

# 承 认 书

## SPECIFICATION FOR APPROVAL

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## 1、SCOPE

The document detail the electrical, mechanical and environmental specifications of a LED POWER, the power supply provide 10W continuous output power.

资料详细描述了一款 10W(连续输出功率)开关电源的电气性,结构性及环境等要求.

The power supply shall meet the RoHS requirement.

此款电源符合 RoHS 要求.

### 1.1 Description

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> SMPS Adaptor (Wall mount)/插墙式适配器 | <input type="checkbox"/> SMPS Adaptor (Desk-top)/桌面型适配器 |
| <input type="checkbox"/> Open Frame/开放式结构                            | <input type="checkbox"/> SMPS Unit (With Case)/带铁壳型     |
| <input type="checkbox"/> LED Driver/LED 驱动电源                         | <input type="checkbox"/> Others/其他                      |

## 2、Input Characteristics/输入特性

### 2.1 Input Voltage & Frequency/输入电压与频率

The range of input voltage is from 100Vac to 240Vac single phase.

输入电压范围: 从 100Vac 到 240Vac, 单相输入.

	Minimum/最小	Normal/额定值	Maximum/最大
Input Voltage/输入电压	90Vac	100Vac~240Vac	264Vac
Input Frequency/输入频率	47Hz	60Hz/50Hz	63Hz

### 2.2 Input AC Current/AC 输入电流

0.5Amax. @ 100Vac input voltage and full load.

### 2.3 Inrush Current (Cold Start)/浪涌电流(冷启动)

50Amax. @ 230Vac input at 25°C/在 25°C 输入电压为 230Vac 时浪涌电流 50A 最大

### 2.4 Power Factor/功率因数

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### 2.5 Efficiency (Normal)/效率(额定输入)

73% min. @ 115Vac input & Full load/115Vac 输入与满载时, 最小效率为 73%

73% min. @ 230Vac input & Full load/230Vac 输入与满载时, 最小效率为 73%

### 2.6 Average Efficiency / 平均效率:

While input 115Vac and 230Vac, the average efficiency is more than 73%. The test point is at 25%, 50%, 75% and 100% load after 30 min warm up at max load. must comply with CEC requirements . level 73%

在输入 115Vac 和 230Vac 条件下, 平均效率不小于 73%, 测试点分别是满载的 25%, 50%, 75% 和 100%. 测试要求电源满载预热 30 分钟测试. 必需符合 CEC level /要求。

### 2.7 No-Load input power dissipation /输入空载功率损耗

While input 115Vac 60HZ/230Vac 50Hz and the output is no load, the input power loss must be less than 0.1W/在输入 115Vac 60HZ/230Vac 50Hz 条件时, 输入空载损耗小于 0.1W.

## 3、Output Characteristics/输出特性

### 3.1 Static Output Characteristics <Vo & >/静态输出特性

Rating Output Voltage 额定输出电压	Load Output Voltage Range 带载输出电压范围	No load Voltage 空载输出电压
5V	4. 6V~5. 3V	MAX, 5. 3V
Output Minimum Load 输出最小负载	Current Output 输出电流	OCP 过流点
0A	2A	2A

**3.2 Ripple and Noise/纹波和噪音:**

测试条件：在额定输入电压及额定负载条件下，示波器带宽设置为 20MHz，连接到产品输出端，同时输出端并联一个 10uF 的电解电容和一个 0.1uF 的瓷片电容。

Under nominal input voltage and nominal load, Parallel with a E-CAP 10uF and C-CAP 0.1uF at the terminal of output rail , measure by Oscilloscope with 20MHz Band width.

电压	最大纹波/最大噪音
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<u>Voltage</u>	<u>Ripple and Noise(Max.)</u>
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<u>5Vdc</u>	<u>300mV p-p</u>
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**3. 3. Voltage/Current Curve/恒压/恒流控制曲线(220V 额定输入)****3. 4. Turn - on Delay Time/开机延迟时间**

3. 0S max. @ 100Vac input & Full load/满载

**3. 5. Rise Time/上升时间**

100mS max. @ 100Vac input & Full load/满载

**4、Protection Requirements/保护要求****4. 1 Short Circuit Protection/短路保护**

The input power shall decrease when the output rail short, the power supply shall no damage, and shall be self-recovery when the fault condition is removed

当输出短路时,产品输入功率降低且不会损伤,当短路情况解除后,产品将会自动恢复正常。

**4. 2 Over Voltage Protection/过压保护**

When the output voltage is over , the product is protected such as hiccup or when is at the highest point of output voltage the product would not be hurted when the fault is excluded or is start working again the power supply is working normally

当过电压时，产品进入保护状态，如打嗝或钳在某输出最高电压状态，产品不受损伤，

当故障排除或重新起机时，电源工作正常。

**4. 3 Over Current Protection/过流保护**

The output shall hiccup when the over current applied to the output rail, and shall be self-recovery when the fault condition is removed.

当过电流时，输出将进入打嗝模式，当过电流情况解除后，产品将会自动恢复正常。

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## 5、Environment Requirements/环境要求

### 5.1 Operating Temperature and Relative Humidity/操作温/湿度要求

0 to +40°C

10%RH to 90%RH

### 5.2 Storage Temperature and Relative Humidity/存储温/湿度要求

-25°C to +85°C

10%RH to 100%RH non-condensing @ Sea level shall be low 2000 feet/低于 2000 英尺

### 5.3 Vibration/振动

10 to 300Hz sweep at a constant acceleration of 1.0G (Breadth: 3.5mm) for 1 Hour for Each of the perpendicular axes X, Y, Z.

扫描频率:10 到 300Hz, 加速度:1.0G (位移:3.5mm), X, Y, Z 三垂直坐标轴各振动 1 小时.

### 5.4 Waterproof lever/防水等级

IP20

## 6、Reliability Requirements/可靠性要求

### 6.1 Burn-in/老化

The power supply shall be burn-in for 4 Hours under normal input and full load at 40°C ± 5°C.

产品至少要在 40°C ± 5°C 的环境及额定输入与满载条件下煲机 4 小时.

### 6.2 MTBF Qualification/平均间隔故障时间估算

The MTBF shall be at least 30,000 hours at 25°C, Full load and normal input condition.

平均间隔故障时间:至少 30,000 小时, 25°C 环境及额定输入与满载条件下

## 7、EMI/EMS Standards/EMI/EMS 标准

### 7.1 EMI Standards/EMI 标准

EN55032/EN55015

### 7.2 EMS Standards/EMS 标准

## 8、Safety Standards/安规标准

### 8.1 . Dielectric Strength(Hi-pot)/介电耐压强度(高压)

Primary to Secondary: 3000VAC 5mA Max / 60 seconds (3 seconds for production)

初级对次级:3000VAC 5mA Max / 60 秒(生产时高压测试时间: 3 秒)

### 8.2. Grounded Resistance/接地电阻

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### 8.3 Leakage Current/漏电流

3.5mA max @ 120Vac/60HZ

### 8.4. Insulation Resistance/绝缘阻抗

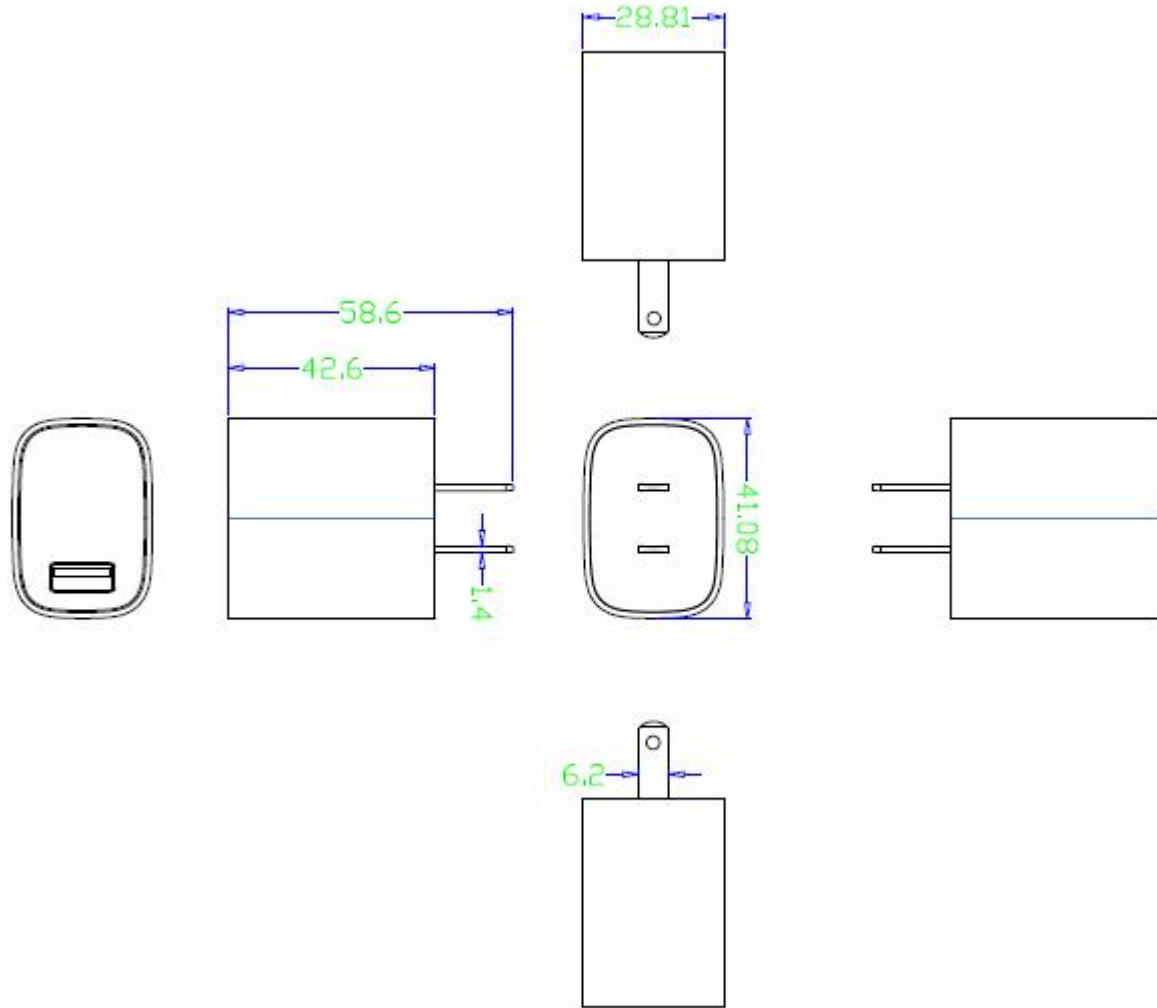
10MΩ min. at primary to secondary add 500Vdc Test voltage

在初级与次级间加 500VDC 进行测试

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8.5. Regulatory Standards/安规标准

Type/安规	Country/国家	Standard/标准	State/状况	
ETL	美国	UL1310	符合	

**9 外观图/OUTLOOK DRAWING**

要求： 1.. 美规黑色 USB 胶壳

## 10 铭牌 LABEL

