Specification for Approval

Customer	：	**Linkman Co.,Ltd**
Part Name	：	**AC ADAPTER**
Description	：	**3.3Volts / 2.0Amps**
Model No.	：	**STD-03320U2 (USA/Level V)**
Customer P / N	：	
Product P / N	：	**RXTD03320U415201**
Issued Date	：	**05 – Nov. – 2015**
Version	：	**A3**
Issued Stamp	：	

Customer's Approval Signature

ADAPTER TECHNOLOGY CO.,LTD.
Office (Taiwan)：6F-9,No.258, Liancheng Rd.,Zhonghe District,New Taipei City 235,Taiwan (R.O.C.)
TEL：+886-2-8226-2279 FAX：+886-2-8226-2238
E-mail : service_tw@ adaptertech.com.tw；service@ adaptertech.com.tw

Factory (China)：BOAYANG ELECTRONICS CO., LTD.
Di Feng Gong Ye Qu 2 Hao,Xiasha Liuwu Village, Shipai Town, Dong Guan City, Guang Dong Province,China
TEL：86-0769-8136-9899；86-0769-8136-0909；86-0769-8136-9008
86-0769-8186-8338；86-0769-8186-8900
FAX：86–0769-8136-9009

6.6W
AC Adapter
SPECIFICATION

Model No.	:	**STD-03320U2 (USA/Level V)**
Description	:	**3.3Volts / 2.0Amps**
Part No.	:	**RXTD03320U415201**
Version	:	**A3**
Date	:	**05 – Nov. – 2015**

Approved	Reviewed	Checked	Prepared	Sales

■ Approval Documents/Spec. Revised Records

- Customer : Linkman Co.,Ltd
- Model No. : STD-03320U2
- Original Documents Content : SPEC. 10 Page(s) , Attachment 2 Pages

Revised Records : No.	Date	Description (Before / After)	Page(s) Revised	Revised By (Adapter/Customer)	Remark
1	Jun./22/2010	ISSUE	-	Chihwei	1.0
2	Oct./25/2011	Update DC cable, with terminal on the end with PCB	P6,Attachment	Chihwei	A1
3	May./26/2012	change terminal on the DC cable	Attachment	Ken	A2
4	Nov./05/2015	1.Changed into Japanese tracking AC pin 2.LABEL Update	P6 P4,P5,P7	Ken	A3

1. Feature：

- ♦ **Input** ： **Universal 100 ~ 240 Vac / 47 ~ 63 Hz Input, without any slide switch.**
- ♦ **Output** ： **+3.3V / 0~2.0 A**
- ♦ **Case Dimension** ： **72(L) * 34(W) * 59(H) mm**
- ♦ **Efficiency** ： **Eff (av) ≧ 70.25%**
- ♦ **Safety** ： **PSE / CB**
- ♦ **EMI** ： **Class B ； Conduction & Radiation Meet**
- ♦ **Protection** ： **OVP (Over Voltage Protection)、SCP (Short Circuit Protection)、OCP (Over Current Protection)**
- ♦ **High frequency design，less power consumption.**
- ♦ **Suitable for usage at Telecommunication, Computer, Industrial Controller, & OA System.**
- ♦ **Meet Energy Star V / Erp (Stage 2) / MEPS V .**

2. Input：

2.1 Voltage	**Universal 100~240Vac, single phase**
2.2 Frequency	**47 ~ 63 Hz**
2.3 Current	**0.31A Max.**
2.4 Inrush Current	**30A Max. / 100Vac ； 60A Max. / 230Vac (Cold Start At 25 ºC，Full Load)**
2.5 Efficiency	**Eff (av) ≧ 70.25 % (At 115 Vac & 230 Vac)**
2.6 Power Consumption	**Pi ≦ 0.3 W (At 115 Vac & 230Vac & No Load)**

※Eff (av) ＝ $\frac{E_1 + E_2 + E_3 + E_4}{4}$ **E1=efficiency with 25% rated load ; E2= efficiency with 50% rated load**
E3=efficiency with 75% rated load ; E4= efficiency with 100% rated load

3. Output：

3.1 DC Output	**Voltage**	**+3.3V ± 10%**
	Current	**2.0A Max.**
	Regulation	**2.97Vmin. ~ 3.30Vtyp. ~ 3.63Vmax.**
	Ripple & Noise	**100 mVpp Max.**
	Total Power	**6.6W Max.**

Remark：For ripple & noise measurement, use a 20MHz bandwidth frequency oscilloscope, and add a 0.1μF multilayer Cap. and a Low ESR Electrolytic Cap. (10 μF) at output connector terminals. (At nominal line voltage, Full Load)

4. Protection :

4.1 Over Voltage Protection (OVP)	V out *180%(Max)
4.2 Short Circuit Protection (SCP)	Automatic recovery after short-circuit fault being removed
4.3 Over Current Protection(OCP)	5.0A (Max) (Auto Recovery)

Remark : When Short Circuit Protection or Over Current Protection is activated,the power supply will shutdown automatically. Once the abnormal condition resulting in the failure being removed, the power supply will restart accordingly. When Over Voltage Protection is activated, the power supply will shutdown.

5. Safety、EMI and EMC Requirement：

5.1 Safety Requirement

a. Safety ： PSE / CB

b. Dielectric Strength ： 10mA Max. Cut off current

(1)	Primary to Secondary	3000Vac for 1 Minute

c. Insulation Resistance ：

(1)	Primary to Secondary	10 M Ohm for 500Vdc

5.2 EMI Requirement ： Class B ； Conduction & Radiation Meet

5.3 Leakage Current ： Less than 0.25mA

6. Operation and Environment Performance：

6.1 Temperature Range

Operating	+ 0ºC ~ + 40ºC
Storage	- 20 ºC ~ + 80 ºC

6.2 Humidity Range(Non-condensing)

Operating	20% ~ 80% RH
Storage	10% ~ 90% RH

6.3 Cooling：By natural air..

7. M.T.B.F.：300,000Hrs.(Calculated Hours at 25℃,By Telcordia SR-332)

8.Mechanical :

8.1 Weight : 130 g Typical

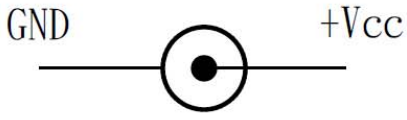
8.2 Cable Type : Black UL2468 18AWG
(Wire + Plug)
Plug : ø5.5*ø2.1*9.5mm
(Tuning Fork & Cannelure)

8.3 Cable Length : 1500mm

8.4 Case Dimension : 72mm(L)*34mm(W)*59mm(H)

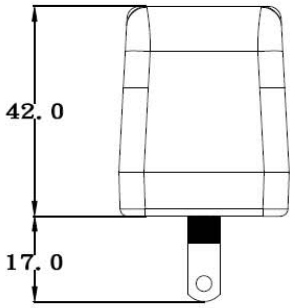
8.5 Material Flammability : UL 94V-0

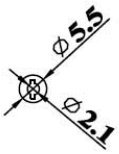
8.6 External Apperance : As drawing below (Scale → mm)

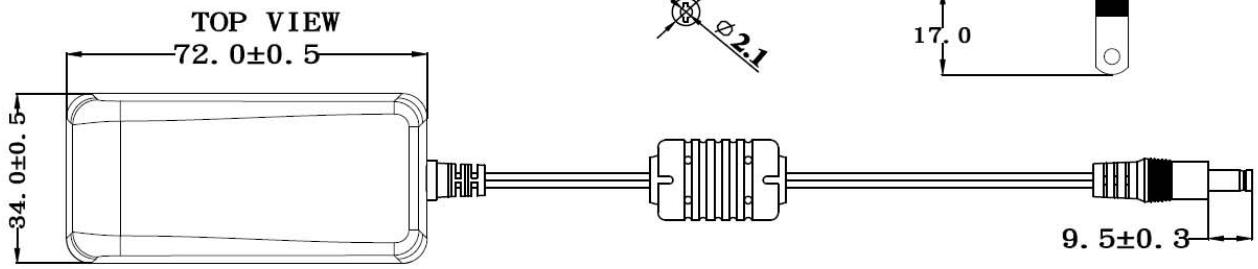


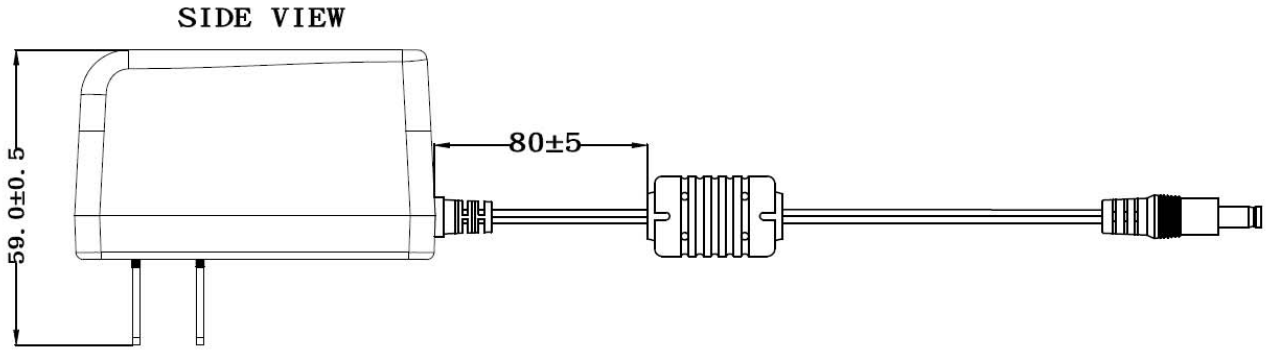
Output Cable Plug Pin Assignment

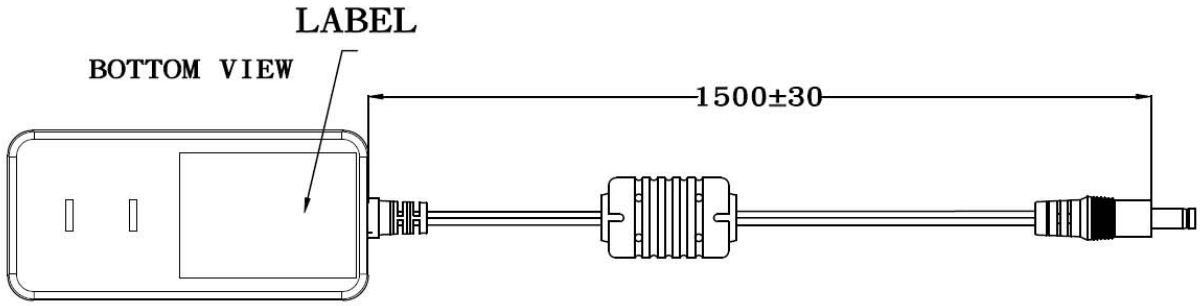
Front-View







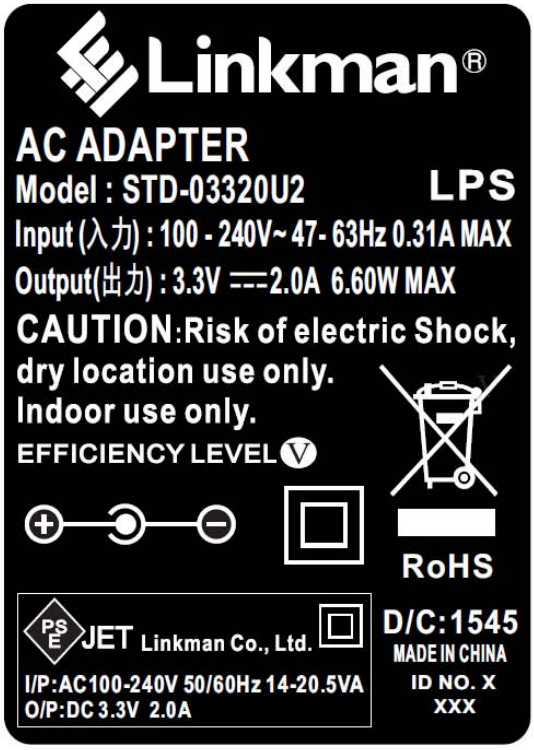




8.7 Spec. Label Materials : Metalized Polyester Label (Silver Gloss)
Color : Black Background with Silver Printing
Label Dimension : 34.5mm(L)*24.5mm(W)+/-0.1mm
Label Thickness : #75

100%

300%



"XXX"
Label supplier's code.
It is accurate that the number of words depends on the real finished product.

ID NO."X"
Manufacturer's code.
It is accurate that the number of words depends on the real finished product.

Label Part No. :9443021161

A. Line Regulation Test

Test Result ：

Test condition	Spec.	Reading 1	Reading 2	Reading 3
90Vac / 50 % Load	2.97~3.63 V	3.396 V	3.400 V	3.389 V
115Vac / 50 % Load	2.97~3.63 V	3.396 V	3.400 V	3.389 V
132Vac / 50 % Load	2.97~3.63 V	3.396 V	3.400 V	3.389 V
180Vac / 50 % Load	2.97~3.63 V	3.396 V	3.399 V	3.389 V
230Vac / 50 % Load	2.97~3.63 V	3.396 V	3.399 V	3.389 V
264Vac / 50 % Load	2.97~3.63 V	3.396 V	3.399 V	3.389 V

B. Efficiency Test

Test Result ：

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac	70.25 % Min.	73.18 %	73.25 %	73.85 %
230Vac	70.25 % Min.	70.40 %	70.39 %	70.63 %

$$Eff_{(av)} = \frac{E_1 + E_2 + E_3 + E_4}{4}$$

E1=efficiency with 25% rated load ; E2= efficiency with 50% rated load

E3=efficiency with 75% rated load ; E4= efficiency with 100% rated load

C. Load Regulation Test

Test Result ：

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 0 % Load	2.97~3.63 V	3.498 V	3.496 V	3.491 V
115Vac / 50 % Load	2.97~3.63 V	3.396 V	3.400 V	3.389 V
115Vac / 100 % Load	2.97~3.63 V	3.294 V	3.302 V	3.287 V
230Vac / 0 % Load	2.97~3.63 V	3.498 V	3.496 V	3.491 V
230Vac / 50 % Load	2.97~3.63 V	3.396 V	3.399 V	3.389 V
230Vac / 100 % Load	2.97~3.63 V	3.294 V	3.302 V	3.286 V

D. Ripple & Noise Test

Test Result ：

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	100 mVpp Max.	31.8mVp-p	29.8mVp-p	24.8mVp-p
230Vac / 100 % Load	100 mVpp Max.	36.8mVp-p	30.1mVp-p	26.8mVp-p

E. Inrush Current

Test Result ：

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	30A Max	12.4 A	12.3 A	12.3 A
230Vac / 100 % Load	60A Max	23.2 A	23.3 A	23.2 A

F. Over Current Protection

Test Result ：

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	5.0A Max.	2.87 A	2.73 A	2.97 A
230Vac / 100 % Load	5.0A Max.	3.31 A	3.28 A	3.43 A

G. Short Circuit Protection

Test Result ：

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	Auto Recovery	OK	OK	OK
230Vac / 100 % Load	Auto Recovery	OK	OK	OK

H. Input Power Consumption(No Load)

Test Result ：

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 0 % Load	≤ 0.3W	0.16W	0.23W	0.22W
230Vac / 0 % Load	≤ 0.3W	0.19W	0.25W	0.24W

Efficiency Test Report

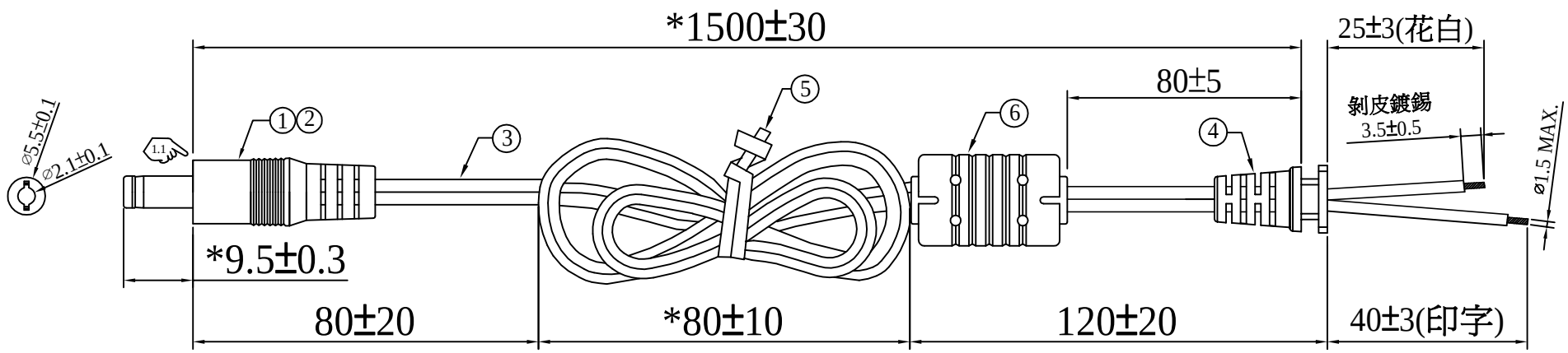
A.	**Model Number**	:	**STD-03320Y2(Y=A,B,C,E,K,U,R)(3.3V /2.0A /6.6W)**
B.	**DC Power Cord**	:	**UL2468 , 18AWG , 1.5M**
C.	**Average Efficiency**	:	
	Energy Star V		**(0.075*Ln(Nameplate OutputW)+0.561) =70.25 % Min.**
	Erp (Stage 2)		**(0.075*Ln(Nameplate OutputW)+0.561) =70.25 % Min.**
	MEPS V		**(0.075*Ln(Nameplate OutputW)+0.561) =70.25 % Min.**
D.	**NO Load Power Consumption**	:	
	Energy Star V		**0.3W max.**
	Erp (Stage 2)		**0.3W max.**
	MEPS V		**0.3W max.**
E.	**Testing Dequipment**	:	
	1. AC Power Source	:	**" Zentech "** **2700M-10**
	2. Electronic Load	:	**" PRODIGIT "** **3311C**
	3. Power Meter	:	**" YOKOGAWA "** **WT210**
	4. Digital Meter	:	**" FLUKE "** **45**
F.	**AC Input Voltage**	:	**115Vac/60Hz**

Load Conditions / Reported Quantity	100%* I_0	75%* I_0	50%* I_0	25%* I_0	0%* I_0
Rms Output Current(mA)	2000mA	1500mA	1000mA	500mA	0mA
Rms Output Voltage(V)	3.287V	3.338V	3.389V	3.440V	3.491V
Active Output Power(W)	6.57W	5.01W	3.39W	1.72W	0.00W
Rms Input Voltage(V)	115V	115V	115V	115V	115V
Rms Input Current(A)	0.149A	0.118A	0.084A	0.050A	0.007A
Rms Input Power(W)	9.00W	6.76W	4.44W	2.39W	0.22W
Voltage T.H.D.(%)	0.16	0.17	0.13	0.12	0.13
True Power Factor	0.523	0.494	0.457	0.414	0.262
Power Consumed by UUT(W)	2.43W	1.75W	1.05W	0.67W	0.22W
Efficiency	73.04%	74.07%	76.33%	71.97%	*
Average Efficiency	73.85%				*

G. AC Input Voltage : 230Vac/50Hz

Load Conditions / Reported Quantity	100%* I_0	75%* I_0	50%* I_0	25%* I_0	0%* I_0
Rms Output Current(mA)	2000mA	1500mA	1000mA	500mA	0mA
Rms Output Voltage(V)	3.286V	3.338V	3.389V	3.440V	3.491V
Active Output Power(W)	6.57W	5.01W	3.39W	1.72W	0.00W
Rms Input Voltage(V)	230V	230V	230V	230V	230V
Rms Input Current(A)	0.100A	0.078A	0.058A	0.034A	0.008A
Rms Input Power(W)	9.26W	6.81W	4.84W	2.53W	0.24W
Voltage T.H.D.(%)	0.11	0.11	0.10	0.10	0.09
True Power Factor	0.401	0.381	0.364	0.326	0.137
Power Consumed by UUT(W)	2.69W	1.80W	1.45W	0.81W	0.24W
Efficiency	70.97%	73.52%	70.02%	67.98%	*
Average Efficiency	70.63%				*

Tester : Chihwei



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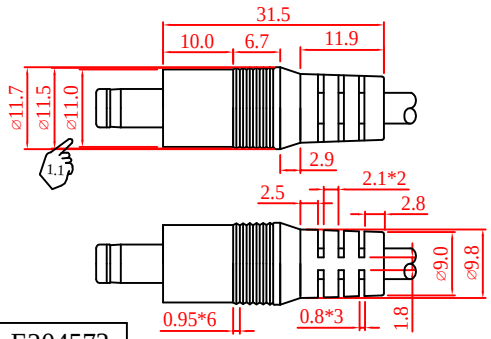
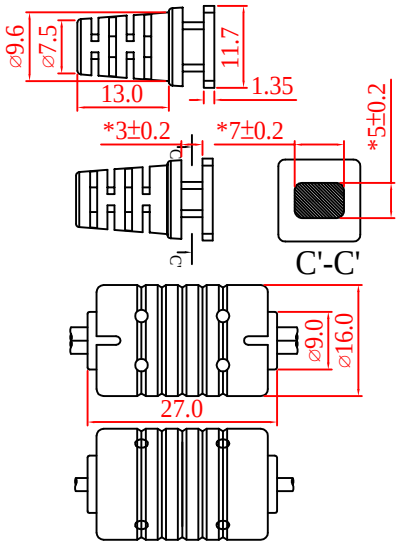




相關測試要求:

一.電性測試:

1.耐電壓:AC 500V/秒,測試無異常;
2.絕緣抵抗:DC 500V 20MΩ 以上;
3.導通測試:無斷線.短路.極性反;

二.拉力測試:電線與S/R間吊重9.1kg
經過1分鐘無斷線脫落等異常.

三.搖擺測試:
電線與PG間吊重200g,40回/分,
角度±60°往復2000回不完全斷
線.且外觀無脫落.斷裂等異常.

阿達特料號: R44M1G150157

線材廠商報備		
E72332-4	E328935	
E198417	E315618	E204573

序號	部品	規　格
6.	Core	Core:AK4h RH: 12*20*5.6或同級品 模具編號:DM-CORE-5032 用料:黑色PVC 60P
5.	扎帶	PE有鐵絲 黑
4.	S/R	模具編號:DM-SR-3138 用料:黑色PVC 60P
3.	Wire	UL2468 18AWG(0.16/41)*2F 黑印字/花白 OD:ø2.2*4.4mm
2.	Plug	模具編號: DM-PG-3377 內/外 用料:內/PE 外/黑色PVC 60P
1.	Pin	ø5.5*2.1 音叉車溝 黑(彈片內縮0.5mm)

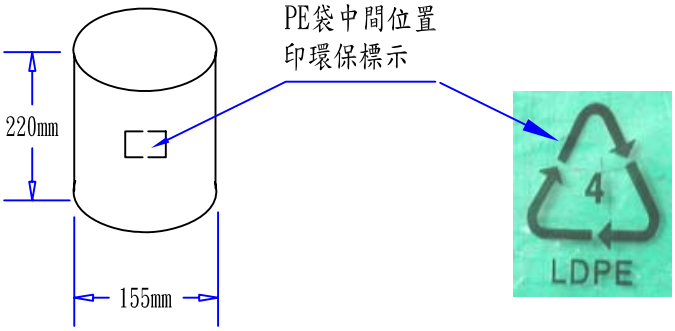
投 影					
制作日期 2012.04.12.	三角法 3RD.ANGLE.	單位 mm DIM.	比例 SCALE.	份數 1 .QTY.	
制圖DRW.	校圖CHKD.	承認 APPD.	承認APPD.	公差 .TOLERANCE.	
江 娟	單 鵬	李 秋 林		XX.X	±0.5
				X.X	±0.3
				X.XX	±0.1

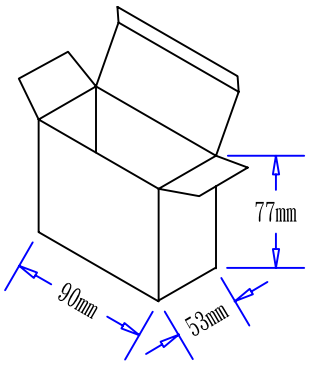
REV.	DATE.	變　更
1.1	2013.01.22.	依客戶要求:變更Plug模具！
客戶名 NAME.	阿達特	版次
品名 .DWG.NO.	ADT222	1.1

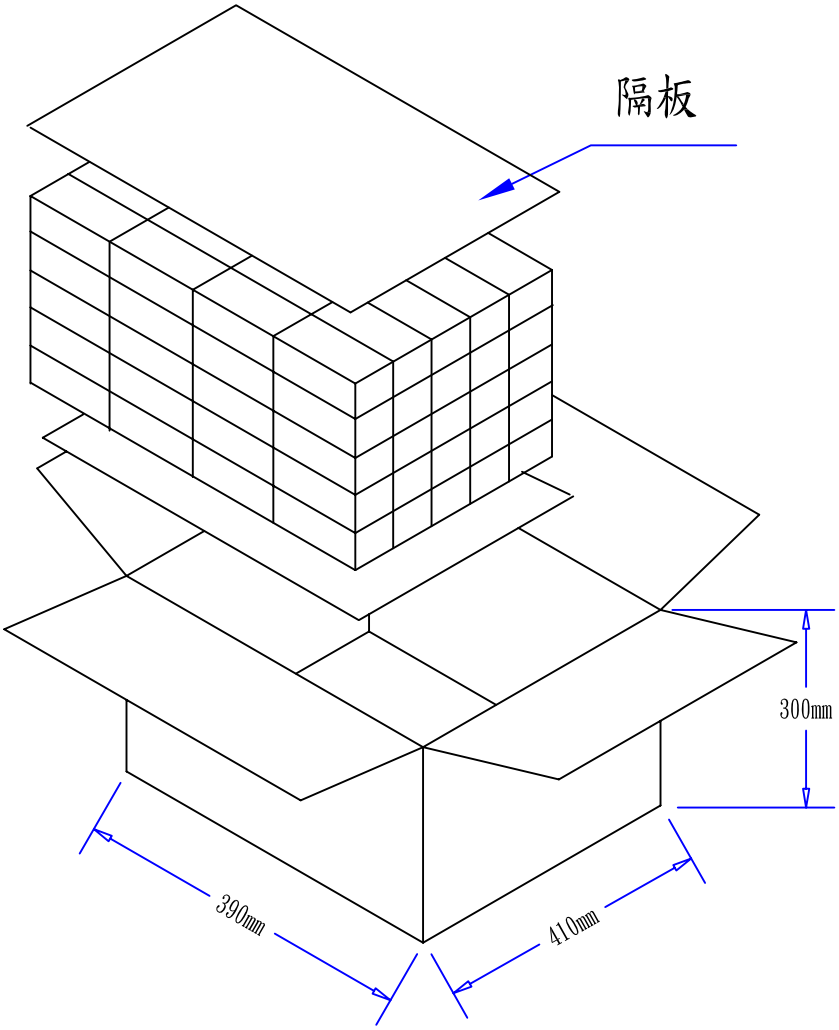
丹貿電子(惠州)有限公司

由 AUTODESK 教育產品製造

SHOW	REV	DESCRIPTION	DATE	APPROVED
0	A	初版制作	Jun./25/2009	







零件料號

9550001501 1. 隔板:400*380*6mm B=B 2/100

2. 數量:20*5=100PCS

9520000202 3. 外箱:L*W*H=410*390*300mm K=K 1/100

9510001302 4. 紙盒:L*W*H=90*53*77mm 白盒 350P+CE(即C9紙加裱350磅白板紙)

9540003001 5. 環保PE袋:220*155*0.09mm 無色透明,長邊中間位置印環保標示,短邊單端開口

6. 成品裝入PE袋后,用小膠紙封口

7. 外箱,紙盒標注為外徑尺寸

ADAPTER
2009.07.17
研發部

阿達特科技股份有限公司	DRAWING NO. PIS5W000002		APPROVAL 1 BY		
	UNIT mm	MODEL NO.5W,10W(美規)	APPROVAL 2 BY		
		FILE NO. PACKAGE_Y_159	CHECKED BY(ENGINEER)	廖志偉(Chihwei)	DATE: 2009/06/25
	SCALE	REV. A SHEET 1/1	DRAWN BY	sun	DATE: 2009/06/25