深圳市普莱科乐电源技术有限公司

SPECIFICATION

PRODUCT: LED CANDLE LAMP POWER

PART NUMBER: PLKL-ADJ

CUSTOMER: _____

CUSTOMER PART NUMBER: _____

CUSTOMER AFFIRM: **PLKL COMPANY:**

DETECTION	CHECKED	APPROVED	PREPARED	CHECKED	APPROVED

FILE NUMBER:0428120002

Spec. Rev.	Sample .Rev	Date	Description	Safety by	Mechanical by	Electrical by
1.0	1.0	2012-4-28				

Section 目录

SCOPE

The PLKL-ADJ is a 3 watts single -output, Alterable current,Full range switching power supply,Which could be use on the LED lighting products. Sustain TRIAC adjustment.

1. Power supply overview. 电源性能指标

1.1.1 Input Electrical Characteristics Overview.(输入特性)

Table 1

Input voltage range	**输入范围**	215V AC to245V ac
Normal voltage range	**标称输入**	220V AC
Frequency range	**频率范围**	50Hz
Max input AC current	**满载输入电流**	0.04 Amax at full load condition
Inrush current (cold start)	**浪涌电流**	30 A typ peak,220V AC
Efficiency(full load)	**效率**	74% min at 220V AC
Leakage Current	**泄漏电流**	Less Than 0.75mA,230V AC input
Input Fuse	**输入保险**	0 ohm RES

1.2 Output Electrical Characteristics Overview.(输出特性)

1.2.1 Output Currents And Loads Regulation.（输出电流调整率）

Table 2

Signal Name	Constant Current (mA)			Voltage (Volts)		
Output for	I min	I normal	Imax	V min	V typ	Vmax
LED forward	25	130	138	16	18	24

Note：The no load output voltage should be less than 19.5V at any AC input condition.

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

Table 3

Output Voltage	Ripple & Noise (Max.)
+18V	800mVp-p@25℃； 1000mVp-p@-10℃

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

示波器须设置在 20 兆赫兹带宽

2）Outputs shall be bypassed at the connector with a 0.1uF ceramic capacitor and a 10uF electrolytic capacitor to simulate system loading.

输出须并联 0.1uF 的陶瓷电容和 10uF 的电解电容来摸拟负载

1.2.3 Output Transient Response.（输出动态响应）

Table 4

Currents Tolerance Limit	Slew Rate	Load Change
130mA±3%	5V/uS	Min to 16V And 24V
All output±5%	5V/uS	Min 16V To 24V

Note: Transient response measurements shall be made with a load changing repetition Rate of 50Hz TO 10kHz. 以 50～10 Hz 的频率跳变负载来测试。

1.2.4 DC Output Hold-Up Time. (输出保持时间)

Table 5

Output Voltage	215V AC input	245V AC input
18V	≥10mS	≥10mS

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

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

Table 6

Output(mA)	Over shoot voltage(V)超调电压	
	Turn on 开机	Turn off 关机
25	10%	10%
130	10%	10%
138	10%	10%

Note: All of dc output voltage from Min. to Max. 测试时电压范围：最小到最大

1.2.6 DC output voltage rise time.(输出上升时间)

Table 7

Output Current(mA)	215Vac input &Full Load	245Vac input &Full Load
25	≤100mS	≤100mS
130	≤100mS	≤100mS
138	≤100mS	≤100mS

Note: The output voltages shall rise from10% to 90% of their output voltage. 输出从 10%上升到 90%的时间

1.4 Protection: (保护功能)

1.4.1 DC output Over Voltage Protection. (输出过压保护)

Table 8

Output Current(mA)	TYP. Over Voltage	Comments	
25	26V	Rail To Return	Hiccup
130	26V	Rail To Return	Hiccup
138	26V	Rail To Return	Hiccup

Note: The power supply shall be test at max AC voltage(245Vac) testing 应该在最大交流输入电压 245 伏测试.

1.4.2 DC Output Over Power Protection. (输出过功率保护)

Table 9

Output Voltage	Over Power	Comments
+18V	≥**3.1W**	shutdown

1.4.3 DC Output Short Circuit Protection.（输出短路保护）

Table 10

Output Voltage	Comments
+18V	Shutdown

Note:The Short Circuit protection should be test at other of dc output at Rated load.短路保护测试是在其它额定负载时测试.

1.4.4 Fuse Protection.（保险丝保护）

The fuse inside the power supply shall open when the AC input current is over the rated current of fuse. This fuse protection will cause switching power supply to fail.

2. Isolation 绝缘性能

2.1 Isolation Impedance （绝缘阻抗）

Table 11

Input To Output	DC500V 500MΩmin(at room temperature)
Input To GND	DC500V 500MΩmin(at room temperature)
Output To GND	Non Isolated

2.2 Hi-Pot Test（耐压测试）

Voltage withstandto 1500V for 1 nimute (or 1800V for 1 sec) with less than 10mA leakage current between primary and secondary.

3. Safety 安全规格

The power supply shall compliance with the following Criterion 电源安全性满足下列标准

1) Design to meet
2) Class II
3) UL1310

3.1 Mean Time Between Failure (MTBF 平均无故障工作时间)

100,000 hrs at 25 Degrees centigrade when calculated using MIL-HDBK-217F,The vender can use agreed upon failure-in-time number in place of MTBF

4. EMC 电磁兼容性

4.1 EMI（电磁干扰）

Designed to meet the following conducted & radiation limits:

EN55015

4.2 EMS（电磁抗扰）

1) Electrostatic Discharge Immunity Test: IEC-61000-4-2 ,4KV, Criteria B
2) EFT/Burst Immunity Test: IEC-61000-4-4 ,1KV, Criteria B
3)Surge Immunity Test: IEC-61000-4-5, 4KV, Criteria B

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5. Environmental Requirement 环境

5.1 Operating Temperature（环境温度）

Operating: -20℃ to +60℃.
Store: -20℃to +85℃.

Note: Thermal test must be done at nom.. AC and LED typical load.

5.2 Environmental Humidity（环境湿度）

Operating: 20% to 85% RH
Store: 10% to 95% RH

5.3 Altitude （海拔高度）

Operating: to 10, 000 ft.
Store: to 20, 000ft.

5.4 Cooling Method（冷却方式）

Ventilation cooling.自然冷却

5.5 Vibration（振动耐受）

10-55Hz, 19.6m/s^2 (2G), 3minutes period, 60minutes each along X,Y and Z axis.

5.6 Impact（冲击耐受）

49m/s^2(5G), 11ms, once each X, Y and Z axis.

6. Dimension（物理尺寸）

32.5mm(Long) X8mm(Wide **1)**X11mm(Wide **2**)X14.5mm(High)

7. Weight (重量)

10g

8. Pin Connection（连接器脚位定义）

RED---LED＋ WHITE---LED－

9. Power Supply mounting（安装尺寸）

50mm(Long) X11.5mm(Wide **1)**X14.5mm(Wide **2**)X17.5mm(High)

Note: In LED candle lamp aluminum structure