

Specification Approval Sheet(PACK)

产品规格确认书

Battery Type: EP763462-75C-1300mAh-11.1V

电池型号: EP763462-75C-1300mAh-11.1V

Prepared By/Date 编制/日期	Checked By/date 审核/日期	Approved By/Date 批准/日期
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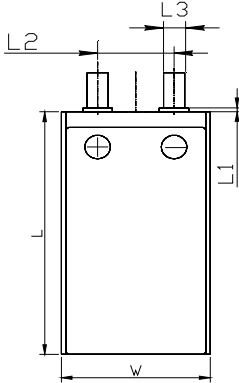
Company Name(公司名称)	
Signature/Date(签名/日期)	
Company Stamp(公司印章)	

1.Scope 范围

The specification applies to polymer battery

2.Specification 产品规格

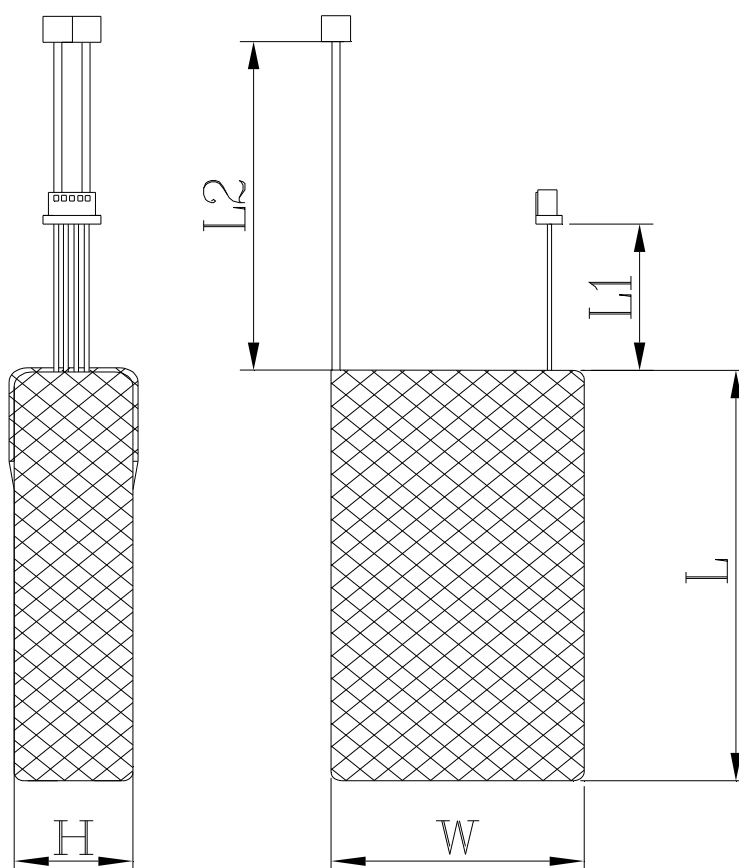
2.1 Cell specification 单电芯规格

NO.	Items	Specifications	
1	Nominal capacity 标称容量	<u>1300mAh @ 0.5C</u> Discharge(放电)	
2	Nominal voltage 标称电压	3.7V	
3	Internal impedance 内阻	≤5.0mΩ	
4	Dimension 尺寸	Thickness/厚度: 7.6±0.5mm	
		Width/宽度: 34.0±1.0mm	
		Height/高度: 62.0±2.0mm	
		Tab width/极耳宽度: 8mm	
		Distance between 2 tabs/极耳间距: 16±2mm	
5	Cell weight (单电芯重量)	34.0±3.0g	
6	Standard charge 标准充电	0.5C CC(constant current)charged to 4.2V, then CV(constant voltage 4.2V)charge till charge current decline to ≤0.05C at 25°C 在 25°C下, 用 0.5C CC (恒流) 充电至 4.2V, 再 CV (恒压) 充电直至充电电流 ≤0.05C	
7	Rapid charge 快速充电	1C CC(constant current)charged to 4.2V, then CV(constant voltage 4.2V)charge till charge current decline to ≤0.05C at 25°C 在 25°C下, 用 1C CC (恒流) 充电至 4.2V, 再 CV (恒压) 充电直至充电电流 ≤0.05C	
8	Charging time 充电时间	Standard charging: 3.0 hours(ref.) 标准充电: 3.0 小时 (参考值) Rapid charge: 2.0 hours(ref.) 快速充电: 2.0 小时 (参考值)	
9	Standard discharge 标准放电	Constant current 75C, end voltage 3.0V, at 25°C 在 25°C下, 持续电流: 75C, 截止电压 3.0V	
10	Peak discharge currents 瞬间电流	Peak current 85C, Continue time ≤2S 瞬间电流 85C, 持续时间 ≤2S	
11	1C Mid Point Voltage 1C 中值电压	≥3.7V	
12	Operating temperature 工作温度	Charging(充电) : 0-40°C Discharge(放电) : -10-40°C	

2.2 Package specification 电池组规格

NO.	Items	Specifications
1	Combination method 组合方式	3S1P (三串一并)
2	Combination standard 配组标准	Capacity difference(容量差) $\leq 40\text{mAh}$
		Resistance difference(内阻差) $\leq 0.5\text{m}\Omega$
		Voltage difference(电压差) $\leq 10\text{mV}$
3	Nominal capacity 标称容量	1300mAh @ 0.5C Discharge (放电)
4	Minimum capacity 最小容量	1200mAh @ 0.5C Discharge (放电)
5	Nominal Voltage 标称电压	11.1V
6	Standard Charging Current 标准充电电流	0.5C CC(constant current)charged to12.6V, then CV(constant voltage 12.6V)charge till charge current decline to $\leq 0.05\text{C}$ at 25°C 在 25°C下,用 0.5C CC(恒流)充电至 12.6V,再(恒压 12.6V)充电直至充电电流 $\leq 0.05\text{C}$
7	Max.Charging Current 最大充电电流	1C CC(constant current)charged to12.6V, then CV(constant voltage 12.6V)charge till charge current decline to $\leq 0.05\text{C}$ at 25°C 在 25°C下,用 1C CC(恒流)充电至 12.6V,再(恒压 12.6V)充电直至充电电流 $\leq 0.05\text{C}$
8	Standard discharge 标准放电	Constant current 60A (Restricted by XT60 plug) ,end voltage 9.0V,at25°C 在 25°C下,持续电流: 60A(受 XT60 插头限制),截止电压 9.0V
9	PACK voltage(As of shipment) 电池电压(出货状态)	11.25-11.7V (cell3.75-3.90V)
10	Internal impedance (内阻)	$\leq 18.0\text{m}\Omega$
11	Max dimensions (最大尺寸)	24.5*35.0*72.0 (H*W*L)
12	Pack weight (电池重量)	MAX: 120.0g

3.PACK Drawing 组装示意图:



No.序号	Item 项目	Size尺寸	Remarks备注
1	H	Max24.5mm	
2	W	Max35.0mm	
3	L	Max72.0mm	
4	L1	22#JST-XHR-4P插	Wire length:50±5mm
5	L2	12#XT60插	Wire length:100±5mm

Note: the above material for easy material BOM, reference use only

注：以上物料为简易物料 BOM，仅参考使用

4.Performance Data 性能参数表

4.1 Electrochemical Characteristics 电化学性能

NO. 序号	Item 项目		Criterion 标准	Test Method 测试方法
1	C-rate characteristics	1C	≥98%	Test Temperature at 25±2°C Charge:0.5C,CC/CV,12.6V,curret≤0.05C cut-off

	放电倍率特性	10C	≥95%	Discharge:Each rate,CC,9.0Vcut-off 测试温度:25±2℃ 充电: 0.5C恒流恒压充到12.6V, 电流≤0.05C 截止 放电: 每种倍率恒流放电, 截止电压 9.0V
		60A	≥80%	
2	Temperature Dependence of capacity 容量温度特性	40□	≥90%	Charge:0.5C, CC/CV,12.6V, current≤0.05C cut-off, at 25±2□
		25□	100%	Discharge: 0.2C,CC,9.0V cut-off at setting temperature
		0□	≥85%	Interval for temperature's change is 2Hrs 充电: 在 25±2℃ 0.5C恒流恒压充电到12.6V, 电流≤0.05C 截止
		-10□	≥70%	放电: 在设定温度, 0.2C 恒流放电9.0V 截止, 温度变化间隔是 2 小时
3	Cycle Life Characteristics 循环寿命特性		≥300cycle	Capacity≥1040mAh Charge: 0.5C CC/CV,12.6V,0.05C cut-off Discharge:1C CC9.0V cut-off 容量≥1040mAh 充电: 0.5C恒流恒压充电到 12.6V,0.05C 截止 放电: 1C恒流放电 9.0V 截止
4	Self-discharge 自放电		≥85%	Standard charge,under the condition of 25±2□ storage one months,tests of 0.5C till 9.0V discharge capacity 标准充电后, 在25±2℃条件下贮存1个月, 测试 0.5C放电至9.0V的容量
5	High temperature performance 高温性能		≥85%	After standard charge in 55±2□ environment on hold for 4 hours,the test of 0.5C till 9.0V discharge capacity 标准充电后, 在 55±2℃的环境下搁置 4 小时, 测试 0.5C 放电至 9.0V 的容量

4.2 Mechanical Characteristics 机械性能

NO. 序号	Item 项目	Criterion 标准	Test Method 测试方法
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1	Vibration Test 振动	NO explosion,no fire,no leakage 不起火、不爆炸、不泄漏	<p>After Standard Charging, fixed the cell to vibration table, then subjected to vibration test for 30 minutes per axis of XYZ axes</p> <p>Frequency rate : 1 Oct/min Vibration frequency : 10Hz-30Hz Excursion(single amplitude): 0.38mm Vibration frequency : 30Hz-55Hz Excursion(single amplitude): 0.19mm</p> <p>电芯标准充电后，固定在振动台上，然后沿XYZ每个坐标方向振动 30 分钟</p> <p>扫频速率：1 Oct/min 振动频率：10Hz-30Hz 位移幅值（单振幅）：0.38mm 振动频率：30Hz-55Hz 位移幅值（单振幅）：0.19mm</p>
2	Drop Test 跌落测试	NO explosion,no fire,no leakage. 不起火、不爆炸、不泄漏。	<p>Drop the battery in the shipment condition from 1m height onto 18~20mm thick hard board on it 3 times each of X,Y, and Z directions at 25±2℃</p> <p>在出货条件下将电池从高度1米的位置自由跌落到18-20毫米厚的硬质木板上，X，Y，Z方向上各三次</p>

4.3 Test data 测试数据

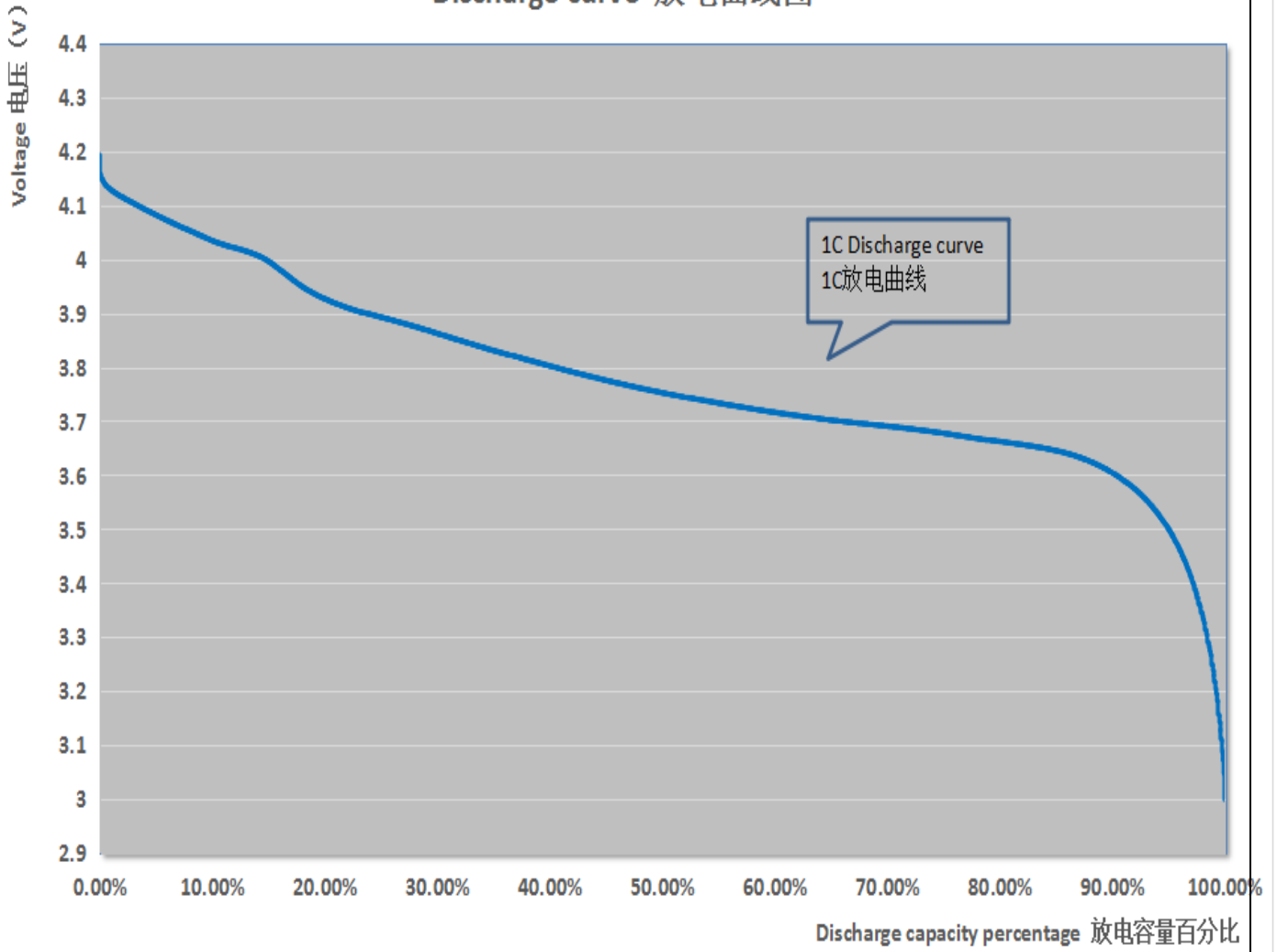
Charge: 0.5C CC(constant current) charged to 4.2V, then CV(constant voltage 4.2V) charge till charge current decline to $\leq 0.05C$ at 25°C

充电：在 25°C 下，用 0.5C CC（恒流）充电至 4.2V，再 CV（恒压）充电直至充电电流 $\leq 0.05C$

Continuous Discharge: 1C CC, 3.0V cut-off, at 25°C

持续放电：1C 恒流放电到 3.0V 截止，在 25°C

Discharge curve 放电曲线图



5.Storage and shipment requirement 存储及运输要求

Item 项目	Requirement 要求
Storage temperature 贮存温度	-10°C~+35°C
Humidity 湿度	≤75%RH
Charged 荷电	about 30~60%charged state 大约30~60%荷电状态

6. Warranty period of battery

电池保质期

Battery warranty for half a year since factory delivery within the time limit, if it does show that the battery did not experience the abnormal use (charge discharge, etc.), but because the battery itself quality problem caused by material or process, vigor power battery will compensate for the equivalent amount of new battery free of charge.

电池保质期为从工厂发货起半年期限内，如果确实证明电池没有经受过异常使用（过充、过放等），而是因为电池本身的材料或制程导致的品质问题，伟之冠电池将免费赔偿等值的新电池。

7. Exemption from warranted

免责条款

7.1 During the product is not used for a long time, need to be regularly recharged for products (at least once every 3 months), will maintain its voltage from 3.7 V to 3.9 V

7.2 Charge and discharge current and voltage shall not exceed the current and voltage of the provisions of this specification

7.3 On more than manual outside the problem caused by wrong operation, vigor power battery does not undertake any responsibility

7.4 As a result of battery protection board RC model and use the charger does not match the results of problem, vigor power battery does not undertake any responsibility

7.5 Beyond the shelf life of products, vigor power battery does not undertake any responsibility

7.6 Products have been qualified, the assembly process lead to cell damage on the client, vigor power battery does not undertake any responsibility

7.1 产品长期未使用期间，需定期对产品进行充电（每3个月至少一次），将其电压维持在3.7V-3.9V之间

7.2 充放电电流和电压不得超过本规格书规定的电流和电压

7.3 对超过说明书外的误操作导致的问题，伟之冠电池不承担任何责任

7.4 如因保护板、电池组、RC模型和充电器不匹配使用导致的问题，伟之冠电池不承担任何责任

7.5 对超出保质期的产品，伟之冠电池不承担任何责任

7.6 产品已经验收合格，在客户端装配过程导致的电池损坏，伟之冠电池不承担任何责任

8. Danger and Warning and Caution in handing the battery

电池使用时危险事项、警告事项及注意事项

8.1 Danger Warning 危险警告！

Danger warning(it should be described in manual or instruction for users,indicated especially)To prevent the possibility of the battery from leaking, heating,explosion, Please observe the following precautions:

危险警告：（应在使用说明手册或说明书中，特别注明）为防止电池可能发生泄漏，发热，爆炸，请注意以下预防措施：

1. Do not disassemble or reconstruct battery.

禁止拆卸或重组电池！

2. Do not short-circuit battery

禁止短路电池！

3. Do not use or leave battery nearby fire, stove or heated place(more than 80 ℃),
禁止在热源旁使用！
4. Do not immerse the battery in water or sea water , or get it wet
禁止将电池投入水中、海水中或弄湿！
5. Do not charge battery nearby the fire or under the blazing sun
禁止在近火处或阳光照射下充电！
6. Do not use the special charger, comply with the charging requirement
禁止使用指定非专用充电器，遵照充电要求！
7. Do not drive a nail into the battery. Strike it by hammer, or tread it
禁止将钉子插入电池中、用铁锤敲打或用脚踩！
8. Do not give battery impact or fling it
禁止冲击或投掷！
9. Do not use the battery with conspicuous damage or deformation
禁止严重损害或变形下使用！
10. Do not make the direct soldering on battery
禁止在电池上直接焊接
11. Do not reverse charge or over discharge the cell
禁止反向充电或过放电！
12. Do not reverse-charge or reverse-connect
禁止反向充电或反极连接！
13. Do not connect battery to the plug socket or car-cigarette-plug
禁止把电池连接到充电插座或汽车点烟插座上！
14. Do not use battery for unspecified equipment
禁止用于非指定设备上！

8.2 Warning 警告！

1. Do not use Lithium ion battery in mixture
禁止将一、二次锂电池混合使用！
2. Keep the battery away from babies
远离小孩触手可及的地方！
3. Do not get into a microwave or a high pressure container
禁止将电池置于微波或高压容器中！
4. Do not use a leaked battery nearby fire
禁止在近火处使用漏液电池！
5. Do not use an abnormal battery
禁止使用非正常电池！

8.3 Caution 小心!

1. Do not use or leave the battery under the blazing sun (or heated car by sunshine). The battery may smoke, heat or flame. And also, it might cause the deterioration of battery's characteristics or cycle life.

禁止在阳光照射下（或阳光直射的汽车上）使用或放置电池，否则可能会引起电池过热，起火荷功能实效，寿命减短

2. Do not use nearby the place where generates static electricity (more than 64V)

禁止在静电（超过 64V）场所旁使用！

3. Do not charge the battery out of recommended temperature range of 0°C and 60°C.

禁止在 0°C 以下和 60°C 以上环境充电！

4. When the battery has rust, bad smell or something abnormal at first-time-using, do not use the equipment and go to bring the battery to the shop which it was bought.

电池首次使用时，若有腐蚀、难闻气味或不正常现象，禁止使用用电器并送回出售点！

5. In case children use the battery, their parents teach how to use batteries according to the manual with care.

小孩要使用电池时，父母须根据手册详细指导其使用方法！

6. If the skin or cloth is smeared with liquid from the battery, wash with fresh water.

若皮肤或衣服沾上电池里的电液，请用清水冲洗！

9. Amendment of this Specification 产品规格书的修订

This specification is subject to change with prior notice.