

小耳朵（广东）电子科技股份有限公司

承认规格书

Specification for Approval

客户名称
CUSTOMER NAME

产品类型
PRODUCT ITEM

机种名称
MODEL NO.

送样日期
SEND DATE

LED 驱动器
led driver

UK17 双色温调光 LED 电源
EAR-UK17-250-48

制造		客户	
APPROVAL		APPROVAL	
拟制	审核	批准	
赖家华	冯杰	冯杰	

工程文件发行章

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版本历史
REVISION HISTORY

Spec Rev 规格书版本	Sample Rrv 样品版本	Date 日期	Description 描述	Safety 安规确认	Mechanical 结构确认	Electrical 电气确认
1.0		2022-11-04	首版发行	冯杰	颜强梅	冯杰

目录 Section

1. 电气性能指标 Power supply overview

1.1 输入特性 Input Electrical Characteristics Overview

1.1.1 输入电压 Input Voltage

1.1.2 输入频率 Input Frequency

1.1.3 输入电流 Input Current

1.1.4 效率及平均效率 Efficiency and Average Efficiency

1.1.5 待机功耗 No Load Power Consumption

1.1.6 冲击电流 Inrush Current

1.1.7 功率因素 Power Factor

1.2 输出特性 Output Electrical Characteristics Overview

1.2.1 输出电压电流调整率 Output Voltage、Current & Regulation

1.2.2 输出纹波和噪声 DC Output Ripple & Noise

1.2.3 输出动态响应 Output Transient Response

1.2.4 输出保持时间 DC Output Hold-up Time

1.2.5 输出超调 DC Output Overshoot At Turn On & Turn Off

1.2.6 输出上升时间 DC Output Rise Time

1.2.7 开机时间 Turn-on delay Time

1.3 保护功能 Protection

1.3.1 过压保护 Over Voltage Protection

1.3.2 过流保护 Over Current Protection

1.3.3 短路保护 Short Circuit Protection

1.3.4 保护功能复位 Reset After Shutdown

- 2. 安规要求 Safety**
- 3. 电磁兼容性 EMC**
 - 3.1 电磁干扰 EMI
 - 3.2 电磁抗扰 EMS
- 4. 绝缘性能 Isolation**
- 5. 寿命 Lifetime**
- 6. 环境要求 Environmental Requirements**
 - 6.1 温度 Temperature
 - 6.2 湿度 Humidity
 - 6.3 海拔高度 Altitude
 - 6.4 冷却方式 Cooling Method
 - 6.5 振动耐受 Vibration
 - 6.6 跌落测试 Drop Test
- 7. 重量 Weight**
- 8. 标签 Label**
- 9. 机械尺寸 Mechanical**
- 10. 包装、运输、贮存 Package、Transport、Storage**

1. 电气性能指标 Power Supply Overview

1.1 输入特性 Input Electrical Characteristics Overview

1.1.1 输入电压 Input Voltage

标称输入电压: 100~240Vac,单相

Normal Voltage Range: 100~240Vac, single phase;

变动输入电压: 90~264Vac,单相

Vibration Input Voltage Range: 90~264 Vac, single phase;

1.1.2 输入频率 Input Frequency

标称频率范围: 50/60Hz

Normal Frequency Range: 50/60Hz

变动频率范围: 47~63Hz

Vibration Frequency Range: 47~63Hz

1.1.3 输入电流 Input Current

最大 3.5A, 在 90Vac 60Hz, 满载

3.5A MAX, At 90ac 60Hz, Full load output.

1.1.4 效率及平均效率 Efficiency and Average Efficiency

在 230Vac 交流输入, 额定负载输出时, 效率 $\geq 90\%$,

At 230Vac input, 100% of full load output, efficiency $\geq 90\%$

1.1.5 待机功耗 No Load Consumption

在 230Vac 输入时, 空载, 待机功耗 $\leq 1W$

At 230Vac input and no load condition, input power $\leq 1W$.

1.1.6 冲击电流 Inrush Current

最大 50A, 在 230Vac, 冷启动

50A MAX. At 230Vac, Cold Start.

1.1.7 功率因素 Power Factor

输入电压 230VAC, 满载条件, PF $\geq 90\%$

Input voltage 230Vac, Full load condition PF $\geq 90\%$

1.2 输出特性 Output Electrical Characteristics Overview

1.2.1 表 1 输出电压电流调整率 Table 1 Output Voltage、Current & Regulation

Output Voltage 输出电压	Adjust range 调整范围	Rated output range 额定输出范围	Min. current 最小电流	Maximum rated current 最大额定电流	Maximum rated power 最大额定功率
(空载) (No load)		48-49.5V	0A		
(满载) (Full load)	28-48V			5.8A (电流精度±3%)	300W

1.2.2 表 2 输出纹波和噪声 Table 2 DC Output Ripple & Noise

Output Voltage	Ripple & Noise (Max)
+48V	≤480mV

Note: 1) Measurements shall be made with an oscilloscope with 20 MHz bandwidth.

示波器须设置在 20 兆赫兹的带宽

2) Output shall be bypassed at the connector with a 0.1uF ceramic capacitor and a 47uF/50V electrolytic simulate system loading.

输出并联 0.1uF 的陶瓷电容和 47uF 的电解电容。

1.2.3 表 3 输出动态响应 Table 3. Output Transient Response

测试条件 Test Conduction

Voltage Tolerance Limit	Slew Tate	Load Change
+48V ± 10%	0.2A/uS	40% to 80% Load

Note: 以 50-10KHz 的频率跳变负载来测试;

Transient response measurements shall be made with a load changing repetition rate of 50Hz to 10KHz.

1.2.4 表 4 输出保持时间 Table 4. DC Output Hold-Up Time

Output Voltage	115Vac/50Hz Input	230Vac/50Hz Input
+48V	≥3Ms	≥3Ms

Note: 所有输出带满负载 All of DC output at full load.

1.2.5 表 5 输出超调 Table5 DC Output Overshoot At Turn on & Turn Off

Output Channel	Output (V)	Over Shoot Voltage (V) 超调电压	
		Turn On 开机	Turn Off 关机
+48V	+48V	10%	10%

Note: 测试时负载范围: 由最小到最大 All of DC output current from Min. to Max.

1.2.6 表6 输出上升时间 Table 6. DC Output Rise Time

Output Voltage	115Vac/60Hz input & Full load	230Vac/50Hz input & Full load
+48V	≤60mS	≤60mS

Note: 输出电压从10%上升到90%

The Output Voltages shall be rise from 10% to 90% of their output voltage.

1.2.7 表7 开机时间 Table7 Turn-on delay Time

Output Voltage	90Vac/60Hz input & Full load	115Vac/60Hz input & Full load	230Vac/50Hz input & Full load
+48V	≤2S	≤2S	≤2S

1.3 保护功能 Protection

1.3.1 表8 过压保护 Over Voltage Protection Table 8.

Output Voltage	Max. Over Voltage	Comments
+48V	+60V	+60V Latch off

Note: 应该在最大交流输入电压264伏特和轻载、空载下测试

The power supply shall be test at Max AC voltage (264Vac) and min load or no load.

1.3.2 表9 过流保护 Over Current Protection Table 9.

Output Voltage	Over Current	Comments
+48V	6A	hiccup

1.3.3 表10 短路保护 Short Circuit Protection Table 10.

Output Voltage	Comments
+48V	Latch off

1.3.4 保护功能复位 Reset After Shutdown

电源进入保护状态故障去除后可恢复

Automatic recovery after Short Circuit fault being removed

2. 安规要求 Safety

The power supply shall compliance with the following Criterion.
电源安全性要满足以下标准

3. 电磁兼容性 EMC

3.1 电磁干扰 EMI

电源电磁干扰应满足下列规则:

The power supply shall comply the following Criterion.

- 1) 传导干扰 Conduction Emission EN55032 GB/T13837-2012 GB17625.1-2012
- 2) 辐射干扰 Radiate Emission EN55032 GB/T13837-2012 GB17625.1-2012

3.2 电磁抗扰 EMS

电源电磁抗干扰应满足以下规则:

The power supply shall compliance with following Criterion:

- 1) 静电抗扰度 ESD

*GB17626.2-1998/IEC61000-4-2

Air Discharge/空气放电 8KV Class B

Contact Discharge/接触放电 4KV Class B

- 2) 脉冲群抗扰度 EFT

*GB17626.4-1998/IEC61000-4-4

- 3) 雷击浪涌 Surge

*GB17626.5-1998/IEC61000-4-5 5KV(Dif) L,N

10KV(Com) L,N-PE

4. 绝缘性能 Isolation

4.1 Table 11 绝缘阻抗

Input to Output	DC 500V \geq 100M
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4.2 Table 12 绝缘耐压

Input to Output	AC 1500V 10mA 60S
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5. 寿命 LIFETIME

可靠性工作时间 3 万小时, 工作条件: 在额定负载内, +25°C 的室温

This unit to have a minimum lifetime of 30,000 hours at rated continuous load ,+25°C ambient temperature

6. 环境要求 Environmental Requirements

6.1 环境温度 Temperature

Operating: -35°C to $+45^{\circ}\text{C}$

Store: -40°C to $+60^{\circ}\text{C}$

6.2 湿度 Humidity

Operating: From 10% to 90% relative humidity (Non-condensing).

Store: From 5% to 95% relative humidity (Non-condensing).

6.3 海拔 Altitude

Operating: to 5000 meters

6.4 冷却方式 Cooling Method

自然风冷

natural air cooling

6.5 振动耐受 Vibration

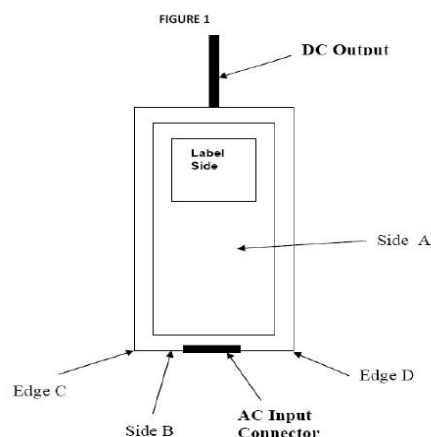
Operating: 5-44Hz, 0.005 inch displacement, 44-500Hz, 0.5g, 15 minutes duration

Storage: 5-17Hz, 0.01 inch displacement, 17-500Hz, 1.5g, 30 minutes duration

6.6 跌落测试 Drop Test

测试要求: 高 1 米, 跌落到水泥地板, 跌落点为 A, B 面; C, D 边缘 (如图 1) 跌落次数各 1 次, 电源必须功能正常, 外壳不能开裂。

Drop power supply module from 36 inches maximum height onto vinyl tiled floor onto sides A,B,and edsC&D(refer to Figure 1).power supply must remain functional and case must not crack or break. Number of unts per drop=1



7. 重量 Weight

$1500 \pm 20\text{g}$

8.标签 Label

75#合成纸加强胶
四色印
粘贴铝壳表面

224mm

35mm

INPUT

- ACL
- ACN
- GND

小耳朵® Smart LED Power Supply EAR-UK17-250-48

INPUT:100-240V~ 50/60Hz 3.5A Max Ta:45°C
OUTPUT:28-48V 5700mA 5% EFFICIENCY≥91% Max Tc:80°C
Rated Power:300W (额定功率)
Suitable For Dry, Dampand Wet Locations λ:0.95 For operaton with LED modules only

IP66 CE

OUTPUT

DIMMING
470-510MHz

- LED+ ●
- LED- ●
- LED DIM A- ●
- LED DIM B- ●

	品名 Item Code	纸盒贴	型号 Item number	日期 Date	版本 Edition	01 / 01
小耳朵®	尺寸 Size	物料料号		47-led002-ca0		
	设计 Design	审核 Check		核准 Approve		

材质: 100g铜版纸不干胶
印刷: 黑色印刷
尺寸: 见图档标注
红色线为刀模印刷请删除

37mm

28mm

小耳朵® 智能LED驱动电源

● EAR-UK17-250-48

制造商: 小耳朵(广东)电子科技有限公司
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15#厂房二楼17-201
电话: 400 004 9109 0752-6778 800

误差正负0.1mm

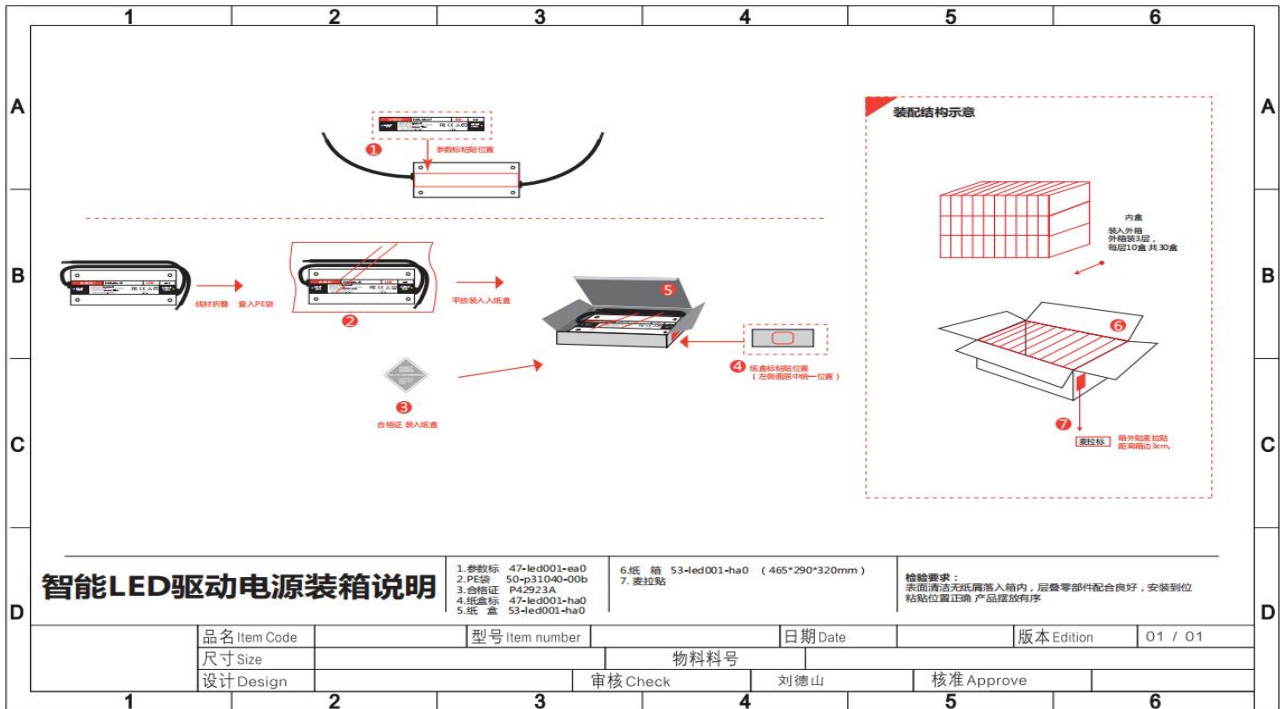
	品名 Item Code	纸盒贴	型号 Item number	日期 Date	版本 Edition	01 / 01
小耳朵®	尺寸 Size	物料料号		47-led002-ha0		
	设计 Design	审核 Check		核准 Approve		

9. 机械尺寸Mechanical

225MM*75*36MM

10. 包装、运输、贮存 Package、Transport、Storage

10.1 包装 Package



包装箱上应有产品名称、型号、厂家标识、厂家质量部门的检验合格证、制造日期等。

Product name, part number, supplier's logo, QC stamp, Pb-Free display and data must be printed on the package case.

10.2 运输 Transport

适应于车、船、飞机运输，运输中应遮蓬、防晒、文明装卸。

This product can be transported through land, sea or air, Measures should be taken for water and sunproof also. it should be handled with care.

10.3 贮存 Storing

产品未使用时应存放在包装箱内，仓库环境温度为-40℃--60℃，相对湿度为5%--95%，仓库内不允许有有害气体，易燃、易爆的产品及有腐蚀性的化学物品，并且无强烈的机械振动，冲击和强磁场作用，包装箱应垫离地至少20mm高，距离墙壁、热源、窗口或空气入口处至少50cm，在本规定条件下的内存周期一般为2年，超过2年后应重新进行检验。

**小耳朵 (广东) 电子科技股
份有限公司**

**产品型号:
EAR-UK17-250-48**

Keep the product staying in the package case before using, The temperature of the stock house should be between -40°C - 60°C and the humidity should be between 5-95%, keep the product away from hazardous gas, flammable or explosive substances racked 20cm above the ground and 50cm away from the wall, window, heat source or ventilation port. Generally the storage term of this product is 2 years. All the products should be double check after that time.