AUTEC POWER SYSTEMS,INC.

APPROVAL SHEET FOR SAMPLE
样品承认书

CUSTOMER/客户：

CUSTOMER P.N./客户物料号： WM24P-12-A-QL

MODEL NO./产品型号：

APPROVAL NO./承认书编号： 1506001

DESCRIPTION/产品名称: SWITCHING MODE POWER SUPPLY

DATE/日期： **REV/版本：** **Colour/颜色：**

PREPARED BY/拟制	CHECKED BY/审核	APPROVED BY/批准

CUSTOMER AUTHORIZED SIGNATURE/客户承认签核		

Please return to us one copy of "APPROVAL SHEET FOR SAMPLE"with you approved signature.

确认后请签名盖章并回传一份样品承认书给我司.

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E.C.LIST/变更履历表

Rev. 版本	Description of change/变更内容描述	Changed Date/日期	Changed By/变更者
1.0	Original Release/初次发行	2015-6-1	

1.INPUT/输入特性

1.1 Input voltage rating/额定输入电压范围:	100-240V AC
1.2 Input voltage range/输入电压范围:	90-264V AC
1.3 Input frequency rating/额定输入频率 :	60/50 Hz
1.4 Input frequency range/输入频率范围:	63/47 Hz
1.5 AC input current/最大输入电流:	0.75 A Max .@100V AC
1.6 AC input power saving/输入空载功率:	0.3 W Max .@230V AC at no load
1.7 Inrush Current/最大浪涌电流:	30 A Max .@100VAC (Cold start/冷启动)
	60 A Max .@230VAC (Cold start/冷启动)
1.8 Leakage current/最大漏电流:	0.25mA Max

2. Output characteristics/输出特性

2.1 Output voltage/输出电压:	12 V
2.2 Max. load current/最大负载电流:	2 A
2.3 Min. load current/最小负载电流:	0 A
2.4 Output noload voltage/输出空载电压:	12 V± 5%
2.5 Output full load voltage/输出满载电压:	12 V± 5%
2.6 Output ripple & noise/输出纹波与噪声:	300 mV max.

Note: 1. output voltages shall be measured at output connector.
2. Ripple measurements shall be made with an oscilloscope of at least 20 MHz bandwidth. Output shall be bypassed at the connector with a 0.1uF ceramic disk capacitor and a 10uF electrolytic capacitor to simulate system loading at temperature 25• :

1.输出电压要求测试连接输出端。

2. 纹波测试要求在环境温度25度情况下示波器频宽在20MHz以下，量测输出连接端并联一个10uF电解电容与0.1uF的独石电容。

3. General characteristics/一般特性

3.1 Total output power/额定总输出功率:	24 Watts
3.2 Average Efficiency / 平均效率:	While input 115Vac and 230Vac,the average efficiency is more than 82.22% .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 V 在输入115Vac和230Vac条件下，平均效率不小于 82.22% 测试点分别是最大载的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要求。
3.3 Short circuit protection/短路保护:	A Short circuit placed on DC output shall cause no damage or auto-recovery the power supply. 输出短路时电源不会损坏或自动还原供电.
3.4 Over Voltage Protection/过压保护:	When overvoltage occurs on DC output shall cause no damage or auto-recovery the power supply. 输出过压发生时电源不会损坏或自动还原供电.

4. Environment/环境:

4.1 Operating temperature/:操作温度	0~40℃
4.2 Storage temperature/:存储温度	–25℃ to 85℃
4.3 Operating humidity/:环境湿度	8% to 90%
4.4 Storage humidity/:存储湿度	5% to 95%

5. Application safety standard : meet/应用安全标准

■UL 60950	□EN 60950	□AS/NZS 60950	□J60950	□K60950
□UL 60065	□EN 60065	□AS/NZS 60065	□J60065	□Brazil
□UL 1310	□EN 60335	□GB4943	□J61558	
	□EN 61558	□GB8898		

6. EMC standard /电磁干扰标准:

6.1 EMI standard / EMI 标准:

■ FCC Part 15 Class B : 2008	□ GB 9254-2008	□ J55022
□ EN 55022: 2010	□ GB 17625.1-2012	□ J55013
□ EN 55013: 2001 +A1:2003 +A2:2006		

6.2 EMS standard / EMS 标准:

■ EN 61000-4-2/ESD静电耐受测试	■ EN 61000-4-5/Surge点击波耐受测试
■ EN 61000-4-3/RS辐射场强耐受测试	■ EN 61000-4-6/CS传导场强耐受测试
■ EN 61000-4-4/EFT/Burst瞬间脉冲耐受测试	

7. HI-POT test/高压测试

(1)Primary to secondary/:初级对次级	4525VDC for 3sec. 5mA(production testing)
	4242VDC for 1min. 5mA(Sample testing)
(2)Primary to case/:初级对外壳 (only for metal case)/只适用于金属外壳	4525VDC for 3sec 5mA(Production test)

8. Insulation resistance /绝缘电阻

Input to output/输入对输出:	>10Mohm.@500VDC

9. Reliability:/ 可靠性

9.1 MTBF/平均故障间隔时间:	50K hours min. @full load at 25℃ ambient temperature.
9.2 Burn-in/烘烤:	2~4hrs,40+/-5℃ 240VAC,ON/OFF cycling full load nominal line.

9.3 Altitude: Will operate properly at altitude between 0 to 6000ft

正常运转在0到6000英尺之间的高度.

10. Mechanical/ 机械结构

10.1 Dimensions/尺寸:Please see the mechanical dimension drawing./请参见机械尺寸图

10.2 Weight/重量: 141.6 g

11. Mechanical specification/机械参数:

11.1 Drop test/落地测试： The height of 1 M,frepuency 1 drop per face.

dropping surface on concrete floor judgment standard:No function fail & no cabinet joint broken.

11.2 Bending test: With load 200g, then bend ±60 degree at ratio of 45times/minute.

摇摆试验:吊重200 g,然后折弯±60度,频率按45次/分钟.

16AWG	----------	5000cycles Min
18AWG	----------	4500cycles Min
20AWG	----------	2400cycles Min
22AWG	----------	2000cycles Min
24AWG	----------	1500cycles Min
26AWG	----------	1000cycles Min

11.3AC plug drawing/输入插头图面： Attached/附图

11.4AC cable drawing/输入线图面： Attached/附图

11.5DC cable drawing/输出线图面： Attached/附图

11.6Outline drawing/外观图面： Attached/附图

11.7Lable drawing/铭牌图面： Attached/附图

11.8Package drawing/包装图面： Attached/附图

SAMPLE PRIMARY TEST REPORT/样品初测报告

TEST BY/测试人: 李景扬

Test Items./测试项目	Test Condition /测试条件	Unit/ 单位	Sample quantity and test result/样品数量和测试结果										Pass /Fail
			1#	2#	3#	4#	5#	6#	7#	8#	9#	10#	
Unload output voltage/ 空载输出电压 (0.0A) 11.4vdc - 12.6vdc	90Vac	V	12.11	12.06									PASS
	115Vac	V	12.11	12.06									PASS
	230Vac	V	12.12	12.07									PASS
	264Vac	V	12.12	12.07									PASS
Rated load output voltage/ 额定负载输出电压 (2 A) 11.4vdc - 12.6vdc	90Vac	V	11.71	11.70									PASS
	115Vac	V	11.71	11.70									PASS
	230Vac	V	11.71	11.70									PASS
	264Vac	V	11.71	11.70									PASS
Output ripple & noise voltage (Full load)/输出纹波及噪声 电压 (满载) ≤ 300mV	90Vac	mV	99	103									PASS
	115Vac	mV	94	90									PASS
	230Vac	mV	60	53									PASS
	264Vac	mV	56	52									PASS
Short-circuit protection test/短路保护测试	90Vac	W	0.008	0.008									PASS
	264Vac	W	5.65	5.46									PASS
Over current protection/ 过流保护点 (≥ 2.4 A)	90Vac	A	2.82	2.78									PASS
	264Vac	A	4.01	3.82									PASS
IC Vcc voltage test/ Vcc电压测试 (规格≤ 27V)	90Vac	V	18.49	18.27									PASS
	264Vac	V	18.71	18.37									PASS
Hi-pot test/介电强度	4242Vdc/3.5mA/ 1Minute		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	PASS
Appearance/外观	无刮伤,字迹清晰无误		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	PASS
Mosfet(IC)/Vds耐压测试	264Vac	V	540	Mosfet规格		600			Derating≤95% Max. Volt.		90.00%		PASS
输出肖特基D/Vrr耐压测试	264Vac	V	73	Diode规格		100			Derating≤90% Max. Volt.		73.00%		PASS
变压器反馈绕组上所连接电阻(R)功率损耗(PD)	90Vac	P	_	R(功率)规格		_			Derating≤65% Max Power		_		PASS
	264Vac	P	_	R(功率)规格		_			Derating≤65% Max Power		_		PASS

CEC/ERP 2 test/能效测试

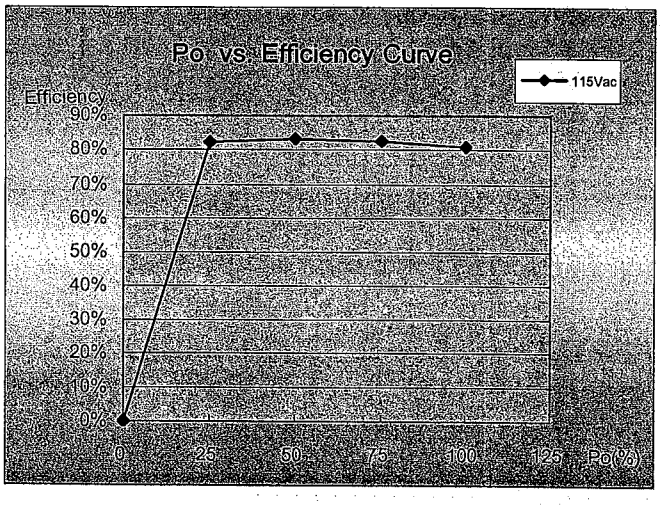
TEST BY/测试人： 李景扬

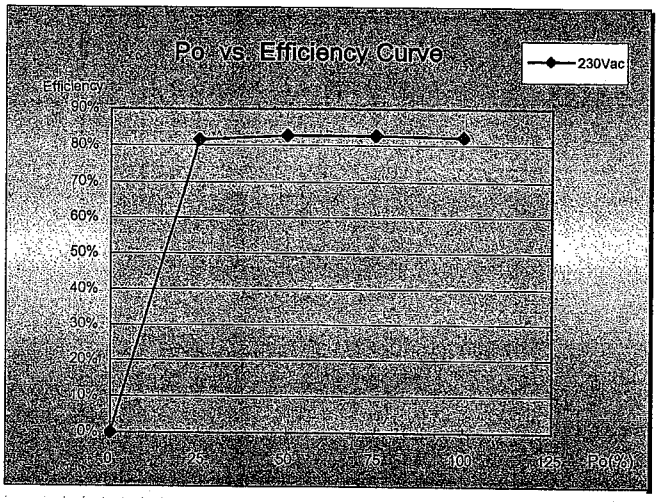
Environment : ● Ambient ○ High ○ Low : 25℃

Test Condition: Vac=115V/230V ,Load :0~100% step Load :25%

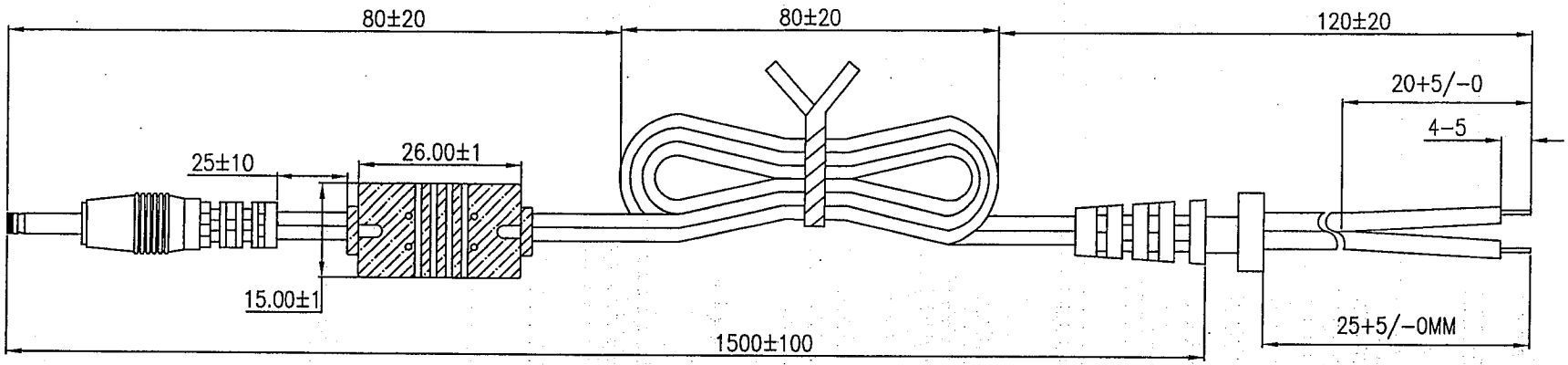
1				Vin: 115Vac/60Hz			
Load (%)	Vout(V)	Iout(A)	PF	Pin(w)	Po(w)	Efficiency	Result
0	12.09	0.000	---	0.11	0	0.00%	PASS
25	11.94	0.500	---	7.25	5.97	82.34%	---
50	11.94	1.000	---	14.33	11.94	83.32%	---
75	11.84	1.500	---	21.49	17.76	82.64%	---
100	11.73	2.000	---	29.02	23.46	80.84%	---
Po_typical (w)				24	Average 82.29%		PASS
					Spec. 82.22%		V

1				Vin: 230Vac/50Hz			
Load (%)	Vout(V)	Iout(A)	PF	Pin(w)	Po(w)	Efficiency	Result
0	12.17	0.000	---	0.2	0	0.00%	PASS
25	12.05	0.500	---	7.39	6.025	81.53%	---
50	11.94	1.000	---	14.43	11.94	82.74%	---
75	11.84	1.500	---	21.48	17.76	82.68%	---
100	11.73	2.000	---	28.52	23.46	82.26%	---
Po_typical (w)				24	Average 82.30%		PASS
					Spec. 82.22%		V

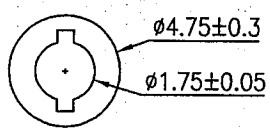




版本	变更内容	变更人	变更时间

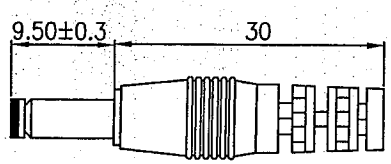


线材规格：黑色 20# 2468 印白边线接内孔 配黑色小磁环(YX465)

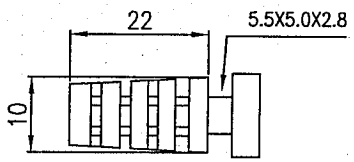


A-A

放大 3:1



DC头规格：
编号：YX321
包胶材质：50+/-5P PVC 黑色
DC头规格:平头黄胶 音叉叉沟 1.75X4.75X9.5直头

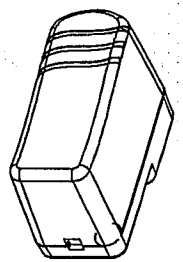


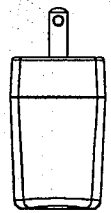
SR规格：
编号：YX462(828)
材质：70+/-5P PVC

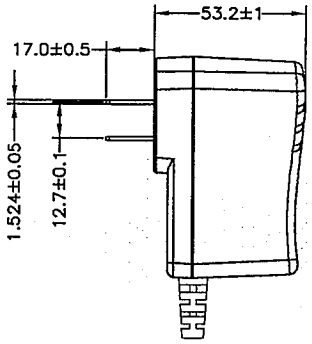
技术要求：
1.线材摇摆测试，拉力测试依照金盈线材测试标准。
2.热变形温度大于60度。
3.产品必须符合ROHS+PAHS+16P要求。

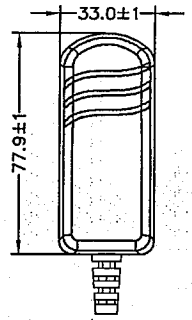
版本	图寸	图号	型号	产品名称	单位	比例	设计	校对	批准	尺寸公差	
							邝丽梅			±0.05	±0.10 ✓
A	A4		0	DC线	mm	1:1	设计日期	材料		±0.15	±0.20
										±0.25	±0.30

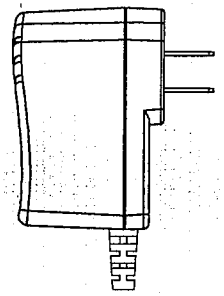
选择	颜色	料号
●	黑色	
	白色(AB301) 苹果白 185669	
	白色(AB30)	

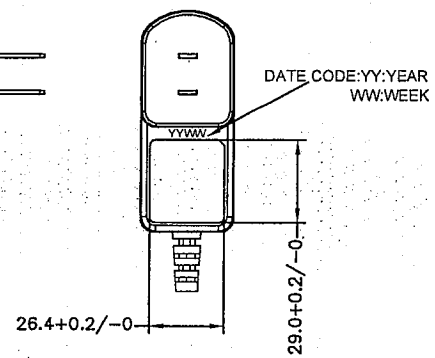


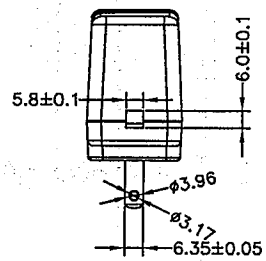








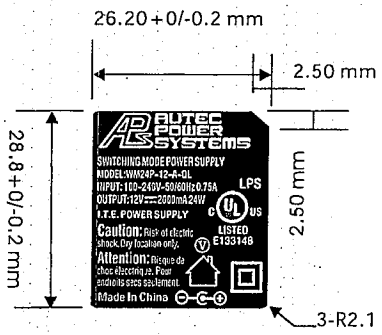


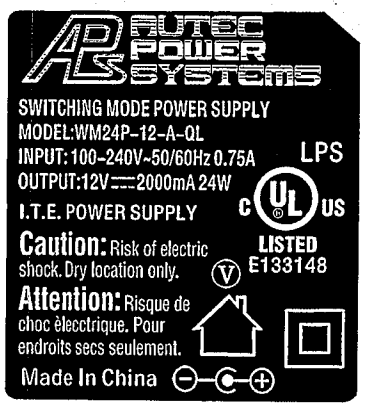


材质:PC料
纹面与光面参照样板

版本		图号		产品名称				陈健生			尺寸公差			
A		82	GPE-K248			1:1	2009.07.06		材料		±0.05	±0.10		
											±0.15	±1.00	✓	
											±0.25	±0.30		

版本	变更内容	变更人	变更时间



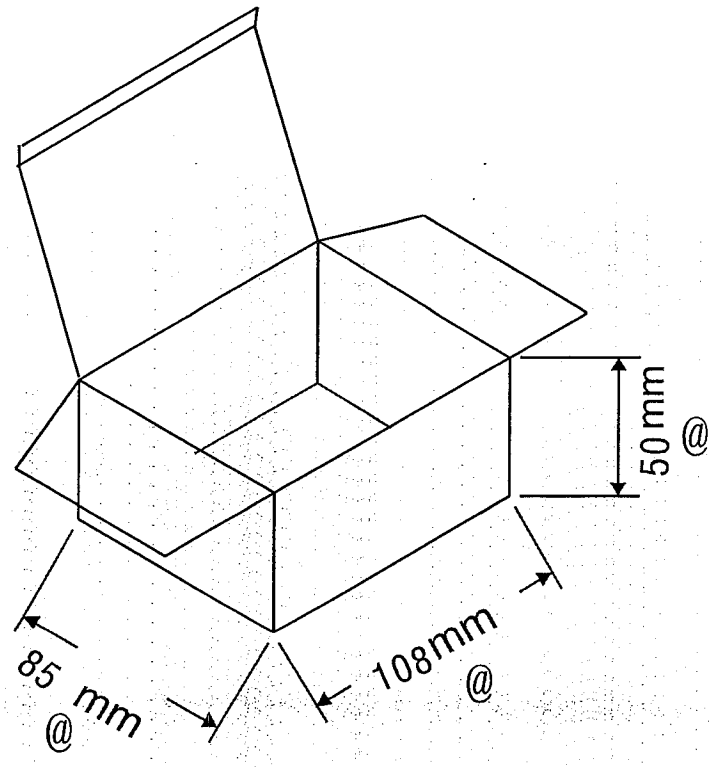


此图为1:1之图型模板

注：版面为黑底白字
材质为100#白亮特多龙+雾面
耐温80℃
厚度为0.13±0.01

AUTEC POWER SYSTEMS,INC.							
名称：						REV: A	
图号：			型号：			页号：	图寸：A4
尺寸公差			比例	1:1	绘图	校对	批准
±0.05		±0.10 ✓	单位				
±0.15		±0.20	日期	2015/04/09			

纸盒:



NOTES:

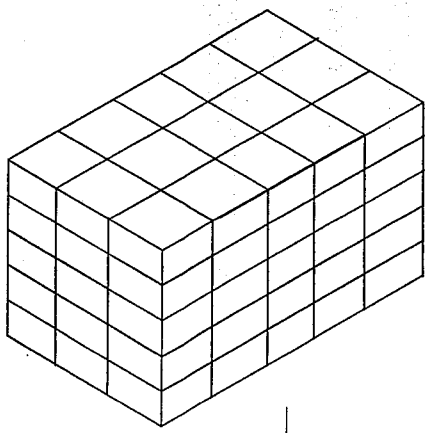
1.TOLERANCE:+/-1

2.材质:450g

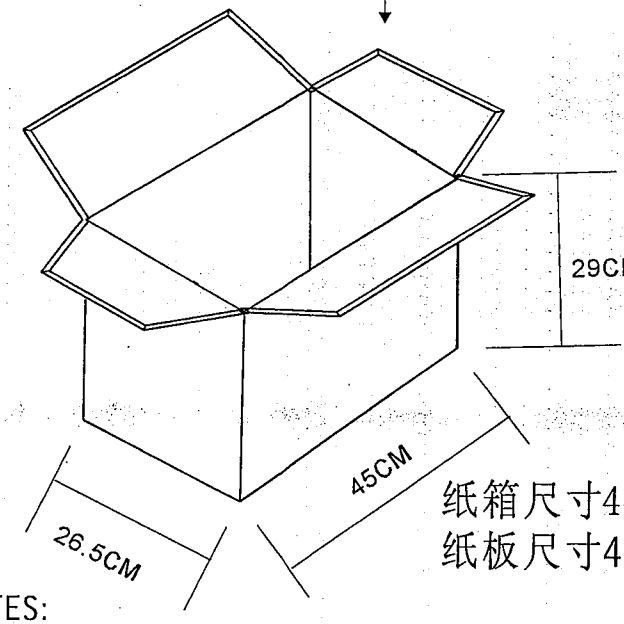
3.@ EMPHASIS CHECKING DINENSTION

料号:19-0600-0060

名称:	纸盒					REV: A	
图号:			GPE125			页号:	图寸: A4
			1:1	绘图		校对	批准
±0.05	±	✓	MM	陈健生			
±0.15	±		2006/06/04				



60PCS WHITE BOXES/CARTON



两边正唛:

侧唛两边:
P/O:
P/N:WM24P-12-A-QL
QTY: 60 PCS
N. W. : KGS
G. W. : KGS
MEAS:45X26.5X29CM

备注:侧唛中的P.O:号码随订单号码变动而变动

纸箱尺寸45X26.5X29cm配二块纸板
纸板尺寸43.5X24.5X0. 5CM

NOTES:
1.TOLERANCE:+/-1
2.材质:K=K
3.@ EMPHASIS CHECKING DIMENSTION

名称: 纸盒				REV: A	
图号: GPE-CS3196	GPE248			页号:	图寸: A4
	1:1	绘图	校对	批准	
±0.05 ± ✓	MM	邝丽梅			
±0.15 ±	2015/06/01				

AUTEC POWER SYSTEMS,INC.

INSTRUCTION MANUAL

说明书

Please keep reading the following safety notes before use or examination.
使用或检验前需细读下列安全说明:

i). Primary technical specification of the marking on the product.
产品铭牌上标识的主要技 术参数:

Input输入: 100V-240V~50/60Hz 0.75 A

Output输出: 12 V ⎓ 2000 mA Total output power/额定功率: 24 W

ii). Operation instruction
使用说明:

1. The product is used only within doors or at the dry location.
本产品仅适用于户内或干燥处使用。

2. Don't store or use this product in the erodent condition.
不要在有腐蚀性的环境 中存放或使用此产品。

3. The ambient temperature around the product must be kept for room temperature because overcool can effect on the feature and working life of product.
产品周围环温应保持在室温状态，应避免过热过冷，以免影响产品性能与寿命。

4. According to the technical specification of product, it must be connected with correct power input and specified out put load or terminal appliance so that it can't be broken. Pay attention to the input voltage & frequency.
请依据产品的技术指标要求,正确接通电源,指定负载或终端产品，以免损坏产品。尤其要注意输入电压与频率的匹配。

5. The disconnection from line voltage is taken by pulling the mains plug.
若需断电，请从插座处拔出产品电源插头。

6. The product is not intended to be repaired by service personnel in in case of failure including component defect of crack of the enclosure and external flexible cord damaged etc, it must be discarded.
如果产品出现故障如元件损坏，外壳裂开，引出线身损伤等，则不可维修再用，必须报废。

7. If you have any technical question, please do not hesitate to consult he supplier directly.
如有技术疑难，请直接咨询产品供应商。

8. Fuses replaceable only by service personnel.
保险管的更换必须由专业维修人员完成。