

**确认书**  
**APPROVAL SHEET**

客 户  
CUSTOMER : \_\_\_\_\_  
机种名称  
Li-Ion battery charger (69.35V/30Ah)  
I T E M : 锂离子充电器 (69.35V/30Ah)  
型 号  
MODEL : **BQ-C-P500**  
发行版本  
VERSION : **REV A/0**  
发行日期  
ISSUE DATE : \_\_\_\_\_

承 制 方:

使用方:

MANUFACTURE:

USER:

拟 制 DESIGN	审 核 CHECK	批 准 APPROVAL
TianJiang	Jingzheng Niu	Ziwen Xiang

主 管 CHIEF	核 准 CONFIRM

- 确认后请及时回签，自接订单后，本确认书将自动生效。
- Please sign and return back after you approval . The specification will come into force automatically after purchase order reception.



**上海锦荃电子科技有限公司**

ShangHai JinQuan Electronic Technology Co.,Ltd

上海市浦东新区康桥路787号中天科技园7号楼210-216室

电话(Tel): +86-21-61901310

传真(Fax): +86-21-51861615

邮编(Post code): 201315

## 目 录 Contents

### 1. 输入特性Input characteristics

- 1.1 额定输入电压 (Rated input voltage)
- 1.2 输入电压范围Input voltage range
- 1.3 输入频率范围Input frequency range
- 1.4 效率Efficiency
- 1.5空载功率No-load power
- 1.6空载输入电流No-load input current
- 1.7 功率因素 Power Factor

### 2. 输出及充电特性灯指示功能: Characteristics of light output and charging functionality instructions

- 2.1 额定输出电压 Rated output voltage
- 2.2 输出电流 Output current
- 2.3 输出电压范围 Output Voltage Range
- 2.4 输出电压纹波和噪声 Output voltage ripple and noise
- 2.5 电池最低充电电压 Minimum battery charge voltage
- 2.6 保持恒流充电最高电压 The highest voltage to maintain constant-current charge
- 2.7 恒流充电 Constant-current charge
- 2.8 灯转换—红灯转绿灯 Light conversion -red light turnto green
- 2.9 灯转换—绿灯转红灯 Light conversion - green light to red light

### 3. 保护特性: Features

- 3.1 过流保护 Over-current protection
- 3.2 短路保护 Short-circuit protection
- 3.3 防倒灌保护Anti-intrusion protection
- 3.4温度保护 Internal temperature protection
- 3.5定时保护
- 3.6插拔保护

**4. 环境特性: Environmental characteristics**

- 4.1 绝缘强度 (耐压) Dielectric Strength (Pressure)
- 4.2 绝缘电阻 Insulation Resistance
- 4.3 安规要求 Safety requirements
- 4.4 温度 Temperature
- 4.5 湿度 Humidity

**5. 机械性能: Mechanical properties**

- 5.1 外壳尺寸 Shell Size
- 5.2 输入AC插座 AC input socket
- 5.3 输出DC线 DC output line
- 5.4 颜色 Color

6. AC输入线的规格 The specifications of the iutput AC line

7. 产品成品图 Finished map products

8. 输出DC线的规格 The specifications of the output DC line

9. 标签 Label

10. 使用说明书 Manual



## 电气规格 Electrical Specification

### 电气性能要求 Electrical performance requirements

#### 1. 输入特性: Input characteristics

序号Serial number	条件说明Conditions	规格Specifications
1.1 额定输入电压 Rated input voltage	连续 Continuously	110/220V
1.2 输入电压范围 Input voltage range	连续 Continuously	90Vac -264Vac
1.3 输入频率范围 Input frequency range	连续 Continuously	47Hz -63Hz
1.4 效率 Efficiency	Vin 110Vac/Vout 1.8A Vin 220Vac/Vout 1.8A	≥80%
1.5 空载功率 No-load power	100/240Vac/Out 0A	≤3W
1.6 空载输入电流 No-load input current	100/240Vac/Out 0A	≤ 65 mA
1.7 功率因素 Power Factor	100/240Vac/Out 1.8A	≥0.45

#### 2. 输出和充电特性、灯指示功能: Output and charge characteristics, functional lights instructions

序号Serial number	条件说明Conditions	规格Specifications
2.1 额定输出电压 Rated output voltage		54.6V
2.2 输出电流 Output current	在恒压模式 constant voltage mode at	6A±0.6A
2.3 输出电压范围 Output Voltage Range	输出空载以DC线末端为准 at the output end of DC cable	69.15V≤Vo≤69.55V
2.4 输出电压纹波和噪声: (在输出端并联0.1uF 独石电容和10uF电解电容, 并且示波器采用20MHz波段测试。 Output voltage Ripple and Noise:(0.1uF Ceramic Cap and 50 V 10uF Aluminum Cap.Paralleled between the end of output cable,BW=20MHz)	Vin 110Vac/Vout 1.8A Vin 220Vac/Vout 1.8A	≤500mVp-p



## 电气规格 Electrical Specification

序号Serial number	条件说明Conditions	规格Specifications
2.5 电池最低充电电压 Minimum battery charge voltage	<p>电池在长时间放电后，到达某一点后会 自动保护关闭输出，该点就是最低充电电 压点。Battery discharge in a long time after the arrival of an automatic protection that will shut down output, the point is the minimum charge voltage point</p>	27±2V
2.6 保持恒流充电最高电压 The highest voltage to maintain constant-current charge	<p>电池在由恒流转入恒压时的电压点， 通常由充电补偿和输出线的规格有关。By the constant current into the battery when the voltage at constant pressure, usually by the charge compensation and the relevant specifications of the output line</p>	≥68.3V
2.7 恒流充电 Constant-current charge	<p>电池在最低充电电压至恒流充电最高 电压之间，充电电流能够满足客户规定的 电流波动范围称之为恒流充电。Battery charging voltage to the minimum to the maximum voltage between the constant- current charge, the charge current to meet the requirements of current customers range called the constant- current charge.</p>	29V±2V至29V±2V时500A±300mA 29V±2V至恒流最高电压时6A±0.6A. 27±2V to 29V ±2V at 500mA ± 300mA, 29V ± 2V maximum voltage to constant current 4A ± 0.2A
2.8 灯转换-红灯转绿灯 Light conversion - red light turnto green	<p>红灯转绿灯表示电池已经充满电，直 观上反映充电的状态。Red light to green light shows battery has been fully charged, such light shows battery charging state directly.</p>	300mA±200mA
2.9 灯转换-绿灯转红灯 Light conversion - green light to red light	<p>直观上反映正在充电的状态。Intuitively reflect the state of charge.</p>	500mA±300mA



## 电气规格 Electrical Specification

### 3. 保护特性: Features

序号Serial number	条件说明Conditions	规格Specifications
3.1 过流保护 Over-current protection	当充电器发生内部或外部故障时，比如短路或者过载，充电器进入保护状态。故障排除后，充电器可恢复正常工作。 When internal or external charger failure, such as short circuit or overload, charger will stop working until failures removed.	保护，无损坏。 Protection without damage.
3.2 短路保护 Short-circuit protection	当正负极短路，充电器进入保护状态：充电器无输出；并且输入功率 $\leq 5W$ 。故障排除后，充电器可恢复正常工作。 When the positive and negative short-circuit, charger will protect and no charger output and input power $\leq 5W$ . Charger rework after failure removed.	保护，无损坏。 Protection, without damage.
3.3 防倒灌 Anti-intrusion	当充电饱和，电源线拔掉充电器和电池依然连接时，电池里电能不会倒灌充电器。When charge saturation, unplug the power cord but battery charger is still connected, battery energy will not flow backward into charger.	无倒灌 No intrusion
3.4 内部过温保护 Internal temperature protection	充电器在充电过程中，检测充电器内部温度，温度超过设定值，温度充电器将关断充电电流保护，停止充电。Charger in the process of charging, the charger internal temperature, the temperature exceeds the set value, the temperature of the charger will turn off the charge current protection, stop charging.	内部保护温度 Internal temperature protection $80\pm 2^{\circ}\text{C}$

### 4. 环境特性: Enviromental Features

序号Serial number	条件说明Conditions that	规格Specifications
4.1 绝缘强度（耐压）： Dielectric Strength:(pressure-resistance)	AC输入端与二次侧之间打3.75KV，漏电流 $<10\text{mA}$ ，测试时间1分钟。批量生产时，3750Vdc，3秒钟。以上测试时，绝缘电阻均应满足。Between AC input and secondary applied AC 3.75kV, 1 minute test time, and cut off current shall be less than 10 mA.AC 3.75kV, test time 3 Sec. for mass production.	无打火，拉弧，超漏 (No brand, arc gap, super-leak)



## 电气规格 Electrical Specification

序号Serial number	条件说明Conditions that	规格Specifications
4.2 绝缘电阻: Insulation Resistance	AC输入端与二次测加500Vdc, 测试时间1分钟; 批量生产时, 500Vdc, 3秒钟。以上测试时, 绝缘电阻均应满足。 Between AC input and secondary applied 500Vdc, 1 minute test time. 500Vdc, test time 3 Sec. for mass production.	≥20MΩ
4.3 安规要求: Safety requirements	根据客户要求 As per customers' requirements	
4.4 温度: Temperature	工作 Operation 储存 Storage	0℃ to +40℃ -40℃ to +55℃
4.5 湿度: Humidity	工作 Operation 储存 Storage	20% ~85% 10%~95%

### 5.机械性能: Mechanical properties

序号Serial number	条件说明Conditions	规格Specifications
5.1 外壳尺寸: (长度 x 宽度 x 高度) Shell Size (Length x width x Height)	外型尺寸 Overall dimensions	
5.2 输入AC插座: AC input socket		
5.3 输出DC线: DC output line		2*0.75mm <sup>2</sup>
5.4 颜色 Color	外壳 SHELL	黑色Black

### 6. AC输入线的规格: The specifications of the input AC line





## 电气规格 Electrical Specification

### 7. 产品成品图： Finished map products

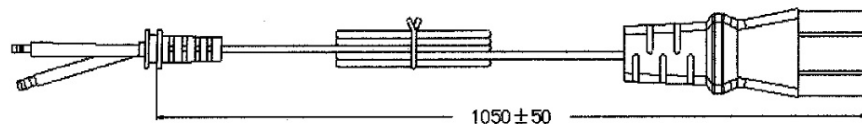


注：正面LOGO可以根据客户需要更改

### 8. 输出DC线的规格： The specifications of the output DC line

输出端定义：

Blue Cable (-)



Grey Cable (+)



注：DC线可以选择DC line Customers can choose any





电气规格      Electrical  
Specification

9. 标签 Label

AS PER CUSTOMER'S NEEDS

**10.使用说明书: Manual****Intelligent lithium charger Manual****First, the characteristics of:**

Smart charger for this product. The use of switching power supply technology, superior performance electric bicycle lithium battery charger dedicated, It has the characteristics of the following advantages:

- 1, adaptive wide input voltage range (100-240Vac)
- 2, A variety of output protection, effective in preventing cell damage.
- 3, the output ripple noise
- 4, short-circuit current is 0, to prevent short circuit damage and to avoid unnecessary short-circuit caused by power loss, can short-circuit a long time
- 5, moisture-proof

**Second, the scope of application:**

The charger for a 13 string 48V/10-20AH rechargeable lithium battery pack.

**Third, charging methods:**

DC line charge will be the first rechargeable battery pack port access, the latter connected to AC input line. Unplug the charger should be disconnected from AC power, unplug the DC-side charging port.

**Fourth, Troubleshooting:**

- 1, the output indicator light does not shine:

- a. Check for AC input
- b. Enter the line interface to check whether the bad

May have excluded the above, please send plant maintenance, not to self-repair.

- 2, output instructions Constant green light:

- a. output connector is connected
- b. can not use the battery
- c. whether there are short-circuit output

May have excluded the above, please send plant maintenance, not to self-repair.

- 3, the output red-Heng Liang instructions:

- a. whether or not damage the battery

May have excluded the above, please send plant maintenance, not to self-repair.

**Note:**

There is high pressure, to prevent the risk of electric shock, do not open the charger to carry out maintenance on their own!

If you have any questions, please contact the dealer or repair station.

**Warning:** the prohibition to non-rechargeable batteries!