

客 户 :

CUSTOMER _____

承 认 书

SPECIFICATION FOR APPROVAL

客户料号 :

CUSTOMER PART NO _____

小耳朵型号: **XED-RZ120200GJ**

品名规格 : **12V 2000 mA** 开关电源

DESCRIPTION _____

编制日期 :

DATE **2016.08.23**

<p>制 造 商</p> <p>MANUFACTURE</p>			<p>客 户 承 认</p> <p>CUSTOMER APPROVAL</p>	
<p>设计</p> <p>DESIGN</p>	<p>审核</p> <p>CHECKED</p>	<p>批准</p> <p>APPROVED</p>	<p>请客户确认回传我司存档, 谢谢</p>	



深圳市小耳朵电源有限公司

SHENZHEN XIAOERDUO POWER ADAPTER .CO., LTD.

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SPECIFICATION

MODEL (型号) : **XED-RZ120200GJ**

STANDARD (规格) : **12V-2A**

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STANDARD (规格) : 12V-2A

Revision History (修改履历)

Rev. (版本)	ECO	Revision Description (修改描述)	Approved 核准	Date 日期
REV01		Initial release to Production	孙志功	2016.08.23



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STANDARD (规格) : **12V-2A**

General (概述)

This specification defines the performance characteristics of **Class 2, 12V, 2A single** output AC-DC adapter. intended for worldwide use in Information Technology Equipment. The power supply unit shall be convection cooled. Meet Safety requirements and EMC requirements of worldwide.

本规格书详细定义 **12V 2A** AC-DC 适配器为 1 路输出 **2 类电源** 产品，可适用于信息技术设备和音视频及类似电子设备中。产品符合全球安规及 EMC 要求

1. ELECTRICAL CHARACTERISTICS(电气特性)

1-1. Input Rated Voltage(额定输入电压范围): 100~ 240VAC

Input Voltage range(最大输入电压范围) : 90~ 264VAC

1-2. Input Frequency(输入频率范围): 47~63Hz

1-3. Input Current: **0.6A(max)**@100VAC/60Hz,Output with **12VDC** full load.

输入电流：输入电压 100VAC/60Hz，输出电压 **12VDC** 满载时最大输入电流为 **0.6A**

1-4. No load power consumption : less than **0.1W**@230VAC/50Hz Output with **12VDC**

空载待机损耗功率：输入电压 230VAC/50Hz，输出电压 **12VDC** 时小于 **0.1W**.

1-5. Output voltage and current (输出电压和输出电流):

Output Voltage (输出电压)	Voltage Range (电压范围)		Current Range (电流范围)	
	Lower Limit (下限)	Upper Limit (上限)	Minimum Load (最小负载)	Full rated Load (额定满载)
+ 12V	11.4V	12.6V	0A	2A

1-6. Input voltage regulation(line regulation) (线性调整率):

The line regulation is less than +/-5%.@ full load and +/-10% input voltage.

输入电压 +/-10% 范围内，输出电压 **12VDC** 满载时，输入电压调整率小于 +/-5%

1-7. Load regulation(负载调整率):

The load regulation is less than +/-5%.负载调整率小于 +/-5%.

1-8. **Average** Efficiency: (平均效率)

86.2% (min) @ input 115Vac/60Hz Output at 25%,50%,75% and full load.

输入电压 115Vac/60Hz，输出电压 12VDC 带 25%载，50%载，75%载，满载时，平均效率 >**86.2%**

86.2 (min) @ input 230Vac/50Hz Output at 25%,50%,75% and full load.

输入电压 230Vac/50Hz，输出电压 12VDC 带 25%载，50%载，75%载，满载时，平均效率 >**86.2%**

备注：测试治具引线尽可能短而粗，且老化半小时后测试，以免影响输出电压的准确性。

1-9. Ripple and noise voltage:

less than **150mVp-p**@ input 100~240Vac/50Hz Output with 12VDC full load.

输入电压 100~ 240VAC，输出电压 12VDC 满载时，纹波噪声 **150mVp-p**

The measuring terminated with a 47uF EC-capacitor and 0.1uF CC-capacitor.

And measurement is done by 20MHz band-width.

纹波和噪声测试：使用频率带宽 20 MHz.的示波器，输出端连接 0.1uF 瓷片电容和 47uF/50V 电解电容



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STANDARD (规格) : **12V-2A**

1-10. Safety test: (安全测试)

1-10-1. Hi-pot test: (耐压测试)

3000Vac,10mA 60sec.between primary and secondary circuit and chassis.

输入端到输出端或输入端到外壳间加 **3000Vac** 电压, 漏电流 10mA, 时间 60 秒

1-10-2. Insulation test: (绝缘阻抗测试)

500VDC ,60sec between primary and secondary circuit and chassis

IR should . 10M

电源输入 L & N 线端到大地线间承受 500Vdc 时 , 其绝缘阻抗大于 10 兆欧姆

1-11 Case Temperature rise: (外壳温升)

Input 100~240vac Output with 12VDC full load.should not exceed 45K

On case surface @ ambient 25

输入电压 100~ 240VAC 输出电压 12VDC 满载 ,环境温度 25 时 ,外壳表面 温升小于 45 度

1-12 Turn On Delay Time (启机时间) :

3S max@ 100Vac to 240Vac input and output Max.Load.

最大 3S 当输入 100Vac 到 240Vac,且带额定负载。

1-13 Hold Up Time (保持时间) :

5mS(min) @ 100VAC/60Hz, ambient 25 Output full load.

输入电压 100VAC/60Hz, 环境温度 25 输出电压满载时, 保持时间最小为 5mS.

1-14 Rise Time(上升时间):

50mS @ 100VAC/60Hz, ambient 25 Output full load. From 5%~95% of output voltage .

输入电压 100VAC/60Hz, 环境温度 25 满载时, 输出电压从 10%上升到 90%时小于 50ms

1-15 Overshoot (过冲):

The output overshoot at turn-on shall not exceed +10%(V) of output voltage at no load and full load connected.

输出电压在启动时过冲不可超过输出电压 10%, 当不带载和满载的情况下

1-16 Transient Response (动态响应) :

Output voltage within 11.0-13.0V for load step from 20% to 80% to 20%,

R/S: 0.10A/uS, Transient Response Recovery Time : 50mS.

输出电压保持在 11.0-13.0V, 当负载从 20%到 80%再到 20%,.

1A/us, 动态响应恢复 50ms.

1-17 浪涌电流(冷启动)/In-rush Current (colk start) :

Power supply inrush current shall be less than the ratings of its critical component (including bulk rectifiers ,fuses and surge limiting device)under all conditions of line voltage of section

在所有输入条件下, 浪涌电路小于关键器件的额定值(包括整流桥, 保险管及相关的浪涌抑制器件)

2. PROTECTION CHARACTERISTICS(保护功能特性)

2-1. Over current protection (过流保护功能):

2.2-3A@ Input 100~240vac ,Output with12VDC,ambient 25

输入电压 100~240VAC 输出电压 12VDC, 环境温度 25 时, 过流电流为 **2.2-3A**。



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2-2. Short protection(输出短路保护功能):

The products can withstand continuous short at DC output and no danger. It will enter into normal condition if the fault condition is removed.

适配器的输出端可经受连续短路,适配器会自动保护不会发生危险,当故障条件排除后,适配器会自动恢复正常。

2-3. Waterproof level 防水等级 :

IP67

3. ENVIRONMENT(环境)

3-1. OPERATING TEMPERATURE(工作温度): 0 ~+40

3-2. OPERATING HUMIDITY (工作湿度) : 10%-96%R.H

3-3. STORAGE TEMPERATURE (贮藏温度) : -40 ~+70

3-4. STORAGE HUMIDITY (贮藏湿度) : 5%-95%R.H

3-5. Operating Altitude(海拔高度): 5,000m

4. RELIABILITY(可靠性):

4-1. MTBF(寿命):

20000 Hours at ambient 40 . 工作环境温度 25 时, 寿命 20000 小时。

4-2. On-Off Life (开关寿命测试) :

To verify the power supply withstand 3,000 time on-off repetition of Primary power without failure or damage at 100Vac input.

经测试初级输入端 100 Vac 重复开关 3000 次, 电源适配器没有损坏或发生危险

4-3. Burn-in(老化)

100% burn-in test at 80~100% of full/rating load at 35~40 bun-in room, 48hrs test for prototype samples, 12hrs test for pilot run samples for 3hrs test for mass production.

产品 100%的在温度为 35~40 老化房及额定负载的 80%~100%条件下老化测试, 试产老化 48 小时, 小批量生产老化 12 小时测试, 大批量生产老化 3 小时。

4-5 .Vibration test (振动测试) :

The vibration frequencies are set at 10-55-10Hz. With total amplitude of 1.5mm along the 3 directions namely X-Y-Z. the each direcion should be vibrated for 30 minutes, after testing no abnormal electrical or mechanical should occur.

振动测试频率范围 10-55-10Hz, 振动幅度为 1.5mm, 在三个 X-Y-Z 相互垂直方向, 持续 30 分钟的振动测试后, 电源适配器电气特性和机械特性没有异常。

4-6 . Salty Fog Test for Metal Part(五金件盐雾实验)

Experiment condition,Salty water thickness:5%,Equipment Temperature:35-40 ,put the adapter(unpacking)in the test equipment for 8h,after 8h recovery at 25 checking the appearance,the metal parts have no erode and rust.

盐雾试验要求:调制(工业盐)盐水的浓度为 5%,设备温度设置为 35-40 ,适配器不包装,放入盐雾试验设备中持续喷雾 8 小时,试验结束后取出,在常温下搁置 8 小时,再检查适配器外观:要求外露金属及电镀件不生锈。



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5. SAFETY AND EMC (安全及电磁兼容性) :

5-1. SAFETY (安全) :

Certificate	standards	
UL/CUL	UL60950-1 & UL60065	PASS
GS	EN60950 & EN60065	
CE	IEC60950 & IEC60065	
SAA	IEC60950 & IEC60065	
CCC	GB4943&GB8898	
PSE	J60950/J55022/J60065	
Australia	AS/NZS60950/AS/NZS60065	

5-2. EMI (电磁干扰) : Meet FCC part 15 Class A/CISPR part 22,Class A/CE/3C.

5-3. EMS (电磁免疫) :

Test Item (测试项目)	Test specification (实验规格参数)	IEC standards (国际标准)	Performance Criterion(性能标准)
ESD (静电放电)	Contact :4KV / AIR :8KV	IEC61000-4-2	判据 B
RF (辐射抗扰度)	FR:26MHz-1.0GHz,Field Strength:3V/M	IEC61000-4-3	判据 B
EFT (电快速瞬变脉冲群)	2KV ON AC power line	IEC61000-4-4	判据 B
SURGE (浪涌抗扰度)	0.5KV(L-N)	IEC61000-4-5	判据 B
CS (传导骚扰抗扰度)	3V/M	IEC61000-4-6	判据 B
DIP (电压跌落/中断)	输入电压跌落至 70% ,25 周期 500mS 输入电压跌落至 40% ,10 周期 200mS 输入电压跌落至 0% , 1 周期 20Ms 输入电压跌落至 0%,250 周期 5000mS	IEC61000-4-11	判据 B 判据 B 判据 B 判据 C

Performance Criterion (性能标准)	配合客户系统测试,通用性能判据
判据 A	整个测试过程中,模块工作正常,输出电压在规定范围内。
判据 B	在测试过程中,允许性能出现降低(12V 以上输出电压波动不超过 20%,12V 及 12V 以下输出电压波动不超过 10%) 但是不允许系统的复位,或者功能中断。
判据 C	在测试过程中,设备允许出现复位,但不能长时间复位,也不允许出现需要人工复位的情况。



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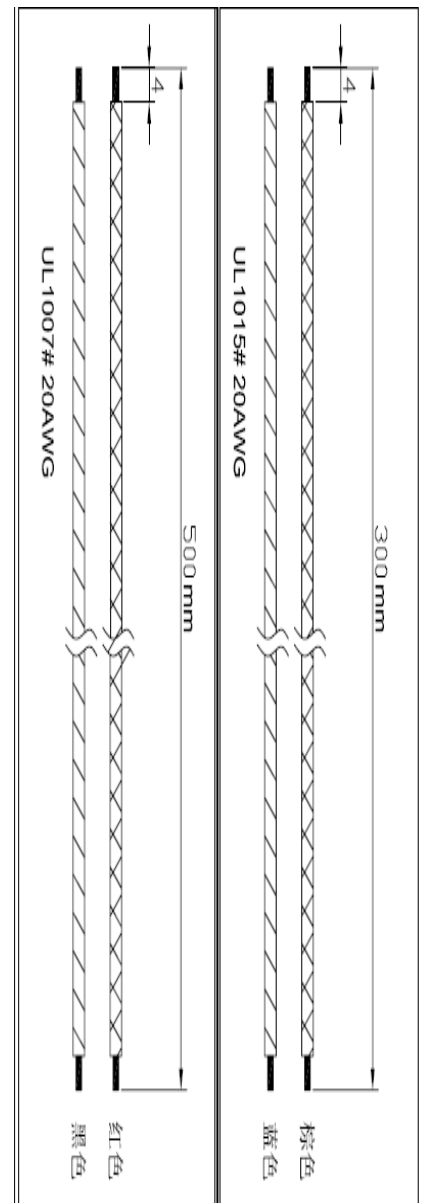
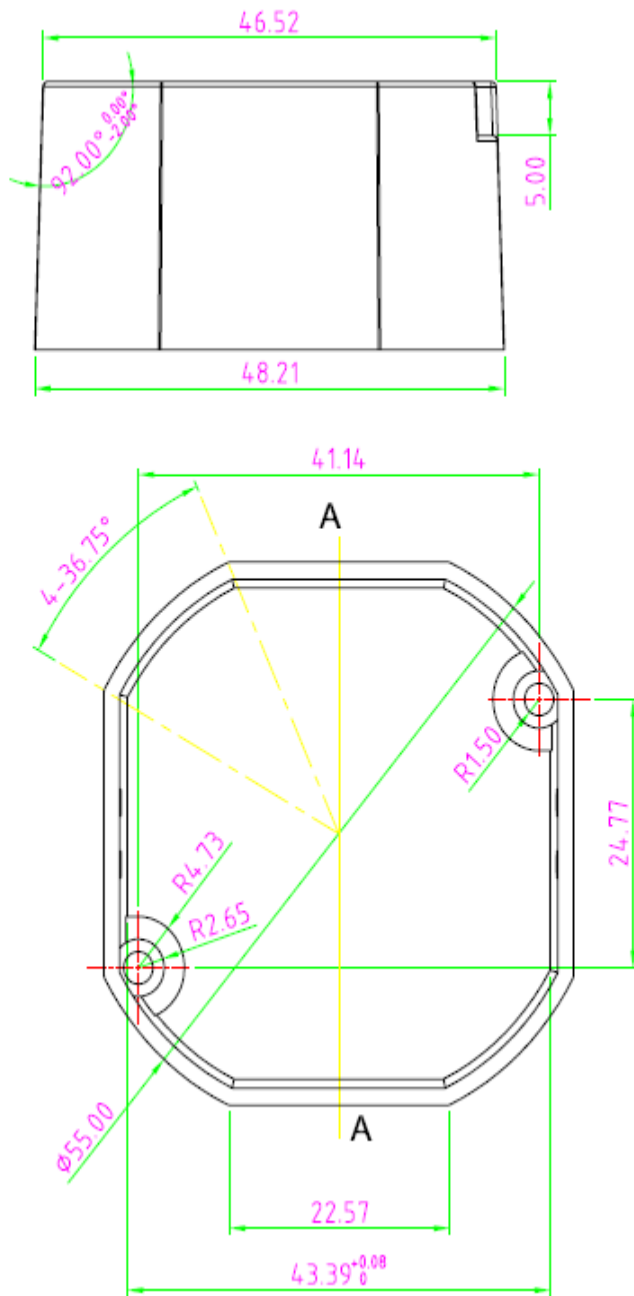
6. MECHANICAL CHARACTERISTICS: (机械特性)

- 6-1. Physical size (外壳尺寸) : (L)148mm*(W)55mm*(H)36.5mm
- 6-2. Enclosure material (外壳材质) : PC+ABS (customer supply)
- 6-3. Net weight (净重) : TYP=153g
- 6-4. AC socket(交流电源插座): IEC320 C8:

7. OTHER (其他)

- 7-1. Operating direction (工作指示) : NOT LED direction (无 LED 灯指示)

8 . Enclosure (外形结构图)

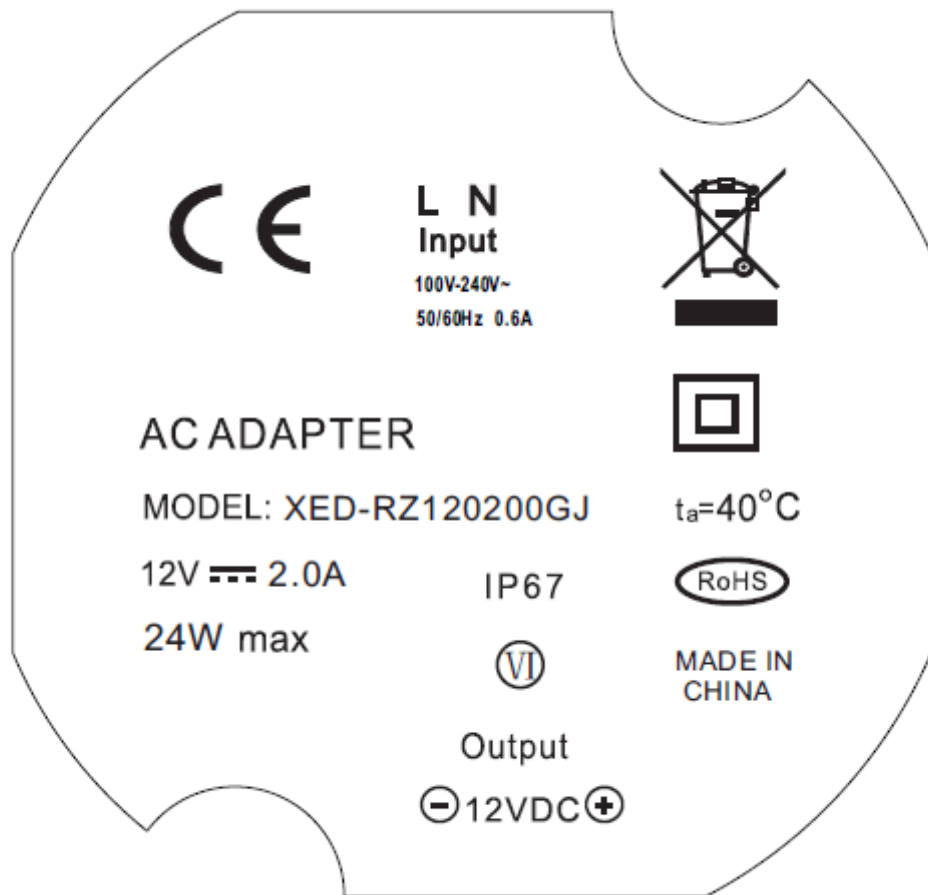


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LABEL (铭牌)



技术要求:

1. 材料: 哑银龙 T=0.15mm;
2. 颜色: 银地黑字 ;
3. 符合ROHS要求。



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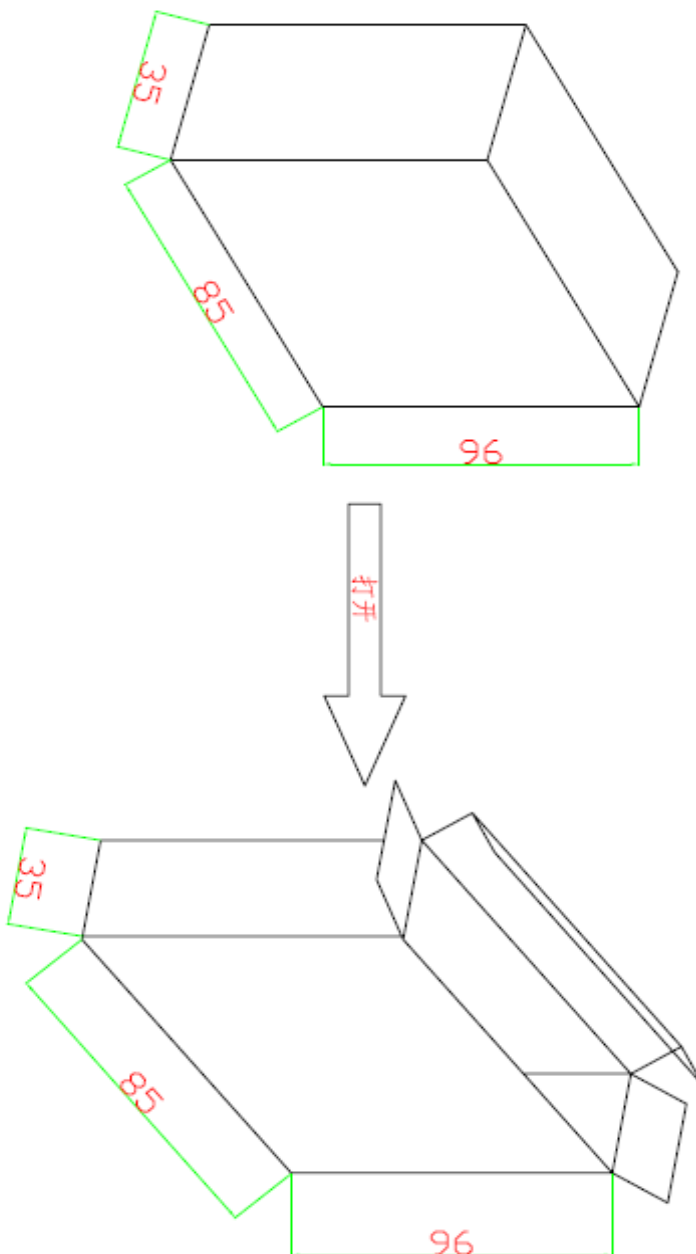
MODEL (型号) : XED-RZ120200GJ

STANDARD (规格) : 12V-2A

PACKAGING (包装)

技术要求:

1. 材料: 3E3;
2. 粘合式;
3. 符合ROHS要求。



版本		日期
设计	杜鑫 2015-11-09	日期
工艺		
审核		
批准		

表面处理		物料编号	
纸盒(双插盒)		深圳市小理电源技术有限公司	
产品	第一版	共 1 版	比例
物料	000-000000		



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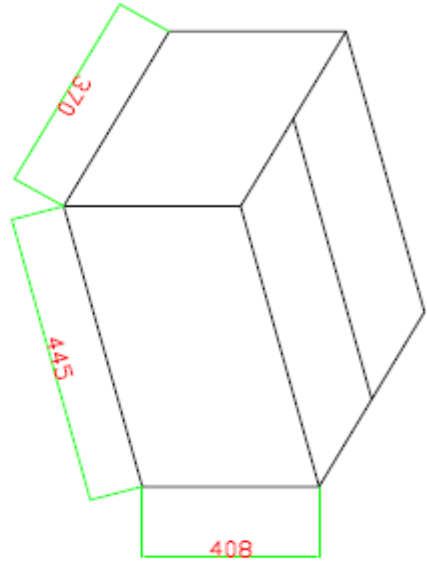
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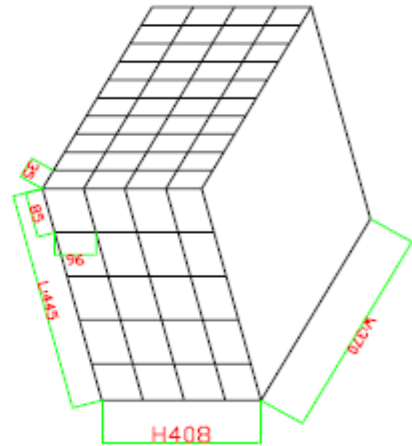
PACKAGING (包装)

技术要求:

1. 材料: 双坑瓦楞纸 K=K;
2. 打钉式;
3. 符合ROHS要求。



一箱装200个10*5*4



QTY:	PCS	QTY:	PCS
N.W.:	KGS	N.W.:	KGS
G.W.:	KGS	G.W.:	KGS
MEAS:	445X370X408	MEAS:	445X370X408

设计		日期	
工艺化	杜鑫 2015-11-09		
审核			
批准			

表面处理			
纸箱			
第一层	共 1 层	比	例
产品	ERP-1000X10		
物料 编码	投影 标识	深圳市小潭泉电源技术有限公司	



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