

# 规格书

## APPROVAL SHEET

CUSTOMER NAME (客户名称):	A096
CUSTOMER NO. (客户料号):	P/N:2227604
DESIGN NO. (工程编号):	plug(5.5x2.5mm)
MODEL NO. (型 号):	GPU481202000WAOO
STANDARD (安规标准):	UL
REV (版 本):	A/0
DATE (日 期):	2016-1-11

客户承认合格章  
APPROVED BY CUSTOMER



香港远洋科技有限公司

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客户 CUSTOMER	A096	型号 MODEL NO.	GPU481202000WAOO	
承制 MANUFACTU	东莞市港奇电子有限公司 DongGuan GangQi Electronic Co., Ltd		版本 EDITION	A/0

## Power adapter specifications

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## 1. 电气特性 (ELECTRICAL PERFORMANCE) :

### 1.0 初级特性 / PRIMARY PERFORMANCE

初级额定电压 / Primary rated voltage	120VAC
初级额定频率 / Primary rated frequency	60Hz
初级空载电流 / Primary exciting current	150mA Max
初级负载电流 / Primary Loading current	330mA Max

### 1.1 次级额定电压及电流 (Secondary rated voltage and current) :

测试点 TEST POINT	电压调整率 VOLTAGE REGULATION	负载额定电压 FULL LOAD RATED VOLTAGE	空载电压 NO LOAD VOLTAGE	额定电流 RATED CURRENT
5~6		12Vac ± 5%	14.5Vac ± 5%	2.0A

1.2 最大空损 (Empty loss max) : 2.5W Max, At input 120VAC 60Hz

1.3 额定负载下电阻法线圈最大温升75°C. 热偶法外壳表面最大温升55°C, 环境温度25°C.

Temperature rise: 75°C max on primary coil by the resistance method, and 55°C max on the surface of the case by the thermometer method at 25°C ambient, rated load condition.

### ~~1.4 效率 (Efficiency) :~~

~~当输入115Vac/60Hz时, 4个负载 (25%、50%、75%、100%) 的平均效率最小为75.22%, 符合能源之星V等级。~~

~~When input 115Vac/60Hz, the average efficiency of (25%, 50%, 75%, 100%) current at load shall be 75.22% Min. Meet CEC level V.~~

### 1.5 绝缘电阻 (Insulation resistance) :

线圈与铁芯间加500VDC, 绝缘电阻不小于100MΩ.

500VDC supplied, 100M ohms minimum between winding & core.

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### 1.6 耐压强度测试(HI-pot test):

1.6.1 初级-次级&初级-铁芯: 1500VAC 50Hz 60秒 (漏电流5毫安) 无击穿、无拉弧。  
或者提高20%电压1秒.

1500VAC 50Hz for 60seconds (leakage current 5mA) primary to secondary&core.  
Potential 20% higher may be applied for one second

1.6.2 次级-铁芯: 500VAC 50Hz 60秒 (漏电流5毫安) 无击穿、无拉弧。  
或者提高20%电压1秒.

500VAC 50Hz for 60seconds (leakage current 5mA) secondary to core.  
Potential 20% higher may be applied for one second.

### 1.7 倍频倍压测试(Induce voltage test)

所有次级开路, 初级需承受电压240VAC 360Hz 60秒而无击穿.

All secondary opened, primary should withstand 240VAC 360Hz for  
60second without breakdown.

### 1.8 老化测试(Life test):

环境温度25℃, 相对湿度90-95%, 输入额定电压和额定频率时, 带额定负载  
连续工作24小时, 产品输出正常且满足1.5 / 1.6项特性要求.

In an ambient temperature of 25℃, 90-95% R.H., applying a power source  
of rated voltage and frequency, with full load for 24hours continuously,  
unit output normally and meet the requirements of item 1.5 / 1.6 .

### 1.9 耐湿测试 (Humidity test) :

在环境温度25±2℃, 相对湿度90-95%条件下放置48小时, 取出10分钟后,  
产品需满足第1.6项要求, 且绝缘电阻不小于10MΩ

In an ambient temperature of 25±2℃ and 90-95% R.H..for 48 hours  
after 10 minutes out of the oven, the unit should meet item 1.6 requirements,  
and insulation Resistance shall be 10M ohms minimum.

## 2. 机械特性 (MECHANICAL CHARACTERISTICS) :

### 2.1 落地测试(Drop test):

从3英尺高自由落下到表面铺有1/8英寸厚聚乙稀垫的水泥地板上, 三个不同面各一次,  
产品需符合1.6项特性要求.

Dropped freely from 3 feet height onto a concrete floor covered with 1/8  
inch vinyl tile 3 times from 3 different surface, the unit should meet the item 1.6 .

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### 2.2 S/R吊重试验 (Strain relief test) :

在正常位置, 输出线需吊重10英磅, 持续60秒钟不可断裂. S/R不可有移位现象.

At normal position, 10 lbs to output cord for 60 secods each, there shall be no breakage displacement.

### 2.3 摇摆测试 (Bending test) :

输出线吊重200克, 摆动角度120度, 每分钟40来回, 1000个来回后仍需导通.

The plug and S/R should withstand weight of 200 gram, swinging from left to right at an angle of 120 degree for 1000 cycles, and 40cycles per minute. The cord shall be conductible.

### 3. 外观要求 (MECHANICAL REQUIRMENTS) :

无损伤无锈迹 (Appearance: Damage and rusting are not permitted.)

### 4. 外部条件 (ENVIROMENTAL CONDITION) :

4.1 正常工作温度 (Operating temperature range) : -10°C --- +25°C

4.2 存贮温度 (Storage temperature range) : -20°C --- +80°C

4.3 正常工作湿度 (Operation humidity range) : 30 --- 85% R. H

### 5. 绝缘系统 (INSULATION SYSTEM) :

CLASS A (105°C)

CLASS B (130°C)

CLASS E (120°C)

CLASS F (155°C)

### 6. 安规标准 (SAFETY STANDARD) :

符合/Meet

认可/Approved

<input checked="" type="checkbox"/> UL/CUL	<input type="checkbox"/> TUV/CE	<input type="checkbox"/> BSI/CE	<input type="checkbox"/> T-MARK
<input type="checkbox"/> CQC	<input type="checkbox"/> CCC	<input type="checkbox"/> CSA	

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## 7. 线上检测 (INSPECTION ON LINE) :

7.1 全检项目 (The test items for each produce) :

- ✓ 初级激磁电流 / Primary exciting current
- ✓ 铁芯损耗 / Core loss
- ✓ 输出电压 / Output voltage
- ✓ 输入电流及功率 / Input current and power at rated load
- ✓ 敲击听异物 / Foreign mass by shock
- ✓ 输出极性 / Polarity of output plug
- ✓ 耐压测试 / Hi-pot test
- ✓ 外观检查 / Apperance

7.2 抽测项目 (The test item for part of products) :

- ✓ 额定负载时哼声 / Hum operating at rated load
- ✓ 直流电阻 / D.C. Resistance
- ✓ 绝缘测试 / Insulation test

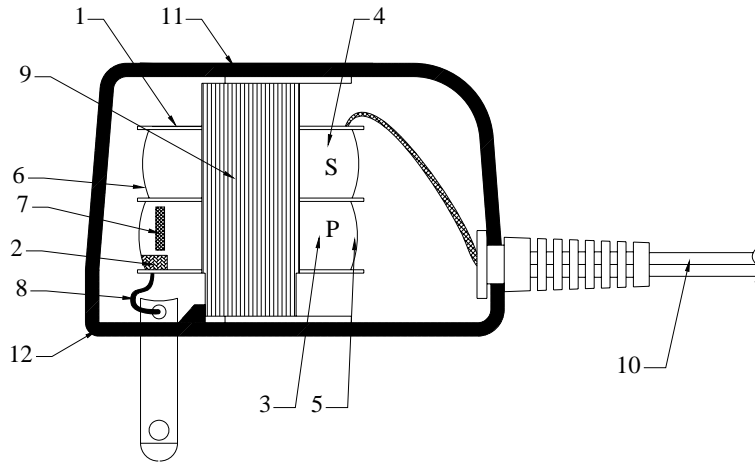
8. 单体净重 (NET WEIGHT) : 489g

9. 电气原理图 (ELECTRICAL CHARACTERISTICS) :



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### 10. 材料明细 ( MATERIAL LIST ) :



序号 ITEM	材料名称 PARTS NAME	材质 MATERIAL&SPEC	供应商 MANUFACTURER
1	线架/BOBBIN	PA66 THICK0.71mm MIN	E I DUPONT DE NEMOURS&CO INC. E41938
2	Primary Crossover Insulation/初级直立绝缘	ACETATE CLOTH TAPE CLASS B 皱纹胶	DUCK SUNG TAPE CO., LTD. E105147
3	PRI. WINDING 初级线圈	2UEW MAGNET WIRE CLASS B 2UEW漆包线	PACIFIC ELECTRIC WIRE & CABLE CO., LTD E201757
4	SEC. WINDING 次级线圈	2UEW MAGNET WIRE CLASS B 2UEW漆包线	JUNG SHING WIRE CO., LTD. E174837
5	PRI. OUTER INSULATION 初级绝缘	MYLAR TAPE 0.025mm 玛拉胶带0.025mm CLASS B	JING JIANG PRESSURE SENSITIVE GLUE FTY. E165111
6	SEC. OUTER INSULATION 次级绝缘	MYLAR TAPE 0.025mm 玛拉胶带0.025mm CLASS B	SUZHOU JINGYI SPECIAL ADHESIVE TAPE
7	PROTECTION 保护器	THERMAL CUTOFF 温度保险130℃ 250V	JOINTFORCEMETALRESEARCH&CO D. E142267
8	LEAD WIRE/引线	UL1015# 22AWG	SHENZHENDONGJUWIRE&CABLE CO., LTD. E189674
9	CORE 铁芯	E-I LAMINATED SILICON STEEL/E-I硅钢片	BEST LEGEND HUI DINGS LTD.
10	OUTPUT CORD/输出线	UL2468#20AWG 1.83M	XIN LONG ENTERPRISE CO. E207567 DESAY WIRE CO., LTD. E252840/E214500
11	NAMEPLATE 铭牌	PET (UL/CSA) OR ALUMINUM PET (UL/CSA认可) 或铝质	JING XING PRINTING FACTORY MH45133 SANLI PRINTING FACTORY. MH20917 GUANG NING YOU TONG MH27610
12	ENCLOSURE/外壳	48#UL插	SABICINNOVATIVEPLASTICSJAPAN LC. E45587 GE PLASTICS AUSTRALIA. E101788
NOTE	Varnish凡立水	V821A	QUALIPOLY CHEMICAL CORP. E213437

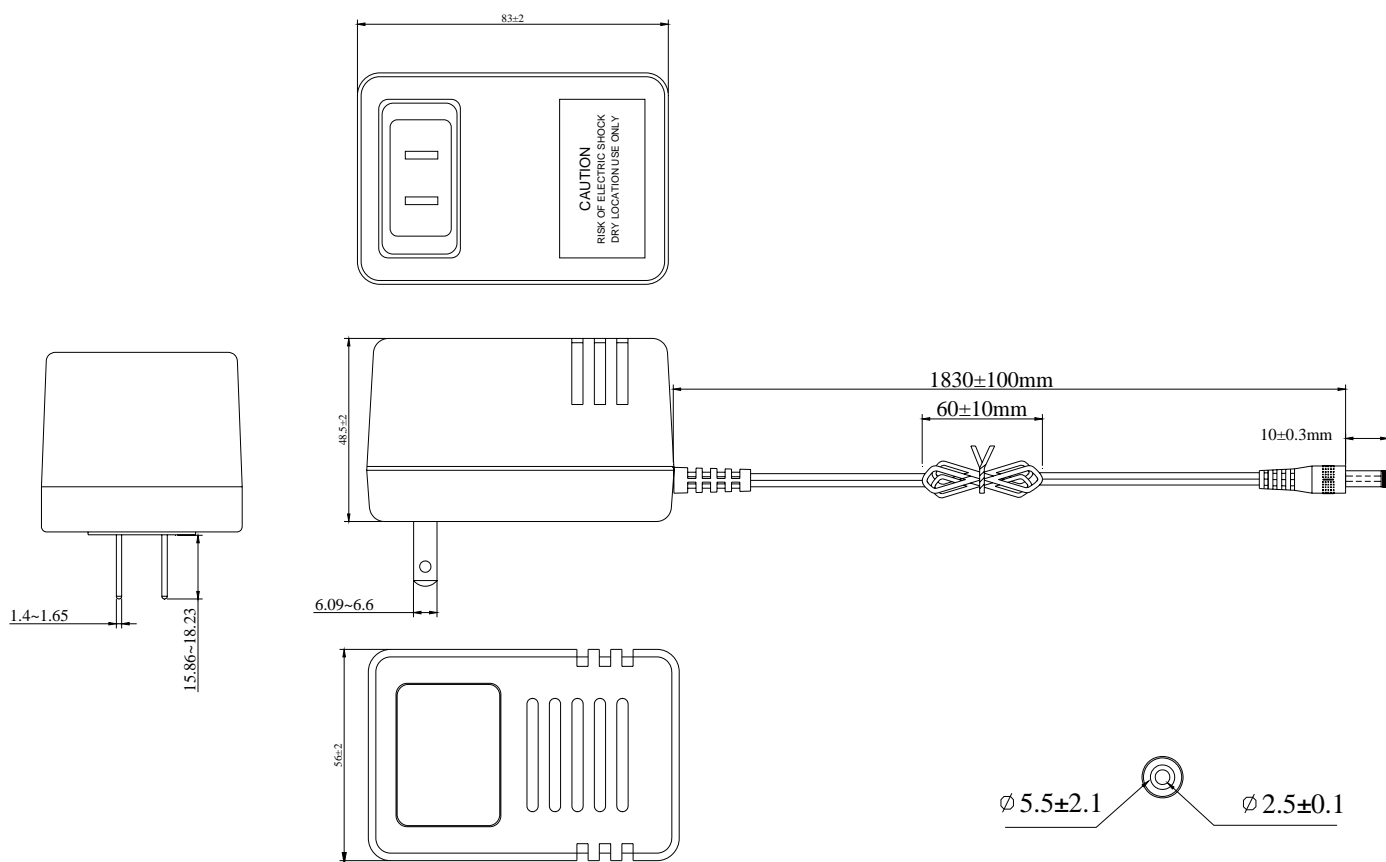


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## 11. 结构参数(MECHANICAL REQUIREMENT):

11.1外壳(Enclosure): SE-100/PP0 ; BLACK(LEAD FREE) 外壳: 黑色

外壳尺寸(The power supply size): L:83\*W:56\*H:48.5mm

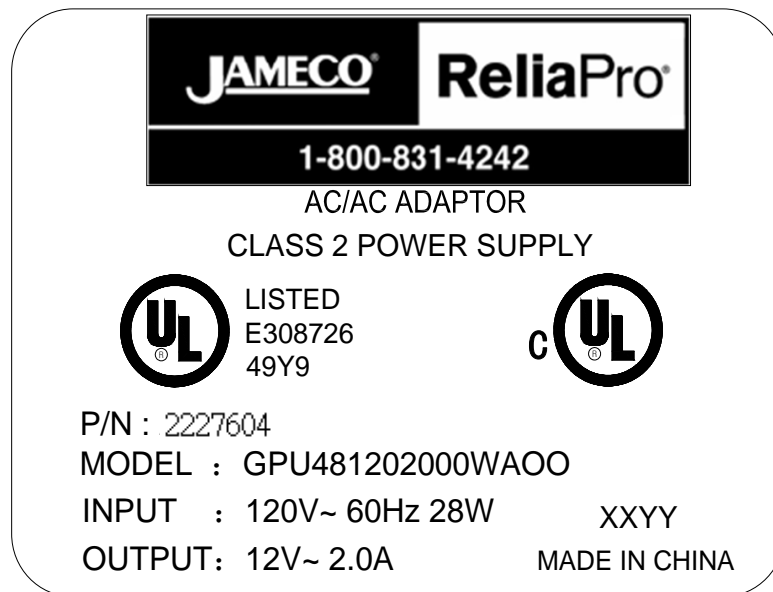


11.2. DC线规格 (DC CABLE SPEC) :

UL2468 20AWG 1.83M 黑色 (BLACK) .DC PLUG:  $\phi$  5.5\*2.5\*10/180°

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12. 铭牌 (NAME LABEL) :



"XX YY"

年———月

具体时间根据生产日期定义!

Note: 材质/MATERIAL:消银龙

银底黑字/ BLACK characters SILVER background

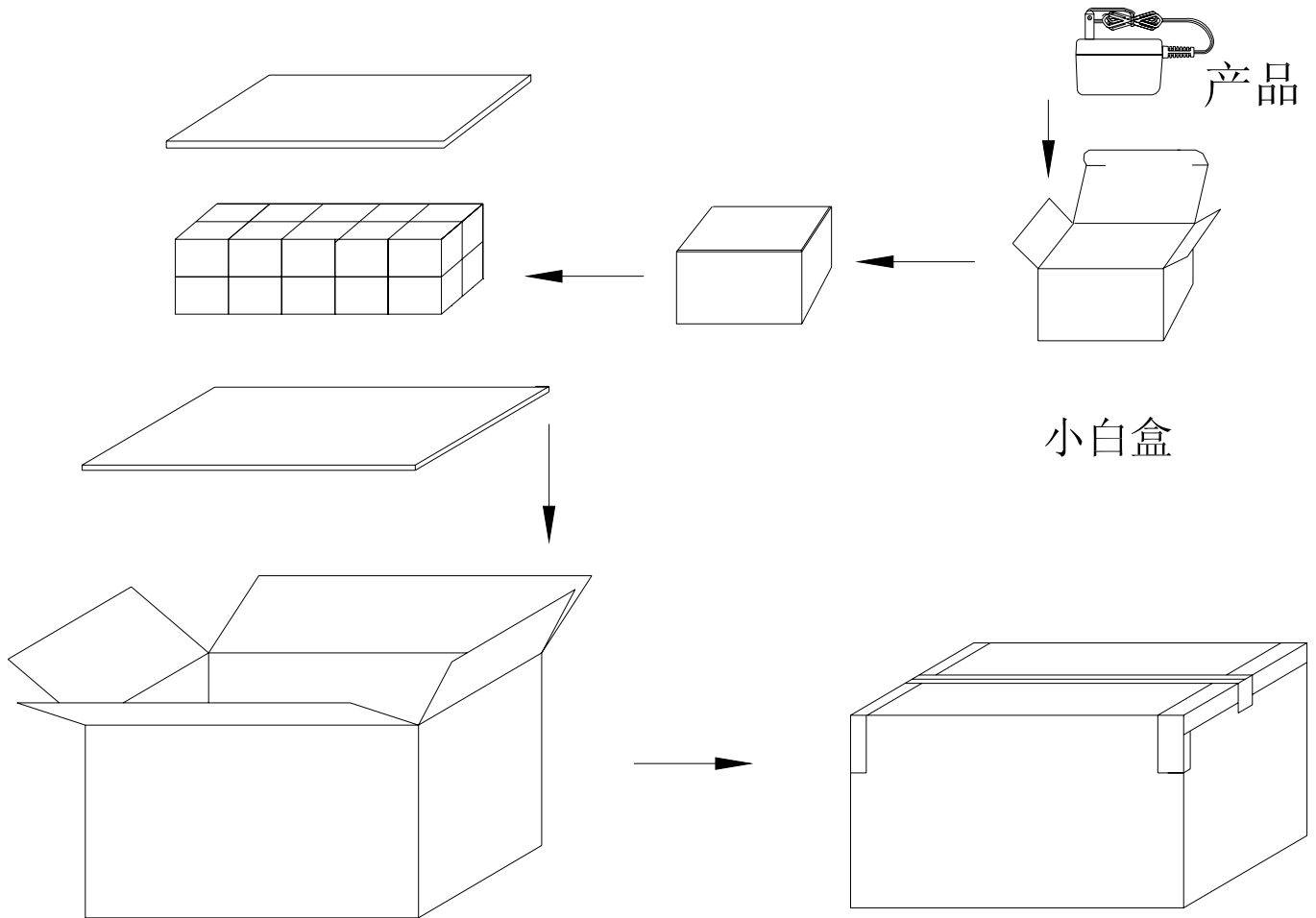
厚度/Thickness: 0.2mmT

环保/ROHS

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### 13. 包装方式 (PACKGE) :

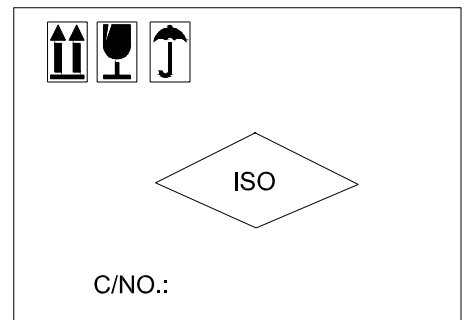
外箱材质：B=B、隔板材质：B=C；白盒材质：450g



侧唛内容为:

订单号码	
型号	
规格	
数量	PCS
净重	KG
毛重	KG
尺寸	mm

正唛内容为:



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#### 14. 测试报告 (TEST REPORT) :

### 样品检验记录表 Sample checkout Record

样单编号/Sample single Numbers:		日期 / DATE: 2015/12/4				
项目/ITEM	范围 / SPEC	样品编号 / SAMPLE				
		#1	#2	#3	#4	#5
初级空载电流 (I <sub>0</sub> ) / PRIMARY EXCITING CURRENT I/P:120VAC 60Hz	150mA Max	108.2 mA				
初级负载电流 (I <sub>L</sub> ) / PRIMARY EXCITING CURRENT I/P:120VAC 60Hz	270mA Max	205.5 mA				
次级空载电压 (V <sub>0</sub> ) / SECONDARY NO-LOAD VOLTAGE 负载/LOAD: 0mA	14.5AC±5%	14.1 VAC				
次级负载电压 (V <sub>L</sub> ) / SECONDARY LOAD VOLTAGE 负载/LOAD: AC 2.0A	12VAC±5%	12.2 VAC				
初级空载功率 (P) / PRIMARY EXCITING POWER I/P:120VAC 60Hz	2.5W Max	2.33 W				
效率 / Efficiency I/P:115VAC 60Hz	平均效率标准 Average Efficiency standard: (25%、50%、75%、100%)					
耐压 / Hi-pot test	初级-次级&初级-铁芯 PRI. TO SEC&CORE	AC 1500V / 5mA / 50Hz 60sec	OK			
	次级-铁芯 SEC. TO CORE	AC 500V / 5mA / 50Hz 60sec	OK			
外壳/CASE	L:83*W:56*H:48.5mm					
DC Cord	UL2468 20AWG 1.83M 黑色 (BLACK) DC PLUG:φ 5.5X2.5X10mm直头					
备注:						
核准:		审核: 雷群刚		检验员: 黄亚菲		