

深圳英辉源电子有限公司

SHENZHEN YINGHUIYUAN ELECTRONICS CO., LTD

# Specifications For Approval

## *CHARGER 14.4V 3A*

APPROVED BY	CHECKED BY	PREPARED

Customer:

Approval by:

Date:2023-3-28

Description	Input: 100-240VAC 50/60Hz Output:+14.4V DC-----3A	
Model NO.	YHY-14403000	
Sample Color	Black	
<b>Manufacturer</b>		
SALES	APPROVED BY	DESIGNED BY
Serena	Edward	Jackson

Manufacture:ShenZhen Ying Hui Yuan Electronics Co.,Ltd

制造商: 深圳英辉源电子有限公司

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### **PRODUCT SPECIFICATION**

请注意, 下面表格中列出了不符合您要求的项目, 请您确认.

*Please note items listed below does not meet your specifications and requires*

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*your consent for deviation:*

项目/Item	客户要求规格/Customer specification	建议规格/Suggestion specification

备注/Remarks:

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Building 3,The Fifth Industrial Zone of Fuqiao,Qiaotou community, Bao'an District, ShenZhen,China 518103

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## ***PRODUCT SPECIFICATION***

1.0 简介/INTRODUCTION

此份是 AC 转 DC 单路输出的开关电源规格书, 产品总输出功率为 43.2W  
The document specifies the AC/DC switching power supply with one output,

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The total output power is 43.2W Max.

产品符合欧盟的 ROHS 要求.

The unit meet ROHS directive of the European Union.

## 2.0 输入特性/INPUT CHARACTERISTICS

2.1 输入电压标称值/Input Voltage: AC100-240V

输入电压范围/Input Voltage Range: AC90-264V

2.2 输入电流/Input Current: 2.0Arms max.@ AC115V full load

2.3 工作频率/Operating Frequency : 50 Hz

频率范围/Operating Frequency Range : 47-63 Hz

2.4 浪涌电流/In-Rush Current: 20A@ AC115V full load

2.5 空载功耗/Input power (no load): <0.3W@ AC115V

## 3.0 输出特性/OUTPUT CHARACTERISTICS

3.1 输出电压/Output Voltage

A.空载/No load:14.2V-14.6V@ AC115V/AC230V

B.负载 CC 3A±0.15A: ≥12V@ AC115V/AC230V

3.2 定电流模式 Constant Current charging mode

CV mode 12V<V<14.4V: 3A±0.15A @ AC115V/AC230V

3.3 LED 指示/LED state

红灯转绿灯电流: 300 mA±100mA@ AC115V/AC230V

/Current (red change to green)

## **PRODUCT SPECIFICATION**

充电器在充电过程中应指示为:

1. 当充电器接通电源, 输出端未接电池, 指示灯绿灯亮, , 处于待充电状态。

When the charger is connected to the power supply and the output terminal is not connected to the battery, the indicator light is green and in the

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state of waiting for charging.

2. 当接上电池, 并且充电电流大于  $300 \pm 100\text{mA}$  时, LED 指示灯由绿色转红色, 表示开始充电。

When the battery is connected and the charging current is more than  $300 \pm 100\text{mA}$ , the LED indicator turns from green to red, indicating that the charging starts.

3. 红灯亮表示正在充电中。

The red light indicates that it is charging.

4. 当充电电流下降到  $(300 \pm 100)\text{mA}$  时, 指示灯由红色转绿色, 表示电池充饱。

When the charging current drops to  $(300 \pm 100)\text{mA}$ , the indicator turns from red to green, indicating that the battery is full.

**3.4 纹波/Ripple and Noise :  $150\text{mV}_{\text{p-p}}$  max. @ AC115V/AC230V**

**(CV=15V) at no load**

用示波器测试输出纹波,示波器需调到 20MHz 的带宽档,并在负载端并联一个  $0.1\mu\text{F}$  的瓷片电容和一个  $10\mu\text{F}$  的电解电容。

The measurement for differential ripple and noise the output will be using oscilloscope, with 20MHz bandwidth. A  $10\mu\text{F}$  electrolytic capacitor and a  $0.1\mu\text{F}$  ceramic capacitor should be parallel with output load.

**3.5 效率/Efficiency: 80 % min. @ AC115V full load**

**4.0 保护功能/PROTECTION FUNCTION**

**4.1 过流保护/Over-current Protection : /A@ AC115V/230VAC**

**4.2 短路保护/Short circuit protection**

当产品输出端短接时,其输入功率小于  $0.5\text{W}$

当输出端短接移除后,产品应能自动恢复输出,并能正常工作。

When the output pin is shorted, the input power should be less than  $0.5\text{W}$

Removal of fault condition shall permit automatic recovery of the output voltage and there is no damage.

**5.0 环境测试/ENVIRONMENTAL CONDITION**

**5.1 贮存环境/Non-operation**

**5.1.1 环境温度/Ambient temperature :  $-20-60\text{ }^\circ\text{C}$**

**5.1.2 环境湿度/Relative humidity 5-65 %**

产品能在上述环境中长期存放,并不会影响电气/机械性能及后续运作。

The power supply shall be capable of withstanding the above environmental conditions for extended periods of time, without sustaining electrical and/or mechanical damage and subsequently operational deficiencies.

**5.2 运行环境/Operating**

**5.2.1 环境温度/Ambient temperature :  $0-40\text{ }^\circ\text{C}$**

**5.2.2 环境湿度/Relative humidity : 5-65%**

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产品能在上述条件下持续运作而不影响电气/机械性能.

The power supply shall be capable of operating continuously in any mode without performance deterioration in the above environmental condition.

5.2.3 温升测试/T rise : 温度上升 $\leq 70^{\circ}\text{C}$

环境温度  $25\pm 2^{\circ}\text{C}$ ,以 3A 负载工作 4 小时,测量可能会被接触到的充电器的外表面温度直至获得最大温度,要求温升最高不超过  $70^{\circ}\text{C}$ 。

at a environment temperature of  $25 \pm 2^{\circ}\text{C}$  ,3A load For 4 hours

measure central section of surface ,T rise max value  $\leq 70^{\circ}\text{C}$  .

## 6.0 可靠性及品质控制/RELIABILITY AND QUALITY CONTROL

### 6.1 煲机/Burn-in

6.1.1 煲机环境温度:  $40^{\circ}\text{C}$

/Burn-in Ambient temperature

6.1.2 煲机时间/Burn-in Time : 4hr.

### 6.2 跌落测试/Drop Test

将被测品从 1000mm 的高度跌落,跌三次,跌落承接面为 3.2mm 厚的硬木板上,硬木板铺设在水泥地板上,跌落后产品无电气/机械/安规上的性能不符合现象.

Dropped the specimen from 1000mm height, 3 times onto a hardwood floor at least 3.2 mm thick vinyl tile

. There shall be no problem on appearance, structure, performance and safety.

### 6.3 振动测试/Vibration and Shock

产品应能承受在正常运输中的振动,参照 MIL-STD-810D 514.3 项目目录 1 程序 I

The power supply shall be designed to withstand normal transportation vibration per MIL-STD-810D method 514.3 CAT1 Proc I.

### 6.4 平均无故障时间/MTBF

平均无故障时间 Mean Time Between: 50,000 hr.@  $25^{\circ}\text{C}$

## 7.0 安规及电磁兼容/SAFETY AND EMC STANDARD

7.1 安规标准/Safety standard: CE

7.2 电磁兼容标准/EMC Standard: CE-EMC

7.3 高压测试/Dielectric strength

初级对次级/Primary to secondary :AC1800V 3S Cut off current 5mA

7.4 绝缘电阻/Insulation resistance

初级对次级/Primary to secondary :  $\geq 20\text{M}\Omega$  Apply DC 500V

在  $40^{\circ}\text{C}$  温度 90% 的湿度环境下 6 小时,绝缘阻抗时不低于  $20\text{M}\Omega$

After store in  $40^{\circ}\text{C}$  temperature and 65% humidity 6 hours, the insulation of primary to secondary is more than  $20\text{M}\Omega$ .

## 8.0 机械结构 MECHANICAL

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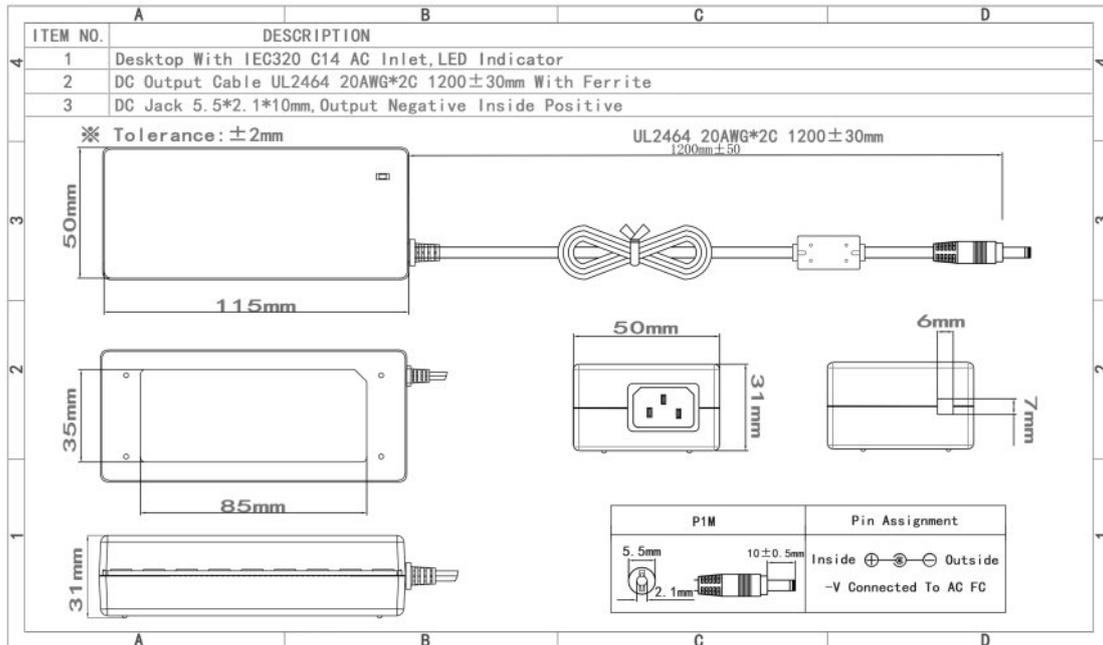
AC connector: C14

8.1 输出 DC 线/Output DC Cord

8.1.1 DC 线材/Output cord: UL2464 20AWG 1200±50mm

8.1.2 DC 插头/Output plug type: OD5.5\*ID2.1\*L10mm

8.1.3 DC 插头极性/Output plug polarity : 内正外负// Inner positive



## 9.0 LABEL

**NOTE :**

**All labels are Laser printing**

### 10、包装说明/PACKING:

1、 Inner box:brown box,1pcs/box, L170\*W90\*H74MM

内包装: 黄色硬纸盒, 1个/盒, 尺寸: 长 170\*宽 90\*高 74MM

2、 Outside Carton,50pcs/carton, 49.5\*43\*19.5cm

外箱: 50个/箱, 尺寸: 长 49.5\*宽 43\*高 19CM



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## 11. Caution

Using indoor only!

## 12. Transport & Storage

### **10.1 Transport**

Suitable for cars, boats, planes transportation, transportation should be canopies, sunscreen, civilization loading and unloading

### **10.2 Storage**

The product should be stored in the box when not use, warehouse environment for-20 ° ~ + 60 °, relative humidity 10% ~ 95%, and warehouse not allow to have the harmful gas, or inflammable or explosive products and corrosive chemicals, no strong mechanical vibration, impact and strong field, packing boxes from at least 20 cm high, the distance from the wall, heat source, window or air entrance at least 50 cm, in this stated conditions storage period generally is 2 years, more than 2 years should be inspection.