸，电池表面温度不超过 150℃。
4.3.5	Projectile test 焚烧试验	In the ambient temperature,the battery is placed on the wire net of the alcohol lamp burning,until the battery is completely destroyed or the fire explodes. 在环境温度下，将电池放在用酒精灯烧红的钢丝网上观察，直到电池完全烧毁或起火爆炸	Any part of the octagon eight aluminum mesh is not damaged,not out of the battery eight aluminum mesh. 八角笼的八面铝网不得破损，电池的任何部分不得穿出此八面铝网
4.3.6	Soak test 浸泡测试	Put the fully charged batteries into clean water,be soaked for 24 hrs. 把充满电的电池放进清水中浸泡 24 小时	No beak,No fire 无炸裂，不起火
4.3.7	Crush test 挤压测试	Fully charged the battery in accordance with standard charge condition,the battery is to be crushed between two flat plated.Continuous to applied force on battery of 13kN(17.2Mpa),stopped until a pressure reading of 17.2Mpa is reached on the hydraulic ram. 电池按标准充电条件充满电，放置在两块平面金属板间，持续施加 13kN(17.2Mpa）的压力，直到液压油罐施加的压力达到 13kN(17.2Mpa）时停止	No fire,No explosion 不起火，不爆炸

4.3.8	Shock test 撞击测试	The fully charged battery is secured to the testing machine by means of a rigid mount which will support all mounting surfaces of the cell or battery.The battery is subjected to a total of three shocks of equal magnitude.The shocks are applied in each of three mutually perpendicular directions.At least one of them shall be perpendicular to a flat face.For each shock the cell or battery is accelerated in such a manner that during the initial 3 milliseconds the minimum average acceleration is 75g.The peak acceleration shall be between 125g and 175g.Cells or batteries are tested in an ambient temperature of 20~ 25℃. 在环境温度下，将电池分别按三个轴向固定在测试台面上，前 3ms 内平均加速度最少达到 75g（g 为重力加速度），峰值加速度达 125g 至 175g	No leakage,No fire,No explosion 无泄露,不起火,不爆炸

4.4 Testing requirements 测试要求

4.4.1 Battery test environment 电池试验环境（无特别注明时，试验环境应符合此项要求）

Temperature 温度：23±2℃

Relative humidity 相对湿度：45~ 85%RH

Atmospheric pressure 大气压力：86~106kPa

4.4.2 Measuring instrumentation requirements 测量仪表要求

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

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 no less than 0.5 magnitude.

电流仪表要求：测量电流的仪表的精确度不低于 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 is instrumentation requirements:Measuring the temperature meter accuracy no less than 0.5℃

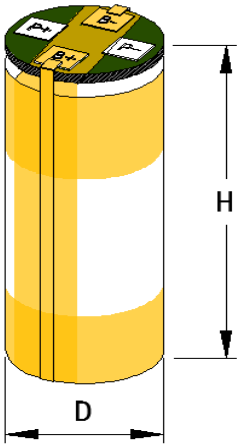
温度仪表要求：测量温度的仪表准确度不低于 0.5℃

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

内阻仪表要求：测量内阻应由正弦交变（1KHZ）进行测试

5. Battery PACK Drawing 电池组规格

5.1 Product Outer Dimension 产品外形尺寸（Not in scale 未按实物比例）



5.2 Product Outer Dimension 电池外部尺寸

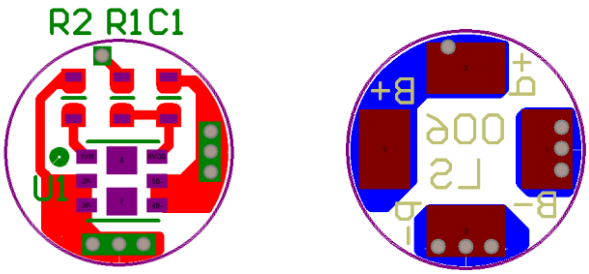
No	Item 项目	Criterion 标准
1	Battery Diameter 直径（D）	10.5mm Max
2	Battery Length 长度（H）	12.5mm Max

5.3 BOM of Product 电池物料清单

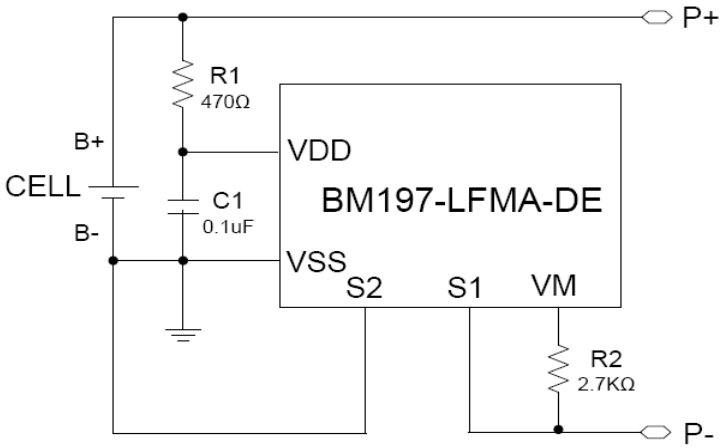
No.序号	Material Name 零件名称	Specification 规格型号	QTY 数量	Note 备注
1	Cell 电芯	HJ10100-60mAh	1	
2	PCM 保护板	复合 IC BM197	1	
3	Yellow Tape 茶色高温胶	T×W×L(max)=0.05×4×30mm	1	
4	Yellow Tape 茶色高温胶	T×W×L(max)=0.05×6×35mm	1	
5	Yellow Tape 茶色高温胶	T×W×L(max)=0.05×4×45mm	1	

6. Protection Circuit Characteristics 保护电路特性

6.1 PCB Layout PCB 布局图（Not in scale 未按实物比例）



6.2 Schematic circuit diagram 电路原理图



6.3 Electrical Characteristic 电气特性

No	Item 项目	Symbol 符号	Content 内容	Criterion 标准
1	Over charge Protection 过充保护	V_{DET1}	Over charge detection voltage 过充电检测电压	4.275±0.025V
		tV_{DET1}	Over charge detection delay time 过充电检测延迟时间	1200ms（MAX）
		V_{REL1}	Over charge discharges voltage 过充电解除电压	4.075±0.05V
2	Over discharge protection 过放保护	V_{DET2}	Over discharge detection voltage 过放电检测电压	2.8±0.05V
		tV_{DET2}	Over discharge detection delay time 过放电检测延迟时间	108ms（MAX）
		V_{REL2}	Discharge voltage after discharge 过放电解除电压	2.9V±0.1V
3	Over current protection 过流保护	V_{DET3}	Over current detection voltage 过电流检测电压	0.02-0.03V
		I_{DP}	Over current detection current 过电流保护电流	0.21~0.8A
		tV_{DET3}	Detection delay time 检测延迟时间	15ms（MAX）
		/	Release condition 保护解除条件	断开负载
4	Short protection 短路保护	/	Detection condition 保护条件	外部电路短路
		T_{SHORT}	Detection delay time 检测延迟时间	600μs（MAX）

		/	Release condition 保护解除条件	断开短路电路
5	Interior resistance 内阻	R_{DS}	Main loop electrify resistance 主回路电阻	R_{SS}≤70mΩ
6	Current consumption 消耗电流	I_{DD}	Current consume in normal operation 工作时电路内部消耗	MTN; 1 uA MAX; 6 uA

6.4 PCM BOM

No.	Material No. 元件编号	Material Name 元件名称	specification	semiconductor package	QTY 数量
1	U1	单节锂电保护复合 IC	BM197	DFN2*2DD-6L	1
2	R1	resistor elements 电阻	SMD470KΩ±5%	0402	1
3	R2	resistor elements 电阻	SMD2.7KΩ±5%	0402	1
4	C1	capacitance 电容	SMD 0.1μF±20%	0402	1
5	PCB	PCB	直径Φ8.0mm *厚度 1.2±0.1(mm)	/	1

7. PACK 包装（Not in scale 未按实物比例）

The sketch, size, color of marking should match GB/T191-2000 requests.

标志的图形、尺寸、颜色应符合 GB/T 191 – 2000 的要求

7.1 Model and specification of product;

产品的名称和型号及规格:

7.2 Quantity;

数量

7.3 Measure up marking;

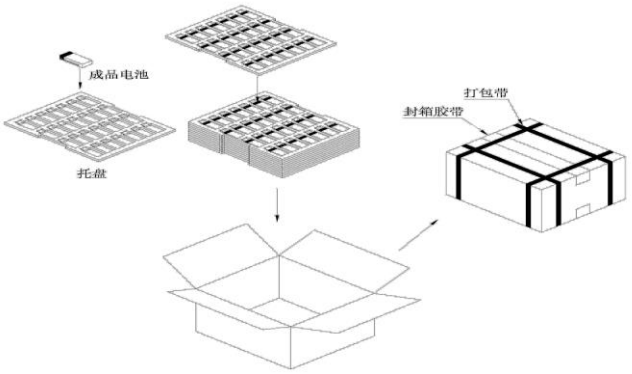
合格品标识

7.4 Make date;

制造日期

7.5 Other markings, like color.

其它标识，如颜色



8. Storage 贮存

The cell shall be storied within -20℃~+45℃ range environmental condition.

If the cell has to be storied for a long time (Over 3 months),the environmental condition should be:

Temperature: 23±2℃ Humidity:65±20%RH

The voltage for a long time storage shall be 3.6V~3.9V range.

Please use 0.5C current to charge up 50% capacity after the battery placed 3 months

电池储存温度必须在-20℃~+45℃的范围内。

长期存储电池（超过 3 个月）须置于温度为 23±2℃、湿度为 65±20%RH 的环境中，贮存电压为 3.6V~3.9V，电池每放置 3 个月，请预先以 0.5C 充电 1 次，并让电池具备 50%以上的电量。

9. Dangers 危险

9.1 Don't disassemble or modify the battery.

The battery has safety function and protection circuit to avoid the danger. HJ cell is packaged by Aluminum laminated plastic film which is easy to be damaged by sharp edge such as pin, needle, edge of devices like nickel tabs, etc. If they have serious damage, electrolyte leakage, short-circuit between positive and negative tabs, etc. It would cause the generation, smoke, rupture, or flaming with mishandling.

禁止分解或修改电池。

电池装有安全保护电路避免发生危险。弘捷新能源电池外层的铝塑膜包装很容易被锋利的东西损害，如钉、针、像定位镍片的装置等。如果电池有严重的损害，如电解液泄露，在正极片与负极片之间发生短路等，将会引起冒烟、破裂、燃烧等不正常现象。

9.2 Don't incinerate or heat the battery

Don't use or leave battery nearby fire, stove or heated place (more than 130℃). These occur the melting of insulator, damage of safety function, or ignition on electrolyte. In case that separator made of polymer is melted by high temperature, the internal short-circuit occurs in individual cells and then it would cause the generating, smoke, rupture or flaming.

禁止将电池投入火中或加热

禁止在火、火炉附近或热的地方使用(超过 130℃)。以免熔化绝缘层，损害电路保护功能，或使电解液着火，以防万一聚合物被高温熔化，使电池内发生短路，然后会引起冒烟，破裂或燃烧。

9.3 Don't use any damage battery

Don't use the battery that are dented or bent on their edge part. batteries are possible to be damaged by strong mechanical shock and it would cause wire break, short-circuit inside the cell, leakage of electrolyte, etc.

禁止使用任何损坏的电池

不要使用有凹痕或被零件弯曲的电池，电池可能是被强裂的机械冲击所损害的，而且会引起电线断开，内部发生短路，电解液泄露等。

9.4 Don't drive a nail into a battery, strike it by hammer, or tread it.

As the battery might be broken or deformed and then it will be short-circuited, it would

cause the generating, smoke, rupture or flaming.

禁止在电池上面钉入钉子，或锤击，踩踏电池。

当电池打折或变形时，将会发生短路，引起冒烟、存裂、燃烧。

9.5 Don’t give battery impact or fling it

If the protection circuit assembled in the battery is broken, the battery will be charged at abnormal voltage or current and abnormal chemical reaction will occur. It may cause the generating, smoke, rupture or flaming.

禁止冲击或抛掷电池

如果装配在电池的保护电路被破坏，电池将会出现不正常的电压和电流和电池内部出现不正常的化学反应。它可能会引也冒烟，破裂或燃烧。

9.6 Don’t make the direct ultrasonic wave power to the battery or soldering near the battery

It may cause serious damage to the batteries. Soldering near the battery may cause damage of the components, such as separator and insulator, are melted by heat, it would cause the gas generating, smoke, rupture or flaming.

禁止在电池上直接做超声波或电池旁边焊接

它会对电池造成严重的伤害，在电池旁边焊接可能会导致电池成分破坏，隔离层和绝缘体被热融化，会引气体产生、冒烟、破裂或燃烧。

9.7 Don’t use battery nearby the high temperature place or under the blazing sun.

HJ batteries have possibility to be degraded its performance such as capacity, thickness increase, impendence, etc. The battery will be charged at the abnormal chemical reaction occurs in the high temperature place. The thickness change may lead to stressing on battery case/ device, wiring or cell which may have possibility to lead to damage performance.

禁止将电池放在高温或阳光直射的地方

在阳光下可能会使弘捷新能源电池的寿命、性能和容量缩短，厚度增加等，在高温的地方电池内部可能会发生不正常的化学反应。厚度改变可能导致压力在电池/装置上，可能导致线路或电池性能损坏。

9.8 Don’t use the unspecified charger.

If the battery is charged with unspecified condition (under high temperature over the regulated value, excessive high voltage or current over regulated value, or remodeled charger with PCM failed or disassemble), there are causes that it will be overcharged or the abnormal chemical reaction will occur in cells. It causes the gas generating, smoke, rupture or flaming.

禁止使用未经指定的充电器

如果电池与未经指定的充电器(在高温之下进行调节，或过高的电压和电流进行调节，或改造过的充电器用保护板保护失败或分解)会使电池充完电后，可能会导致不正常的化学反映在电池内发生，将会产生气体、冒烟、破裂或燃烧。

9.9 Don’t reverse polarity (and terminals)

If the protection circuit assembled in the battery is broken. On charging, the battery is reversed-charged and abnormal chemical reaction occurs. There may be case that unexpected large current flows on discharging. There causes the generating, smoke, rupture or flaming.

禁止将正负极接反（和接线端）

如果电池中组合的保护线路被断掉，在充电，电池在接反时充电电池将发生不正常的反学反应，那种情况有可能会产生意想不到的大电流放电。那种原因可能会使电池冒烟、破裂、燃烧。

9.10 Don’t reverse-charge or reverse-connect

The battery has polarity. In case the battery is not connected with charger or equipment smoothly do not force them to connect and do check polarity of battery. If the battery is connected to opposite polarity with charger. It will be reverse-charged and abnormal chemical reaction will occur. If the protection circuit assembled in the battery is broken, it would cause the generating, swelling, smoke, rupture or flaming.

禁止将充电接反或连接接反

电池有两极，如果电池没有平稳的与充电器或设备连接，将不会做强制他们连接而且检查正负极与充电器是否一致，如果电池与充电器接反，它接会反向充电，而且会引起发生不正常的化学反应。如果电池中装配的保护线路被断掉，它将会引起膨胀、冒烟、破裂或燃烧。

9.11 Don’t connect battery to the plug socket or car-cigarette-plug

Added high voltage to the battery, if the protection circuit assembled in the battery is broken, the excessive current will flow in it and then it may cause the generating, swelling, smoke, rupture or flaming.

禁止将电池连接到插座或汽车的点烟器

更多的高压电流入电池，如果装配在电池内的保护线路被断掉，过多的电流将会产生膨胀、冒烟、破裂或燃烧。

9.12 Don’t use battery for another equipment

If the battery is used for unspecified equipment, it will deteriorate its performance and cycle-life.

禁止使电池用在不同的设备上

如果电池用在未指定的设备上，它将会缩短电池的使用寿命。

9.13 Don’t touch a leaked battery directly

In case the leaked electrolyte gets into eyes, wash them with fresh water as soon as

possible without rubbing eyes. And then, see a doctor immediately. If leave damaged eyes undone, it will cause eye-trouble.

禁止直接碰触漏液的电池

万一泄漏的电解液进入眼睛，应尽快的用清水冲洗眼睛，然后，立刻去看医生。如果眼睛被伤害，将会引起眼睛疾病。

10. Warnings 警告

10.1 Keep the battery away from babies

Keep the little battery out of the reach of babies in order to avoid troubles by swallowing. In case of swallowing the battery, see a doctor immediately.

电池应远离小孩

以免小孩吞下电池，出现不必要的麻烦，应该将电池放到小孩接触不到的地方。如果吞下电池，请立刻看医生。

10.2 Don’t get into a microwave or a high pressure container

Because of sudden heat or damage of sealing condition of battery, it may cause the generating, smoke, rupture or flaming.

禁止将电池放入微波炉或高压容器中

因为在密封的情况下突然受热，可能会引起冒烟、破裂、燃烧。

10.3 Don’t use a leaked battery nearby fire

If the liquid leaks from the battery (or the battery gives out bad smell), let the battery leave from flammable objects immediately. Unless do that, the electrolyte leaked from battery may catch fire and it would cause the smoke, flaming or rupture of it.

禁止将漏液的电池放到火的旁边

如果液体从电池（或者电池发出有害的气体）泄漏，假设将电池直接遗弃于易燃物体旁，如果那样做，从电池泄露出来的电解液可能会着火，而且会引也冒烟、燃烧或破裂。

10.4 Don’t use an abnormal battery, such as leakage, swelling, deformation, etc.

In case the battery has bad smell, it generates, its color change or it is warped in using (includes charging and storage), let it take out from equipment or charger and do not use it. If an abnormal battery is used, it may generate bad performance or damage the device or pack.

禁止使用一个不正常的电池，像漏液、膨胀、毁坏等

万一电池有有害的气味产生，电池的颜色发生变化或它在（包括充电和贮藏）方面被弄歪，应让电池从设备或充电器中取出并且不再使用。如果一个不正常的电池被使用，它可能严重的损害设备包装。

11. Cautions 注意

11.1 Manual

Please read the manual before using the battery and let it keep after reading. And also,Please be sure to use the battery in this specification. HJ will not be responsible for any accidents caused by the operation of the specification

手册

请在使用电池之前详细阅读，并保存好。请您务必遵守本规格书使用电池，对于没有按照规格书进行操作所造成的任何事故，HJ 将不承担任何责任.

11.2 Period of warranty

The period of warranty is 12 months from the date of shipment.HJ guarantees to give a replacement in case of cells with defects proven due to manufacturing process instead of the customer’s abuse and misuse.

保质期

电池保质期为出厂后 12 个月，弘捷新能源承诺如果在保质期内由于电池本身的质量问题，本公司将进行退换。如果是由于用户误用或进行破坏性测试而产生的问题，恕不负责。

11.3 Other the chemical reaction

Because batteries utilize a chemical reaction,battery performance will deteriorate over time even if stored for a long period of time without being used.In addition,if the various usage conditions such as charge,discharge,ambient temperature,etc.are not maintained within the specified ranges the life expectancy of the battery may be shortened or the device in which the battery is used may be damaged by electrolyte leakage.If the batteries cannot maintain a charge for long periods of time,even when they are charged correctly,this may indicate it is time to change the battery.

其它化学反应

由于电池是利用化学反应的原理，所以电池的性能会随时间的增加而降低，即使是存放很长一段时间而不使用。如果使用条件如充电、放电及周围环境温度等情形不在指定的使用范围内，或电池长时间不能充电，即使充电方法正确等，也会缩短电池的使用寿命，或产生漏液导致设备损坏。这样就需要更换电池了。

11.4 Charging Method

Please read the manual of specific charger about charging method.

充电方法

请阅读充电器手册和使用指定的充电器。

12. Others 其它

Any matters that this specification does not cover should be conferred between the customer and HJ.

本说明书中未提及的事项，须经双方协商确定。

-Confidential. Please keep integrated.-