

Specification Approval Sheet

产品规格确认书

Product Name 产品名称	Li-ion battery pack 锂电池
Model SPEC 型号规格	WB3617ZGHR1/36V/17Ah
Company Name 客户名称	
Document Number 文件编号	TEC-SPEC-1811-001
Sample Number 样品单编号	
Document Revision 文件版本	A0

Approved By 批准	Checkup 审核	Make 制定

Customer Confirmation 客户确认	Signature 签名	Date 日期
	Company Name: 公司名称:	
	Company Stamp: 公司印章:	

Address: Nanjing Hi-tech Industrial Zone, Nanjing, Zhangzhou, Fujian Province, PR. China

TEL: 86-596-7666111 FAX: 86-596-7666222

Specification Modification Records

* The above parameters are theoretical data, intended for reference only. Please contact our sales staff for more details.

Factory: Hi-tech Industry Zone, Nanjing, Zhangzhou City, Fujian Province, China.

Tel.: +86-596-7666111 Cellphone: +86-137-0937-3889 Email: Sales@aucopo.com

Content

目 录

1.Scope

适用范围.....4

2.Products specification

产品规格.....4

3.Basic characteristics

电池组的基本性能.....4

4.Drawing of product

产品外形图..... 9

5. Transport

运输..... 9

6. Declaration

声明.....9

Any copies are invalid without our company's approval

本资料未经本公司批准自行影印，视为无效

* The above parameters are theoretical data, intended for reference only. Please contact our sales staff for more details.

Factory:Hi-tech Industry Zone,Nanjing,Zhangzhou City,Fujian Province, China.

Tel.: +86-596-7666111 Cellphone:+86-137-0937-3889 Email: Sales@aucopo.com

1. Scope:

适用范围

This document describes the Product Specification of Chargeable Electric Scooter Motive li-ion battery pack produced by ZHANGZHOU AUCOPO ENERGY TECHNOLOGY CO.,LTD

本产品规格书是漳州万宝能源科技有限公司根据客户要求的性能指标参数而设计制定、加工生产，该产品适用于可充电电动滑板车（以下简称电动车）用锂离子动力电池组。

2. Battery module configuration

产品规格

Cell Type 电芯类型	li-ion battery pack 锂离子动力电池
Cell Modle 电芯型号	Samsung INR18650-35E/ET
Cell capacity 电芯容量	Min 3,350mAh - Charge : 0.5C(1,700mA), 4.2V, 0.02C(68mA) cutoff @ RT - Discharge : 0.2C(680mA), 2.65V cutoff @ RT * 1C = 3,400mA
Cell's assemble: 组装方式	5P10S, voltage 36V. 5 并 10 串, 电压 36V

3. Basic performance of battery pack:

电池组的基本性能

Product SPEC: 产品规格:		WB3617ZGHR1	
Item 项目	Parameter 参数	Remark 备注	
Common Performance 常规特性	Nominal capacity 额定容量	17Ah	At 25°C ± 2°C, constant current charging at 0.2C to 42V; then turn to constant voltage charging; stop charging when the charging current reduce to 0.02C; discharging at 0.2C to 27.0V. 在 25°C ± 2°C 条件下, 电池以 0.2C 恒流充电, 至电池组端电压达 42V 时转恒压充电, 至充电电流降至 0.02C 时停止充电, 然后用 0.2C 电流放电至 27.0V 的容量。
	Min Capacity 最小容量	16.5Ah	
	Nominal voltage 标称电压	36V	
Charging characteristics 充电特性	Charge mode 充电方法	CC/CV	Please use the specified charger. When the red lights, it means to charge. When the green lights, it means charging fully. 用配套专用充电器充电, 红灯亮表示充电, 绿灯亮表示充满电。
	Charge Current 充电电流	Cell surface Temperature (电芯表面温度)	Charge Current (充电电流)
		<0°C	禁止给电池充电(客户端) User shall not charge the battery
		0°C~45°C(±3°C)	3A Max

* The above parameters are theoretical data, intended for reference only. Please contact our sales staff for more details.

Factory: Hi-tech Industry Zone, Nanjing, Zhangzhou City, Fujian Province, China.

Tel.: +86-596-7666111 Cellphone: +86-137-0937-3889 Email: Sales@aucopo.com

	charging voltage 充电电压	42.0V	
	charging current 充电电流	3A	Specified charger 专用充电器
	charging time 充电时间	Approx :6.5h 大约 6.5 小时	
	Overcharge protection voltage 过充保护电压	4.23±0.030V	any one cell(Ta=25°C) 任一节电池(25°C时)
	Temperature of charging place 充电环境温度	+10°C~+35°C	Best charge temperature 最佳充电温度
	Charging Temperature 充电保护温度	0±3°C	When the internal temperature of the battery reaches 0±3°C, will shut off the charging loop 电池组内部温度约 0±3°C时会关断充电回路
		45±3°C	When the internal temperature of the battery reaches 45±3°C, will shut off the charging loop 电池组内部温度约 45±3°C时会关断充电回路
Discharging characteristics 放电特性	MAX. continuous discharging current 最大持续放电电流	16±1A	When the internal temperature of the battery reaches 60±3°C, will shut off the discharging loop 电池组内部温度约 60±3°C时会关断放电回路
	Over-discharge protection voltage 过放保护电压	2.7±0.08V	any one cell(Ta=25°C) 任一节电池(25°C时)
	Battery pack over-current protection 电池组过流保护	42±4A	OCDP1, Over-Current Protection Delay Time:4±1S 过流保护 1 级,过流保护延时: 4±1S
		70±7A	OCDP2, Over-Current Protection Delay Time:100±20mS 过流保护 2 级,过流保护延时: 100±20mS
	Temperature of discharging place 放电环境温度	-10°C~+60°C	
	Discharging Temperature 放电保护温度	-10±4°C	When the internal temperature of the battery reaches -10±3°C, will shut off the discharging loop 电池组内部温度约-10±3°C时会关断放电回路
		60±3°C	When the internal temperature of the battery reaches 60±3°C, will shut off the discharging loop 电池组内部温度约 60±3°C时会关断放电回路
Short circuit current protection	YES 有		

* The above parameters are theoretical data, intended for reference only. Please contact our sales staff for more details.

Factory:Hi-tech Industry Zone,Nanjing,Zhangzhou City,Fujian Province, China.

Tel.: +86-596-7666111 Cellphone:+86-137-0937-3889 Email: Sales@aucopo.com

	短路保护		
	Self-consumption current of the BMS 保护板自耗电	≤100uA	Idle mode 静态模式
		≤30uA	Sleep mode 欠压休眠模式
Storing temperature 存储温度		-5℃~+35℃	Relative humidity 65 ± 20%RH 相对湿度 65 ± 20%RH
Initial Impedance 初始内阻	≤200mΩ		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
battery pack Weight 电池组重量	About 3.1Kg 约 3.1 Kg		
Assemblage Dimension 外形尺寸	77*82*466mm		
Waterproof rating 防水等级	IPX6		
Color 产品颜色	Black 黑色		
Cycle life 循环寿命	Capacity ≥ 9.9Ah @ after 500cycles (60% of the Standard Discharge Capacity @ RT) - Charge : 3A, 42V, CC CV 100mA cut-off @ RT - Discharge: 10A, 27V cut-off @ RT 500 次循环后容量 ≥9.9Ah(60%标准放电容量@室温) 充电: 3A, 42V, CC CV 100mA 截止@室温 放电: 10A, 27V 截止@室温		
Test method 测试条件	Test conditions must choose the production date of the new battery within 1 month. This product specification of all tests are in the following conditions: Temperature: 25℃ ± 2℃ humidity: 45~75%RH 测试条件必须选用出厂日期 1 个月内的全新电池组。本产品规格书中的所有测试均在以下环境条件下进行: 温度: 25℃ ± 2℃ 湿度: 45~75%RH		
Protection function 安全测试	With functions of overcharging, over discharging, over current and short circuit protection. 单体电芯产品符合过充、过放、过流和短路测试要求。		应不泄漏、不泄气、不破裂、不起火、不爆炸 Sample leak, break, fire, burn are not allowed
	将充满电的电池从 0.7m 高度处自由跌落到厚度为 20mm 的硬木板试验台面上, X、Y、Z 每个正、负方向各试验 1 次。试验结束后, 对样品进行外观目测检查。The fully charged battery was freely dropped from a height of 0.7m to a hardwood test platform with thickness of 20mm. X, Y and Z were tested in positive and negative directions one time each. At the end of the test, visual inspection of the sample is performed.		应不泄漏、不冒烟、不起火、不爆炸 Sample leak, break, fire, burn are not allowed
	在环境温度: 15℃~35℃; 相对湿度: 25%~85%; 气压:		不起火、不爆炸 Sample

* The above parameters are theoretical data, intended for reference only. Please contact our sales staff for more details.

Factory: Hi-tech Industry Zone, Nanjing, Zhangzhou City, Fujian Province, China.

Tel.: +86-596-7666111 Cellphone: +86-137-0937-3889 Email: Sales@aucopo.com

	<p>大气压力 86kPa~106kPa, 将单体电池放置在专用的挤压试验机上, 对单 体电池分别进行横向和纵向挤压, 使挤压后的单体电池横向和纵向尺寸变形 1mm。</p> <p>In the environmental temperature: 15 °C ~ 35 °C;Relative humidity: 25% ~ 85%;Air pressure: atmospheric pressure is 86kPa ~ 106kPa. The single battery is placed on a special extrusion testing machine, and the single battery is squeezed horizontally and vertically, so that the horizontal and vertical dimensions of the extruded single battery are distorted by 1mm</p>	<p>fire, burn are not allowed</p>
	<p>将电池以 0.2C CC/CV 充满电后, 在环境温度: 15°C~35°C;相对湿度: 25%~85%; 气压: 大气压力 86kPa~106kPa, 以大平面方向紧固在振动台上。对电池施以振幅为 2mm, 频率为 16.7Hz, 时间为 1h 的垂直振动</p> <p>The battery is fully charged with 0.2C CC/CV., at ambient temperature: 15 °C ~ 35 °C;Relative humidity: 25% ~ 85%;Pressure: atmospheric pressure 86kPa ~ 106kPa, in the direction of large plane fastening on the vibration table.The pack was subjected to vertical vibration with amplitude of 2mm, frequency of 16.7hz and time of 1h</p>	<p>1、外壳不变形, 不超过规定的外形尺寸范围; 2、试验前后开路电压变化不超过±(0.2×n)V; 3、电池不泄露, 不起火、不爆炸。</p> <p>1. The housing shall not be deformed, and shall not exceed the specified range of external dimensions; 2. The change of open circuit voltage before and after the test is not more than + / - (0.2xn)V;</p>
<p>Pack before shipping 电池组出货状态</p>	<p>Charged with about 50~60% power and the voltage is 38V~40.0V being。 电池组在出厂时已充入 50~60%左右的电量, 电池电压在 38.0V~40.0V。</p>	
<p>Notice 注意事项</p>	<ul style="list-style-type: none"> ⊘ Do not connect the anode and cathode reversely. 严禁将电池组输入、输出端的正负极短路。 ⊘ Do not privately take apart the battery pack. 严禁私自拆开电池组。 ⊘ Prohibited to place the battery pack in the high temperature environment, such as heating, close to the fire, should be placed in a cool, dry environment. Batteries shall not be used when the ambient temperature reaches 60 °C. 严禁将电池组放置于高温环境下, 如加热、靠近火源, 应放置于阴凉干燥的环境中。电池受环境温度影响达到 60°C时不得使用。 ⊘ Prohibited the battery pack placed in water, acid, alkaline and salt liquid. 严禁将电池组放置于水、酸性、碱性和带盐的液体中。 ⊘ Forbbiden washing with high pressure jet in of water, to avoid internal electronic devices and circuit due to wet causing the hidden dangers. 禁止用高压水柱冲洗, 以免电池组内部电子器件及线路因浸湿而造成事故隐患。 ⊘ When the battery doesn't work, please turn off the battery on time, in order to prevent from self-discharging. 电池组不工作时, 需及时关断电源防止产品进行自耗电。 	

* The above parameters are theoretical data, intended for reference only. Please contact our sales staff for more details.

Factory:Hi-tech Industry Zone,Nanjing,Zhangzhou City,Fujian Province, China.

Tel.: +86-596-7666111 Cellphone:+86-137-0937-3889 Email: Sales@aucopo.com

	<ul style="list-style-type: none"> ⊘ The battery pack unused for long periods need to add 2 to 3 hours of electricity every three months. And removed from the electric car to be stored in a cool, dry environment. 电池组长期不用时，每隔 3 个月需补充电 2~3 个小时。并将其从电动车取下后在阴凉干燥的环境中存放。 ⊘ Charge must use original special adapter charger, forbidden to use other types and other brands the charger charge. 充电时必须使用原厂专用适配充电器，禁止使用其它型号及其它品牌的充电器 充电。 ⊘ Continuous charging for no more than 10 hours. 连续充电时间不超过 10 小时。 ⊘ Forbidden to use rechargeable mouth for electric discharge and to use discharge mouth charge. 严禁用充电口进行放电，严禁用放电口充电。 ⊘ Prohibited in less than 0°C and higher than +40 °C ambient temperature, battery charge. 严禁在低于 0°C 以下和高于 +45°C 以上环境温度中给电池充电 ⊘ Please handle the battery with care, do not drop the battery to avoid damage to the battery case or battery pack 使用电池请避免电池从高处跌落，以防电池外壳或电池组损伤。 ⊘ Special note:If the battery is not used for for a long time, should keep it at half charge state (half power), namely: not fully charged, not fully discharged (or charged until the third power indicator lights). And re-charging after 2-3 months, and use half of the electricity, the battery should be stored in a cool dry place, so that the battery can not be damaged. 特别提醒：若电池长期不使用前，使其处于半充饱电状态(一半电量)，即:不充满电，也不放完电(或充电至电量指示灯板亮第三盏灯)。并在 2-3 个月之后重新充电，并使用一半电量，电池应在阴凉干燥处储存，这样可以使电池不受损坏。
<p>Warranty period and Product responsibility 包修期限及 产品责任</p>	<p>1、Product warranty period: the user must use the product under the conditions specified in the product specification sheet, 13 month warranty period is calculated from the date of manufacture. 产品包修期：用户必须按照双方产品规格承认书所规定的条件下使用，自出厂日期开始算起 13 个月。</p> <p>2.Before use, please read carefully the attention of the above items and electric car manufacturers the operation instruction "to ensure that the correct use and installation. 使用前请认真阅读上面的注意事项以及厂家电动车《使用说明书》确保正确使用和安装。</p> <p>3.We will not guarantee against any accidents occurring due to usage against this specification. 万宝能源对违反上述注意事项而产生的任何问题不予负责。</p>

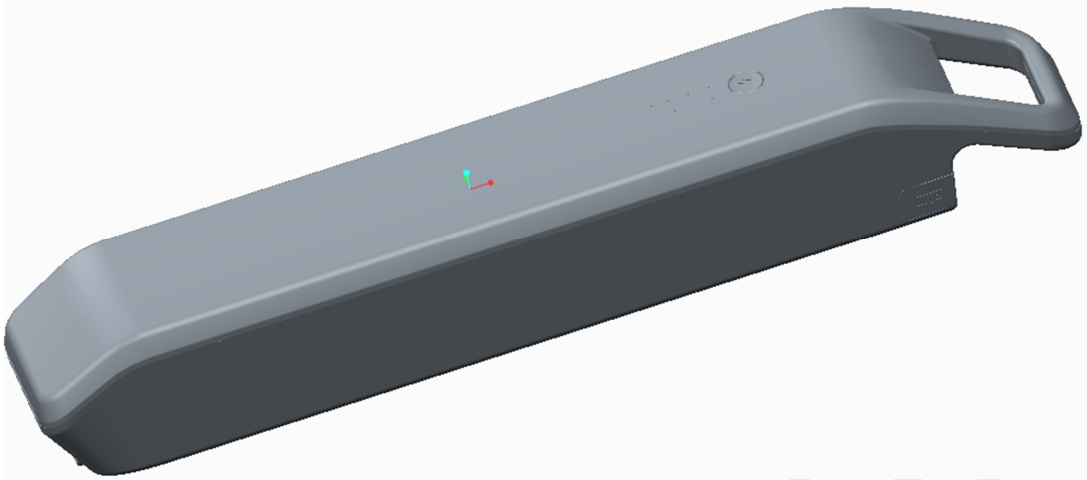
* The above parameters are theoretical data, intended for reference only. Please contact our sales staff for more details.

Factory:Hi-tech Industry Zone,Nanjing,Zhangzhou City,Fujian Province, China.

Tel.: +86-596-7666111 Cellphone:+86-137-0937-3889 Email: Sales@aucopo.com

4. Drawing of product

产品外形图



5. Transport

运输

Battery should be shipment at Less than 50~60% of capacity. It should be avoided that shake, impact or extrusion strongly. Prevent to solarization and drench. It should use autocar, train, plane and so on.

电池应在荷电状态低于 50~60% 充电状态下包装成箱进行运输，在运输过程中应防止剧烈振动、冲击或挤压，防止日晒雨淋，应适用汽车等普通交通工具运输。

6. Declaration

声明

This specification terms is set according to the both actual requirements, regared as the IQC and mutual confession, if needs to change must be agreed upon by both parties agree.

本规格书条款是根据双方的实际要求制定，是作为供货进厂检验依据，若需更改需经双方同意。