

Specification for Approval

Customer : **Linkman Co., Ltd.**

Part Name : **AC ADAPTER**

Description : **5.0Volts / 3.0Amps**

Model No. : **STD-05030U (USA / Level V)**

Customer P / N :

Product P / N : **RXTD05030U412207**

Issued Date : **27 - Jan. - 2015**

Version : **A1**

Issued Stamp :

Customer's Approval Signature

ADAPTER TECHNOLOGY CO.,LTD.

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FAX : +886-2-8226-2238

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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

15W

AC Adapter

SPECIFICATION

Model No. : **STD-05030U (USA / Level V)**

Description : **5.0Volts / 3.0Amps**

Part No. : **RXTD05030U412207**

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Date : **27 - Jan. - 2015**

Approved	Reviewed	Checked	Prepared	Sales
				

Approval Documents/Spec. Revised Records

■ Customer : Linkman Co., Ltd.

■ Model No. : STD-05030U

■ Original Documents Content : Spec. 10 Pages, Attachment 2 Pages

Revised Records : No.	Date	Description (Before / After)	Page(s) Revised	Revised By (Adapter/Customer)	Remark
1	Jan./27/2015	Issue	-	Wei	A1

1. Feature :

- ◆ **Input** : Universal 100 ~ 240 Vac / 47 ~ 63 Hz Input, without any slide switch.
- ◆ **Output** : +5 V / 0~3 A
- ◆ **Case Dimension** : 72 (L) * 34 (W) * 69 (H) mm (±0.5mm)
- ◆ **Efficiency** : Eff (av) ≥ 76.41% Min.
- ◆ **Safety** : PSE
- ◆ **EMI** : Class B ; Conduction & Radiation Met.
- ◆ **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	0.48A Max.
2.4 Inrush Current	60A Max. / 230Vac(Cold Start At 25 °C , Full Load)
2.5 Efficiency	Eff (av) ≥ 76.41% (At 115 Vac & 230 Vac)
2.6 Power Consumption	Pi ≤ 0.3 W (At 230Vac & No Load)

$$\text{※Eff (av)} = \frac{E_1 + E_2 + E_3 + E_4}{4}$$

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	+ 5V + 6% - 5%
	Current	3 A Max.
	Regulation	4.75Vmin. ~ 5.0Vtyp. ~ 5.30Vmax.
	Ripple & Noise	100 mV Max.
	Total Power	15W 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)	6.8V (Max)
4.2 Short Circuit Protection (SCP)	Automatic recovery after short-circuit fault being removed.
4.3 Over Current Protection(OCP)	6A (Max)

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

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

(1)	Primary to Secondary	3000Vac for 1 Minute
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c. Insulation Resistance :

(1)	Primary to Secondary	10 M Ohm for 500Vdc
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5.2 EMI Requirement : Class B ; Conduction & Radiation Met.

5.3 Leakage Current : Less than 0.25mA

6. Operation and Environment Performance :

6.1 Temperature Range

Operating	+ 0°C ~ + 40°C
Storage	- 20 °C ~ + 80 °C

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°C,By Telcordia SR-332)

8.Mechanical :

8.1 Weight : 165 g Typical

8.2 Cable Type : Black UL2468 AWG18
(Wire + Plug)

Plug : $\phi 5.5 \times \phi 2.1 \times 9.5 \text{mm}$ (Tuning Fork & Cannelure)

8.3 Cable Length : 1200mm

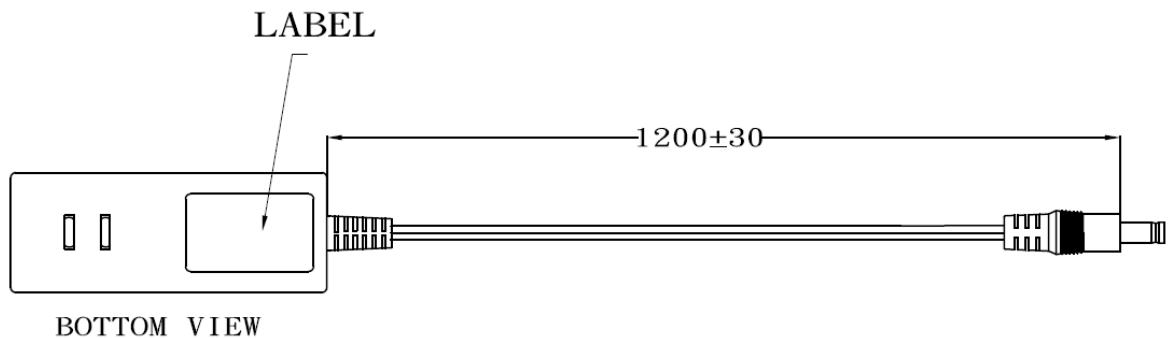
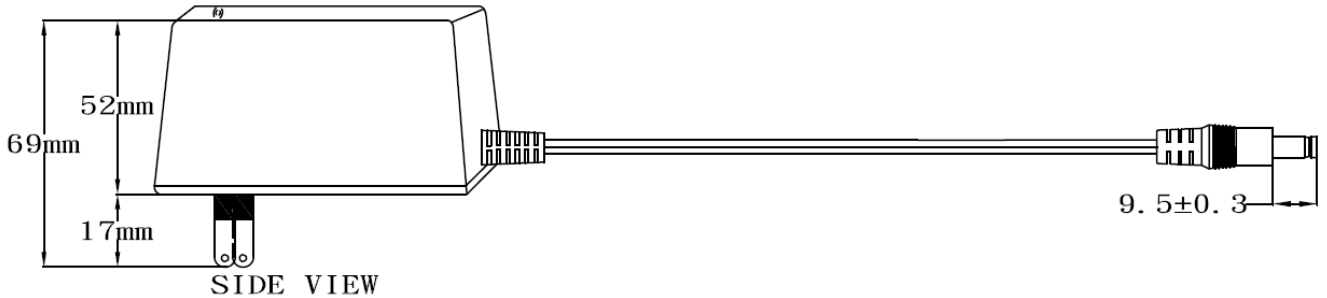
8.4 Case Dimension : 72mm(L)*34mm(W)*69mm(H) ($\pm 0.5 \text{mm}$)

8.5 Material Flammability : UL 94V-0

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

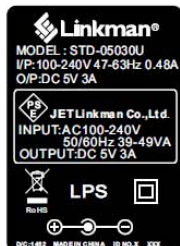


Output Cable Plug Pin Assignment



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%



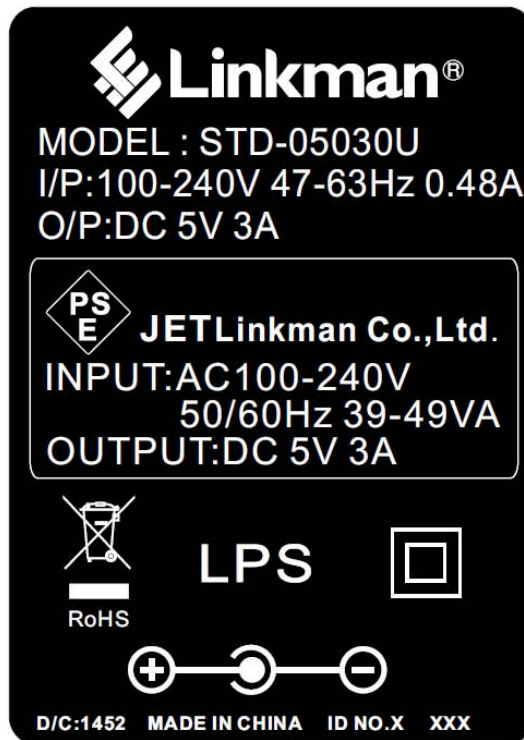
"XXX"

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.

300%



Label Part No. : 9443052510

A. Line Regulation Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
90Vac / 50 % Load	4.75~5.30 V	5.118 V	5.106 V	5.090 V
115Vac / 50 % Load	4.75~5.30 V	5.118 V	5.105 V	5.091 V
132Vac / 50 % Load	4.75~5.30 V	5.118 V	5.106 V	5.090 V
180Vac / 50 % Load	4.75~5.30 V	5.117 V	5.106 V	5.091 V
230Vac / 50 % Load	4.75~5.30 V	5.118 V	5.106 V	5.090 V
264Vac / 50 % Load	4.75~5.30 V	5.118 V	5.105 V	5.091 V

B. Efficiency Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac	76.41 % Min.	78.02 %	78.07 %	78.15 %
230Vac	76.41 % Min.	76.50 %	76.58 %	76.66 %

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

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	4.75~5.30 V	5.263 V	5.248 V	5.228 V
115Vac / 50 % Load	4.75~5.30 V	5.117 V	5.104 V	5.091 V
115Vac / 100 % Load	4.75~5.30 V	4.959 V	4.962 V	4.952 V
230Vac / 0 % Load	4.75~5.30 V	5.261 V	5.247 V	5.228 V
230Vac / 50 % Load	4.75~5.30 V	5.118 V	5.106 V	5.091 V
230Vac / 100 % Load	4.75~5.30 V	4.960 V	4.962 V	4.952 V

D. Ripple & Noise Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	100mV Max.	42.6 mV	47.0 mV	45.0 mV
230Vac / 100 % Load	100mV Max.	43.6 mV	47.2 mV	46.2 mV

E. Inrush Current

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
230Vac / 100 % Load	60A Max	43.5 A	42.9 A	43.7 A

F. Over Current Protection

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	5 A Max.	3.87 A	3.79 A	3.89A
230Vac / 100 % Load	5 A Max.	4.33 A	4.30 A	4.42A

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
230Vac / 0 % Load	$\leq 0.3W$	0.20 W	0.21 W	0.22 W

Efficiency Test Report

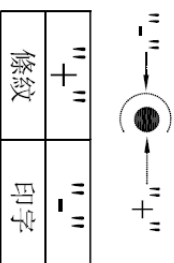
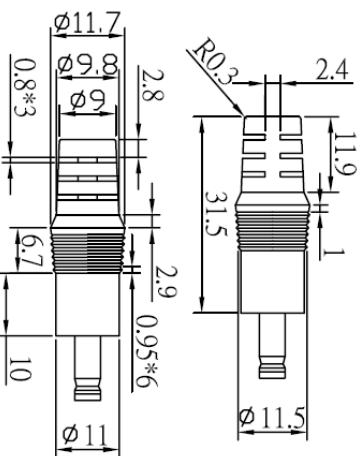
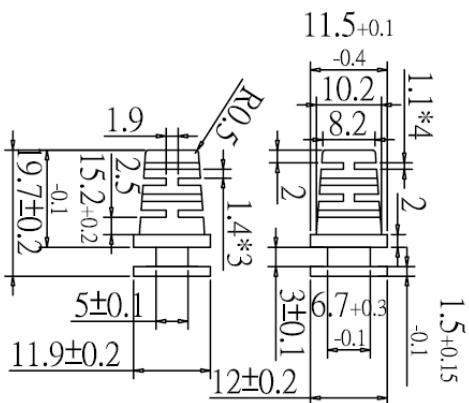
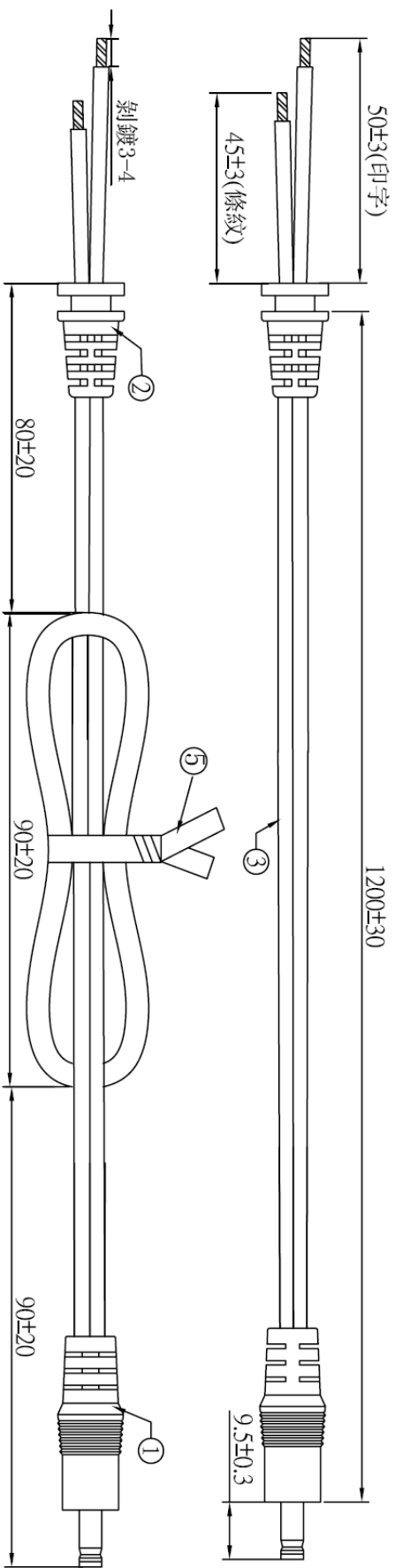
- A. **Model Number** : STD-05030Z (Z=A,B,C,E,K,T,U,V) (5V / 3A / 15W)
- B. **DC Power Cord** : UL2468 , 18AWG , 1.2M SBL52045CT (LITE-ON)
- C. **Average Efficiency** :
- Energy Star V (0.075*Ln(Nameplate Output)+0.561) = 76.41 % Min.
- Erp (Stage 2) (0.075*Ln(Nameplate Output)+0.561) = 76.41 % Min.
- MEPS V (0.075*Ln(Nameplate Output)+0.561) = 76.41 % 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** :
- a. AC Power Source : " Zentech " 2700M-10
- b. Electronic Load : " PRODIGIT " 3311C
- c. Power Meter : " Zentech " 2100
- d. 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)	3000mA	2250mA	1500mA	750mA	0mA
Rms Output Voltage(V)	5.008V	5.066V	5.124V	5.181V	5.241V
Active Output Power(W)	15.02W	11.40W	7.69W	3.89W	0.00W
Rms Input Voltage(V)	115V	115V	115V	115V	115V
Rms Input Current(A)	0.339A	0.269A	0.197A	0.110A	0.010A
Rms Input Power(W)	19.64W	14.58W	9.72W	4.96W	0.15W
T.H.D. (Voltage)	0.18	0.19	0.17	0.14	0.11
True Power Factor	0.505	0.473	0.430	0.393	0.112
Power Consumed by UUT(W)	4.62W	3.18W	2.03W	1.07W	0.15W
Efficiency	76.50%	78.18%	79.07%	78.34%	*
Average Efficiency	78.02%				*

- 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)	3000mA	2250mA	1500mA	750mA	0mA
Rms Output Voltage(V)	5.008V	5.066V	5.124V	5.182V	5.241V
Active Output Power(W)	15.02W	11.40W	7.69W	3.89W	0.00W
Rms Input Voltage(V)	230V	230V	230V	230V	230V
Rms Input Current(A)	0.232A	0.179A	0.125A	0.070A	0.015A
Rms Input Power(W)	19.71W	14.85W	9.97W	5.12W	0.19W
T.H.D. (Voltage)	0.2	0.16	0.15	0.11	0.09
True Power Factor	0.372	0.363	0.348	0.318	0.058
Power Consumed by UUT(W)	4.69W	3.45W	2.28W	1.23W	0.19W
Efficiency	76.23%	76.76%	77.09%	75.91%	*
Average Efficiency	76.50%				*

Tester : Wei



注意:此圖面所需材料符合"ROHS"標準

- ① 5.5*2.1*21 音叉車溝黑色半邊 (YY-PD-00023), 外模P-184號模 (二次成型), 用料外PVC60P 黑色 (YY-PV-00009)
- ② SR-101 號模, 用料PVC60P 黑色 (YY-PV-00009), 吊重:1米/20磅/60秒
- ③ UL 2468 18AWG(0.16*41)*2C BK OD:2.2*4.4(YY-DC-00091) 裁線長度:1260+10/-0
- ④ PE有鐵芯紮帶12CM 黑色 (YY-ES-00001)
- ⑤ 單位:MM

一般公差表	
10mm以下	±0.1mm
150mm以下	±0.5mm
20mm以下	±0.15mm
300mm以下	±0.8mm
5mm以下	±0.2mm
900mm以下	±1.0mm
100mm以下	±0.5mm
900mm以上	±1.2mm

料號	R44M1G12011
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客戶	阿達特	制圖	吳遠松
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頁數	01	審核	
		批準	

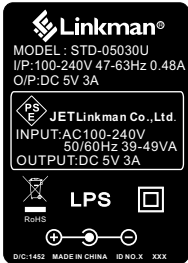
泰岳電子有限公司

圖次	02	變更內容	審核日期	2013/06/05
版次	01	變更內容	日期	2009/12/11

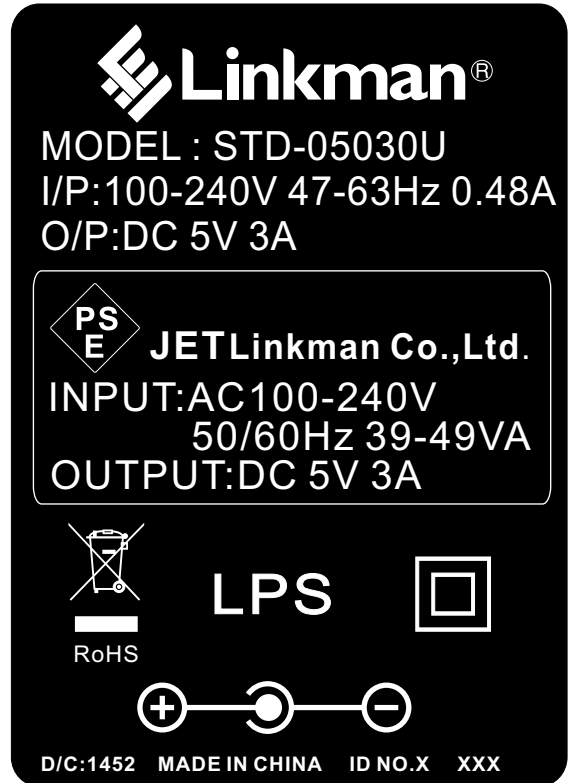
圖號	ADT-1536	日期	2013/06/05
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8.7 Spec. Label Materials : Metalized Polyester Label (Silver Gloss)
 Color : Black Background with Silver Printing
 Label Dimension : 34.5mm(L)*24.5mm(W)+/-0.1mm
 Label Thickness : #75

100%



300%



"XXX"

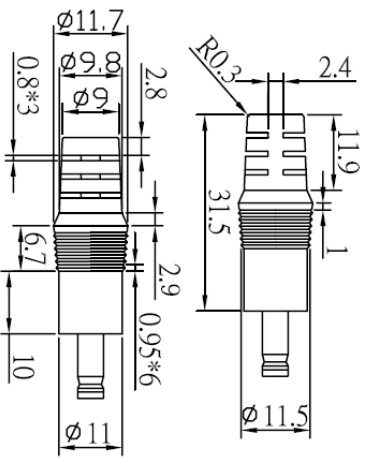
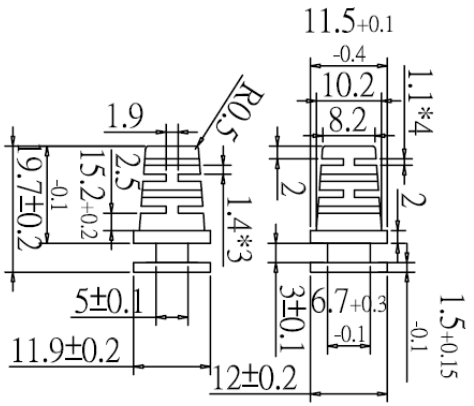
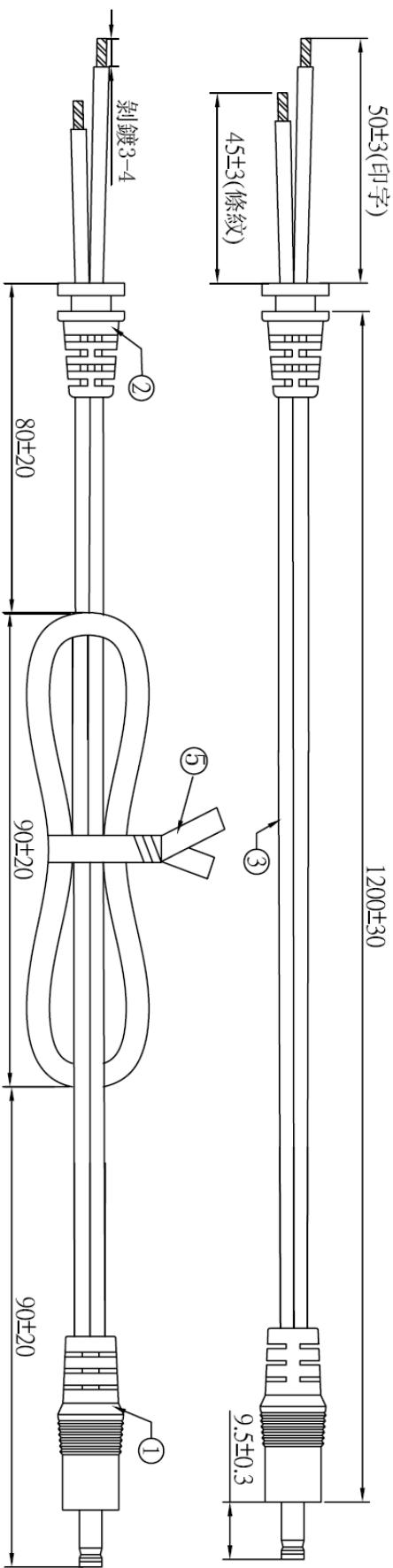
Label supplier's code.
 It is accurate that the number
 of words depends on the real
 finished product.

ID NO."X"

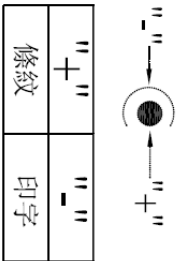
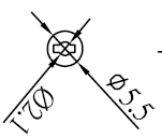
Manufacturer's code.
 It is accurate that the number
 of words depends on the real
 finished product.



Label Part No. : 9443052510



Adapter Tech.
2015.01.26
StefanieWu



注意:此圖面所需材料符合"ROHS"標準

- ① 5.5*2.1*21 音叉車溝黑色半邊 (YY-PD-00023), 外模P-184號模(二次成型), 用料外PVC60P黑色 (YY-PV-00009)
- ② SR-101 號模, 用料PVC60P黑色 (YY-PV-00009), 吊重:1米/20磅/60秒
- ③ UL 2468 18AWG(0.16*41)*2C BK OD:2.2*4.4(YY-DC-00091) 裁線長度:1260+10/-0
- ④ PE有鐵芯紮帶12CM黑色 (YY-ES-00001)
- ⑤ 單位:MM

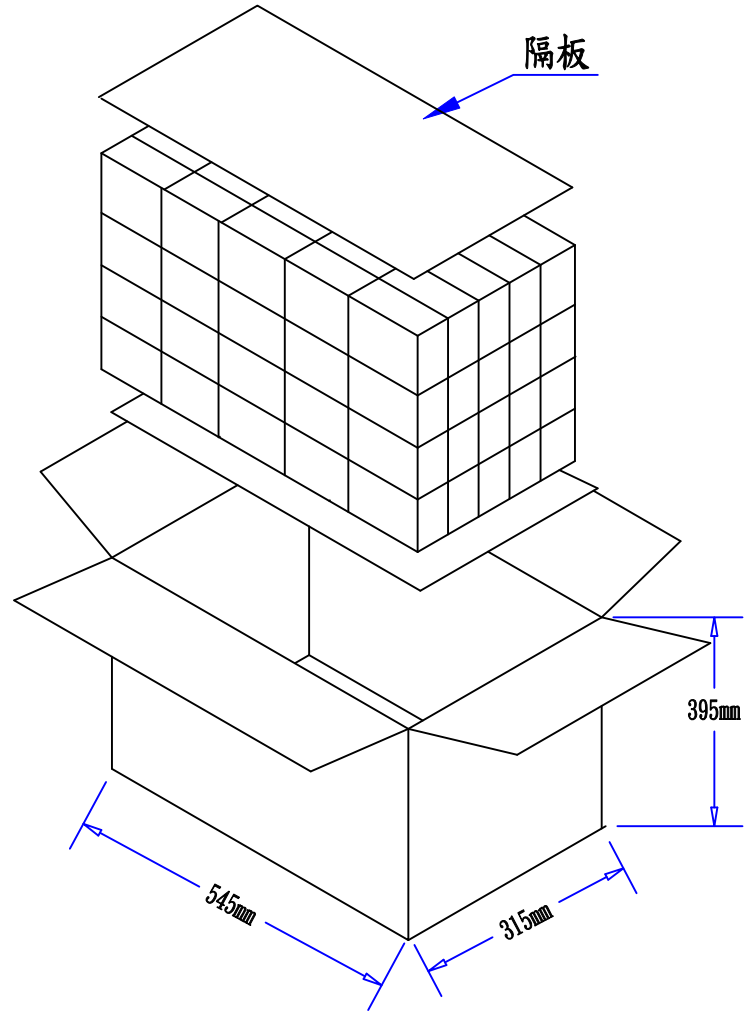
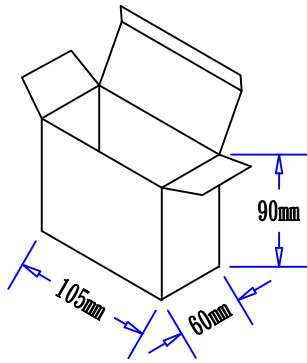
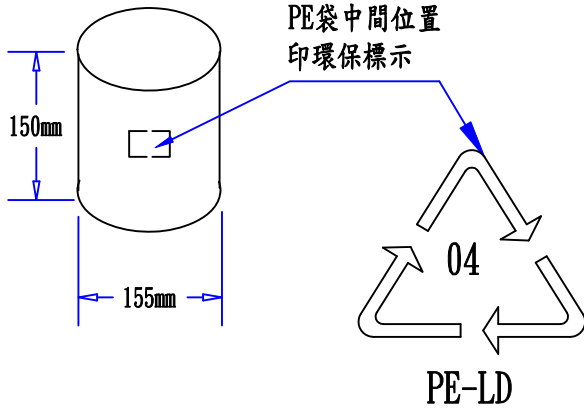
一般公差表	
10mm以下	±0.1mm
10~20mm	±0.15mm
20~30mm	±0.2mm
30~50mm	±0.25mm
50~100mm	±0.3mm
100mm以上	±0.4mm

料號	R44M1G12011		
客戶	阿達特	制圖	吳遠松
頁數	01	審核	
		批準	

圖號	ADT-1536	日期	2013/06/05
圖次	02	變更內容	日期:2013/06/05
版次	01	變更內容	日期:2009/12/11

泰岳電子有限公司

SHOW	REV	DESCRIPTION	DATE	APPROVED
△	A	初版制作	13/08/12	



PIS18W00048 包裝(FOR 18W, 24W插牆式) 短環保PE泡袋厚0.09-白盒-100

9550006001 1. 隔板:530(L)*300(W)*6mm

B=B 2/100

2. 數量:25*4=100PCS

9520006502 3. 外箱:545(L)*315(W)*395(H)mm

K=K 1/100

9510003502 4. 白盒:105(L)*60(W)*90(H)mm 350P+CE(即C9紙加裱350磅白板紙) 1/1

9540008801 5. 環保PE袋:150(L)*155(W)*0.09mm 無色透明,單端開口,中間位置印環保標示. 1/1

6. 成品裝入PE袋后封好,再放入外箱,方向必須統一.

7. 外箱,白盒標注為外徑尺寸

8. 上述所有材料須符合環保ROHS標準.

DRAWING NO. PIS18W00048		APPROVAL 1 BY	
UNIT	MODEL NO. 18W, 24W(插牆式)	APPROVAL 2 BY	
mm	FILE NO. ADT-0211	CHECKED BY(ENGINEER)	
SCALE	REV. A SHEET 1/1	DRAWN BY	李金朝 DATE: 2013/08/12