



Specification for Approval

Customer : AKON CO.,LTD.

Part Name : AC ADAPTER

Description : 48.0Volts / 1.36Amps

Model No. : ATS065A1-P480 (Level VI)

Customer P / N :

Product P / N : ATS065A1P480Q15201

Issued Date : 22 – Feb. – 2024

Version : A1

Issued Stamp :

Customer’s Approval Signature

ADAPTER TECHNOLOGY CO.,LTD.

Office (Taiwan) : 6F,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@ adaptertech.com.tw ; service_tw@ adaptertech.com.tw

Factory (China) : BOAYANG ELECTRONICS CO., LTD.



65.28W
AC ADAPTER
SPECIFICATION

Model No. : **ATS065A1-P480 (Level VI)**

Description : **48.0Volts / 1.36Amps**

Part No. : **ATS065A1P480Q15201**

Version : **A1**

Date : **22 – Feb. – 2024**

Approved	Reviewed	Checked	Prepared	Sales



■ Approval Documents/Spec. Revised Records

■ Customer : AKON CO.,LTD.

■ Model No. : ATS065A1-P480

■ Original Documents Content : SPEC. 10 Page(s) , Attachment 3 Pages

Revised Records : No.	Date	Description (Before / After)	Page(s) Revised	Revised By (Adapter/Customer)	Remark
1	Feb./22/2024	Issue	-	Jordan	A1
2					
3					
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1. Feature :

- ◆ **Input** : Universal 100 ~ 240 Vac / 50 ~ 60 Hz Input, without any slide switch.
- ◆ **Output** : 48.0V / 0~1.36 A
- ◆ **Case Dimension** : 115(L) * 48.5 (W) * 31.6 (H) mm ±1mm
- ◆ **Efficiency** : Eff (av) ≥ 88%
Eff ≥ 79% (At 230V/50Hz input@10% load for CoC Tier2)
- ◆ **Safety** : UL / CUL / GS / PSE / BSMI / CB / UKCA
- ◆ **EMI** : CE / FCC (conduction & radiation Class B)
- ◆ **Protection** : OVP (Over Voltage Protection) 、 SCP (Short Circuit Protection) 、 OCP (Over Current Protection)
- ◆ Suitable for usage at I.T.E., industrial controller
- ◆ Meet DoE VI / ErP (Lot 7) / GEMS / NRCan / CEC

2. Input :

2.1 Voltage	Universal 100~240Vac, single phase
2.2 Frequency	50 ~ 60 Hz
2.3 Current	1.4A Max.
2.4 Inrush Current	80A Max. / 230Vac (Cold Start At 25 °C , Full Load) (ac source chroma 6530)
2.5 Efficiency	Eff (av) ≥ 88 % (At 115 Vac & 230 Vac) Eff ≥ 79% (At 230V/50Hz input@10% load for CoC Tier2)
2.6 Power Consumption	Pi ≤ 0.21 W (At 115 Vac & 230 Vac & 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	48.0V ± 5%
	Current	1.36A Max.
	Regulation	45.60Vmin. ~ 48.00Vtyp. ~ 50.40Vmax.
	Ripple & Noise	480 mVpp Max.
	Total Power	65.28W 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. (47 μF) at output connector terminals. (At nominal line voltage, Full Load)



4. Protection :

4.1 Over Voltage Protection (OVP)	58V (Max.)
4.2 Short Circuit Protection (SCP)	Automatic recovery after short-circuit fault being removed
4.3 Over Current Protection(OCP)	2.7A (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 latch .

5. Safety requirement :

5.1. Dielectric strength : Cut off current 10 mA

(1)	Primary to secondary	3000Vac (RMS) for 1 minute
(2)	Primary to frame ground	1770Vac (RMS) for 1 minute
※ Secondary return connected to FG		

5.2. Insulation resistance :

(1)	Primary to secondary	10 MΩ for 500Vdc
(2)	Primary to frame ground	10 MΩ for 500Vdc
※ Secondary return connected to FG		

5.3 Leakage current : Less than 5 mA (RMS) or 7.07 mA (Peak)

5.4 Grounding test : < 0.1Ω

6. Operation and Environment Performance :

6.1 Temperature Range

Operating	- 20 °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. : 300,000 Hrs.(Calculated Hours At 25°C , By Telcordia SR-332)

8. Mechanical :

8.1 Weight : 220 g Typical

8.2 Cable Type : Black UL2468 22AWG

(Wire + Plug)

Plug : $\varnothing 5.5 * \varnothing 1.7 * 10\text{mm}$

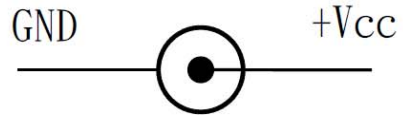
(Tuning Fork & Cannelure)

8.3 Cable Length : 1500mm

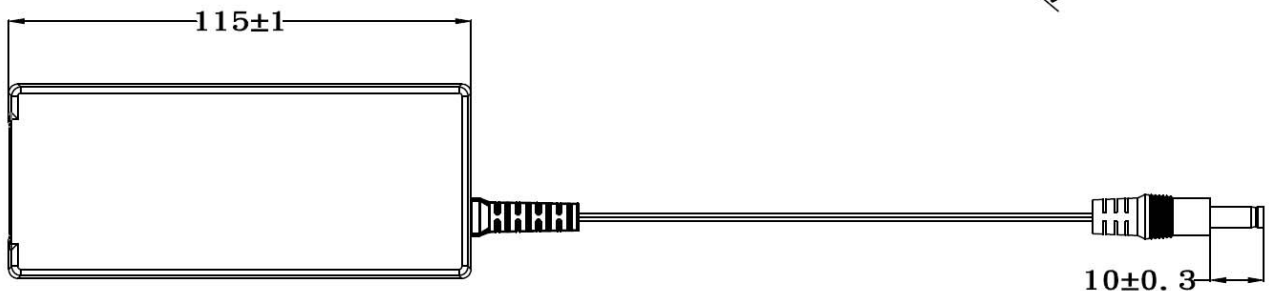
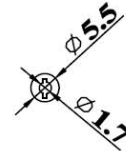
8.4 Case Dimension : 115mm(L)*48.5mm(W)*31.6mm(H)

8.5 Material Flammability : UL 94V-0

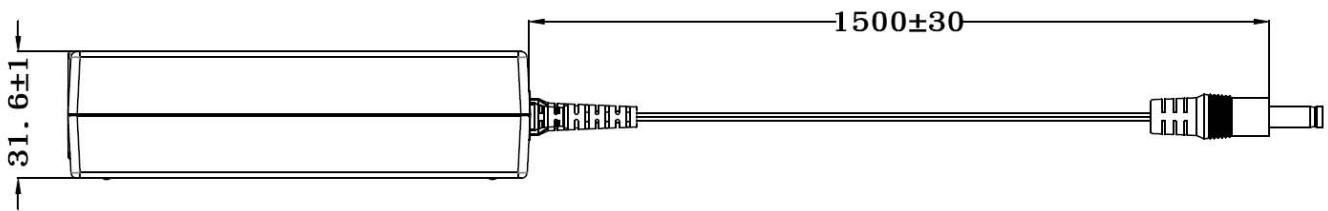
8.6 External Apperance : As drawing below (Scale \rightarrow mm)



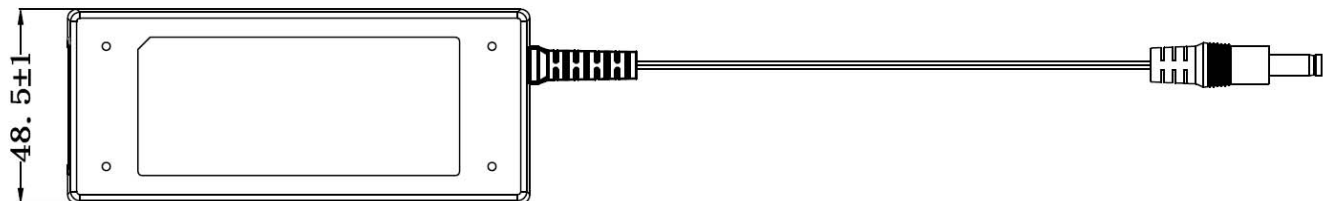
Output Cable Plug Pin Assignment



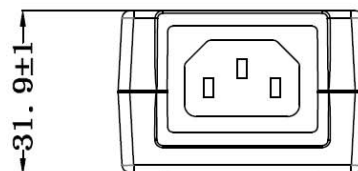
TOP VIEW



SIDE VIEW



BOTTOM VIEW



FRONT-VIEW



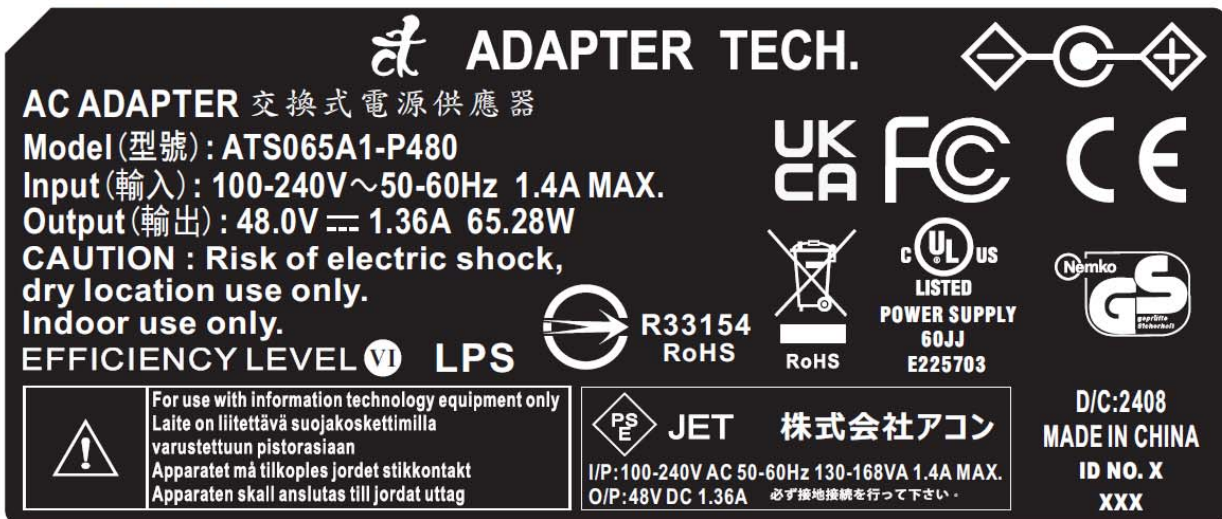
Adapter Technology Co., Ltd.

8.7 Spec. Label materials : Metalized polyester label (silver Gloss)
Color : Black Background with Silver Printing
Label dimension: 79(L)*33.5(W) 0.1mm
Label thickness : 75#

100%



200%



"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.:9443131230



A. Line Regulation Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
90Vac / 50 % Load	45.6 V ~ 50.4 V	48.46 V	48.47 V	48.46 V
115Vac / 50 % Load	45.6 V ~ 50.4 V	48.46 V	48.47 V	48.46 V
132Vac / 50 % Load	45.6 V ~ 50.4 V	48.46 V	48.47 V	48.46 V
180Vac / 50 % Load	45.6 V ~ 50.4 V	48.38 V	48.39 V	48.38 V
230Vac / 50 % Load	45.6 V ~ 50.4 V	48.38 V	48.39 V	48.38 V
264Vac / 50 % Load	45.6 V ~ 50.4 V	48.38 V	48.39 V	48.38 V

B. Efficiency Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac	88 % Min.	89.62 %	89.63 %	89.62 %
230Vac	89 % Min.	89.56 %	89.57 %	89.56 %
230Vac@10% load	79 % Min.	84.59 %	84.61 %	84.59 %

$$\text{Eff (av)} = \frac{E1 + E2 + E3 + E4}{4}$$

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	45.6 V ~ 50.4 V	48.65 V	48.66 V	48.65 V
115Vac / 50 % Load	45.6 V ~ 50.4 V	48.46 V	48.47 V	48.46 V
115Vac / 100 % Load	45.6 V ~ 50.4 V	48.26 V	48.27 V	48.26 V
230Vac / 0 % Load	45.6 V ~ 50.4 V	48.65 V	48.66 V	48.65 V
230Vac / 50 % Load	45.6 V ~ 50.4 V	48.38 V	48.39 V	48.38 V
230Vac / 100 % Load	45.6 V ~ 50.4 V	48.20 V	48.21 V	48.20 V



D. Ripple & Noise Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	480 mVpp Max.	65.4 mV	66.4 mV	67.4 mV
230Vac / 100 % Load	480 mVpp Max.	60.2 mV	61.2 mV	62.2 mV

E. Inrush Current

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
240Vac / 100 % Load	80A Max	73.8 A	74.7 A	73.5 A

F. Output Current Protection

Test Result Test Result

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac	2.7A (Max)	137 %	138 %	137 %
230Vac	2.7A (Max)	126 %	127 %	127 %

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

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 0 % Load	≤ 0.21 W	0.044 W	0.043 W	0.045 W
230Vac / 0 % Load	≤ 0.21 W	0.109 W	0.108 W	0.110 W



Adapter Technology Co., Ltd.

Efficiency Test Report

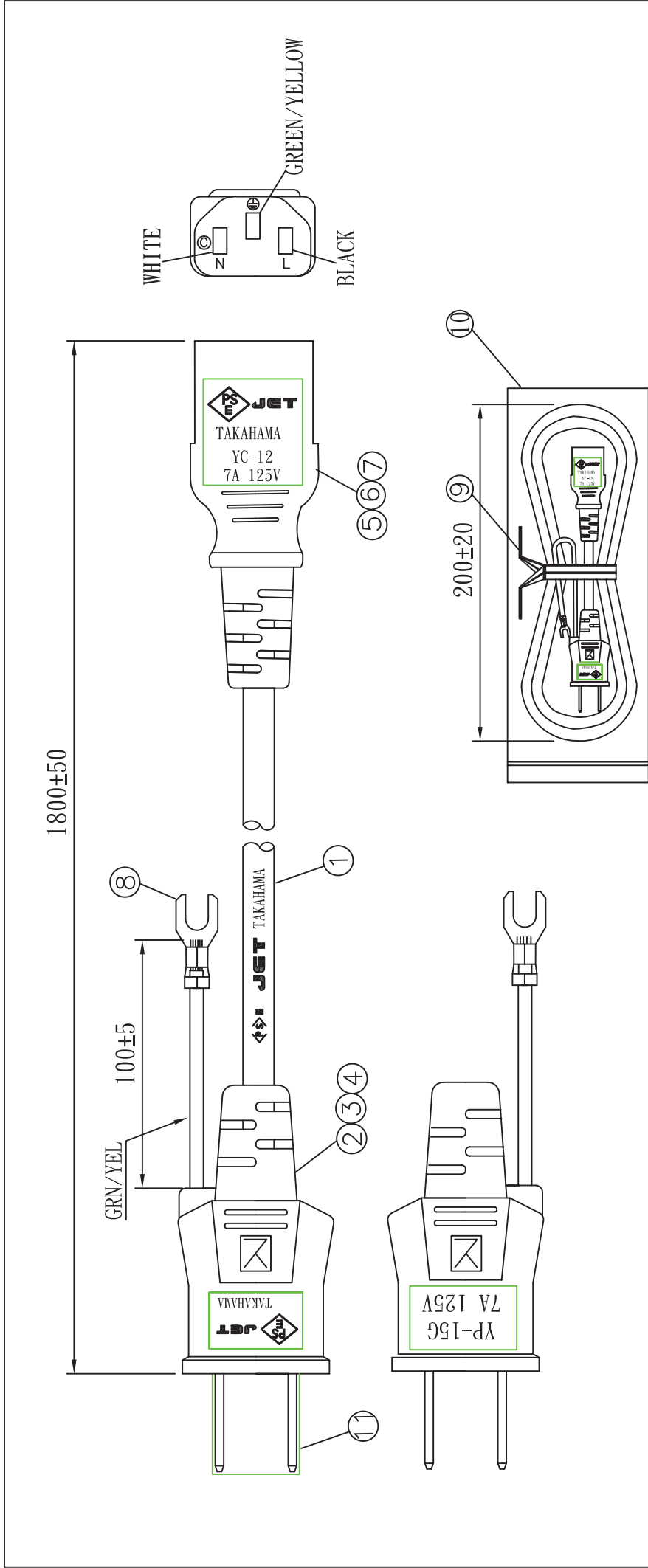
A.	Model Number	: ATS065A1-A,P,G480	48.0V	1.36A	65.28W
B.	DC Power Cord	: UL2468 22AWG , 1.5M			
C.	Average Efficiency	:			
	Erp (Lot 7)		88.000%	Min.	
	DoE Level VI		88.000%	Min.	
	GEMS Level VI		88.000%	Min.	
	CoC Tier 2		89.000%	Min.	
	CoC Tier 2 (10% Load)		79.000%	Min.	
D.	NO Load Power Consumption	:			
	Erp (Lot 7)	0.21W Max.			
	DoE Level VI	0.21W Max.			
	GEMS Level VI	0.21W Max.			
	CoC Tier 2	0.15W Max.			
E.	Testing Equipment	:			
	a. AC Power Source	: " Zentech " 2700M-10			
	b. Electronic Load	: " PRODIGIT " 3311C			
	c. Power Meter	: " YOKOGAWA " WT-210A			
	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	10%* I ₀	0%* I ₀
	Rms Output Current(mA)	1360mA	1020mA	680mA	340mA	136mA
Rms Output Voltage(V)	47.950V	48.000V	48.060V	48.120V	48.150V	48.170V
Active Output Power(W)	65.21W	48.96W	32.68W	16.36W	6.55W	0.00W
Rms Input Voltage(V)	115V	115V	115V	115V	115V	115V
Rms Input Current(A)	1.333A	1.081A	0.728A	0.364A	0.156A	0.023A
Rms Input Power(W)	73.020W	54.410W	36.180W	18.070W	7.386W	0.073W
True Power Factor (PF)	0.505	0.460	0.424	0.429	0.413	0.216
Total Harmonic Distortion of the input current	142.3A%	155.6A%	178.5A%	218.2A%	243.4A%	15.6A%
Power Consumed by UUT(W)	7.808W	5.450W	3.499W	1.709W	0.838W	0.073W
Active Efficiency	89.307%	89.983%	90.328%	90.541%	88.660%	*
Average Efficiency	90.040%				88.660%	*

G. AC Input Voltage : 230Vac/50Hz

Load Conditions Reported Quantity	100%* I ₀	75%* I ₀	50%* I ₀	25%* I ₀	10%* I ₀	0%* I ₀
	Rms Output Current(mA)	1360mA	1020mA	680mA	340mA	136mA
Rms Output Voltage(V)	47.950V	48.020V	48.070V	48.130V	48.160V	48.170V
Active Output Power(W)	65.21W	48.98W	32.69W	16.36W	6.55W	0.00W
Rms Input Voltage(V)	230V	230V	230V	230V	230V	230V
Rms Input Current(A)	0.818A	0.622A	0.428A	0.239A	0.106A	0.036A
Rms Input Power(W)	72.140W	54.240W	36.300W	18.270W	7.559W	0.112W
True Power Factor (PF)	0.376	0.372	0.367	0.343	0.332	0.295
Total Harmonic Distortion of the input current	245.7A%	259.1A%	260.2A%	261.8A%	195.1A%	6.6A%
Power Consumed by UUT(W)	6.928W	5.260W	3.612W	1.906W	1.009W	0.112W
Active Efficiency	90.396%	90.303%	90.048%	89.569%	86.648%	*
Average Efficiency	90.079%				86.648%	*

Tester : Jordan

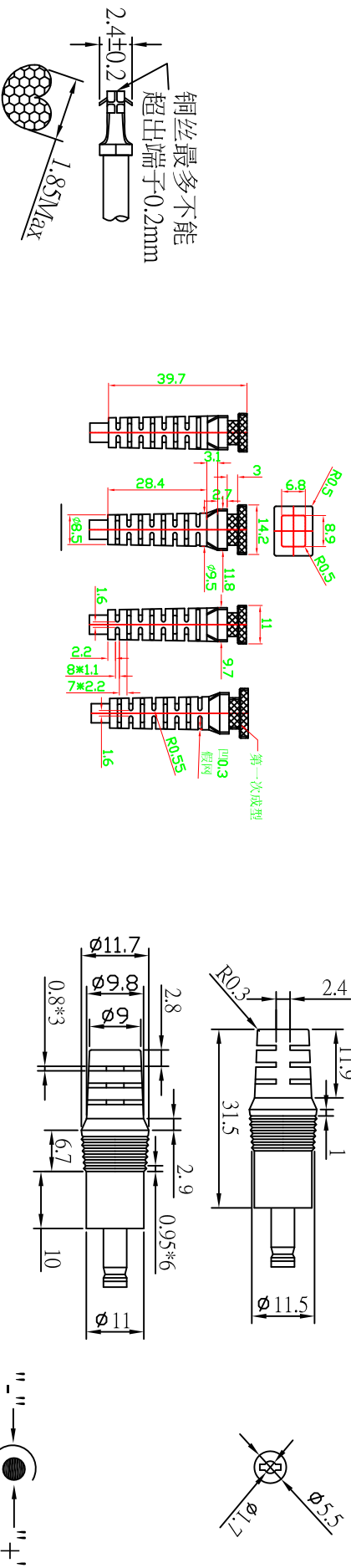
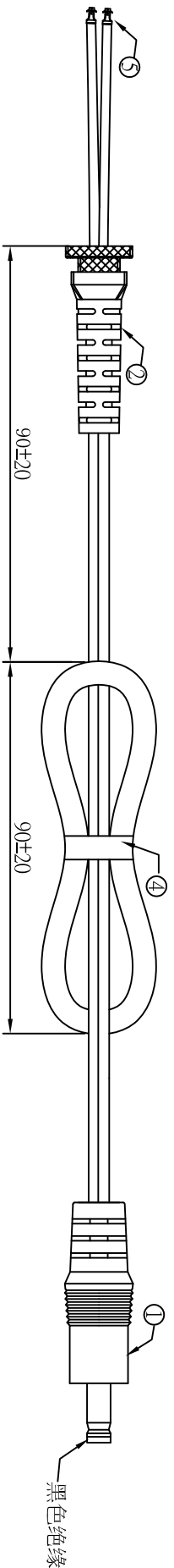
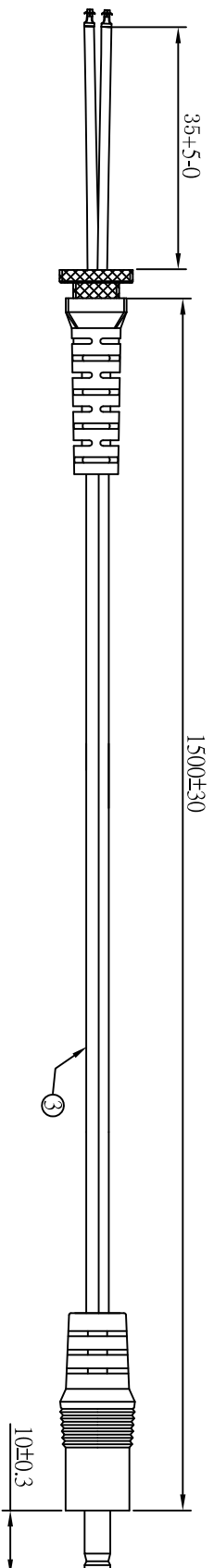


NO.	SPECIFICATION	Q'TY	REMARK
1	VCTF 0.75/3C BLACK PSE	1PC	
2	YP-15G TER:98675BS-1	2PCS	
3	TP-15G INNER BODY	1PC	
4	YP-15G PVC PLASTIC:50P BLACK	23g/PC	
5	YC-12 PVC PLASTIC:50P BLACK	18g/PC	
6	YC-12 TER:97740PS-0	3PCS	
7	YC-12 INNER BODY	1PC	
8	"Y"TER:96552BS-2	1PC	
9	MINI TIE:L=130mm	1PC	
10	LOCK BAG:250*110*0.04mm	1PC	
11	SLEEVE WHITE	1PC	

CORD MARKING:

PSE JET TAKAHAMA VCTF 3G 0.75mm² 20XX -F-

YUNG LI CO.,LTD	
Approved	Date
Checked	Date
Drawn	黃方 15.12.24
Cat. No.	YP-15G/YC-12
Customer	阿達特
Material	P.V.C
HEFT(g)	
Unit	mm
Rev.	B
Drawing No.	CY-P0335
P/N.	R427A218011



注:此图面所用材料需符合ROHS标准

- ① 5.5*1.7*23音叉車溝黑色半邊(內縮0.5MM),外模P-184號模(二次成型),用料外PVC60P黑色
- ② SR-BY-056 号模 (阿达特模号: 外模:SR-A004002/內模:SR-A003001-IN) (二次成型)外模用料 PVC75P黑色, 內模用料PVC25P黑色, 吊重:1米/20磅/60秒
- ③ UL 2468 22AWG(0.16*17) *2C BK OD:1.8*3.6 裁線長度:1560+10-0
- ④ PE无鐵芯扎帶10CM黑色
- ⑤ 1.8双钩机板端*2PCS(进文提供:P1815-A)
- ⑥ 單位:MM

一般公差表

10mm以下	±0.1mm	15mm以下	±0.08mm
20mm以下	±0.15mm	20mm以下	±0.08mm
30mm以下	±0.20mm	30mm以下	±0.08mm
100mm以下	±0.50mm	300mm以上	±1.2mm

料號 D1M19238620152001810

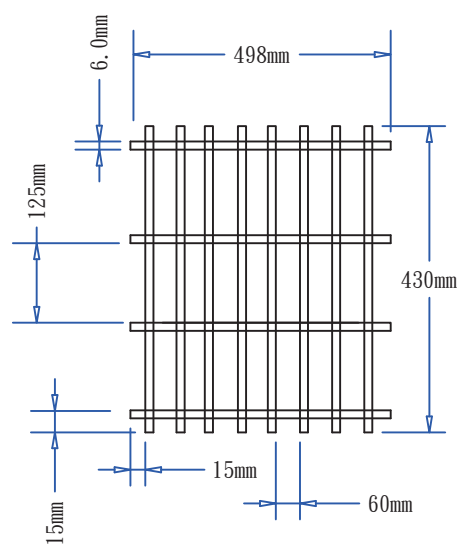
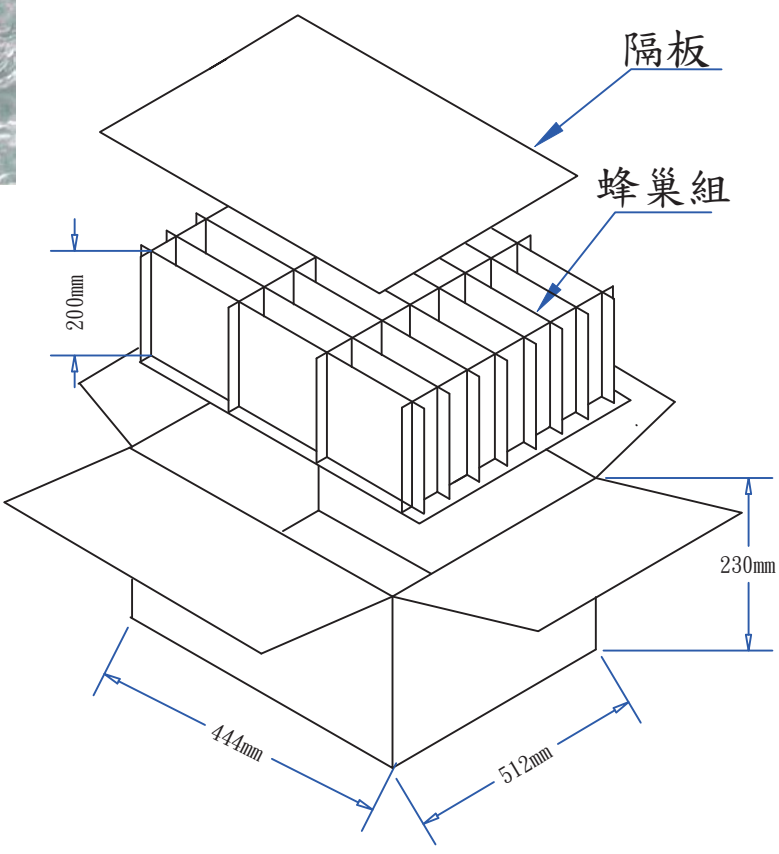
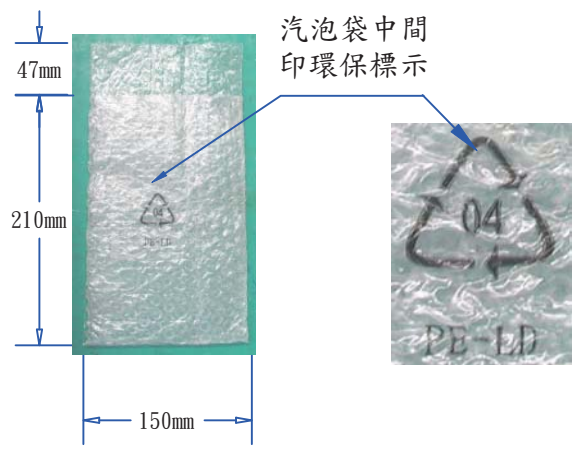
客戶 阿達特 制圖 吳遠松

頁數 01 審核

批準

01	新出	2024/02/19	泰岳電子有限公司
圖號	變更內容	日期	圖號
ADDT-7491		2024/02/19	

<input checked="" type="checkbox"/> 用膠帶封口	REVISIONS				
<input type="checkbox"/> 無需膠帶封口	SHOW	REV	DESCRIPTION	DATE	APPROVED
	△	A	初版制作	13/05/11	SUN
	△	B	更新格式	21/12/21	SUN



PIS36W00022 包裝(FOR 36W~65W)(K=K) 環保雙面氣泡袋-刀卡-21

- 9550022201** 1. 隔板:498(L)*430(W)*6mm K=K 2/21
- 2. 數量:7*3*1=21PCS
- 9520030701** 3. 外箱:512(L)*444(W)*230(H)mm K=K 1/21
- 9560023701** 4. 4刀卡:430(L)*200(W)*6mm(邊分) K=K 8/21
- 9560023801** 5. 8刀卡:498(L)*200(W)*6mm(邊分) K=K 4/21
- 9540000901** 6. 環保氣泡袋:210(L)*150(W)*47mm 無色透明,短邊單端開口,長邊中間印環保標志. 1/1
- 7. DC線材擺放在本體旁裝入氣泡袋中對折袋口,銘板與環保標示同一側,SR朝上裝入蜂巢內,AC線大頭朝上裝入蜂巢位於DC線側,方向必須統一.
- 8. 外箱標注為外徑尺寸
- 9. 上述所有材料須符合環保ROHS標準.



阿達特科技股份有限公司
Adapter Technology Co., Ltd.

DRAWING NO. PIS36W00022		APPROVAL 1 BY		
UNIT	MODEL NO. 36W-65W(附AC線)	APPROVAL 2 BY		
mm	FILE NO. ADT-0181	CHECKED BY(ENGINEER)	Sun	2021/12/21
SCALE	REV. B	SHEET	1/1	DRAWN BY Moon 2021/12/21
Apply for sales		Apply for engineer		Use the sales Use the engineer



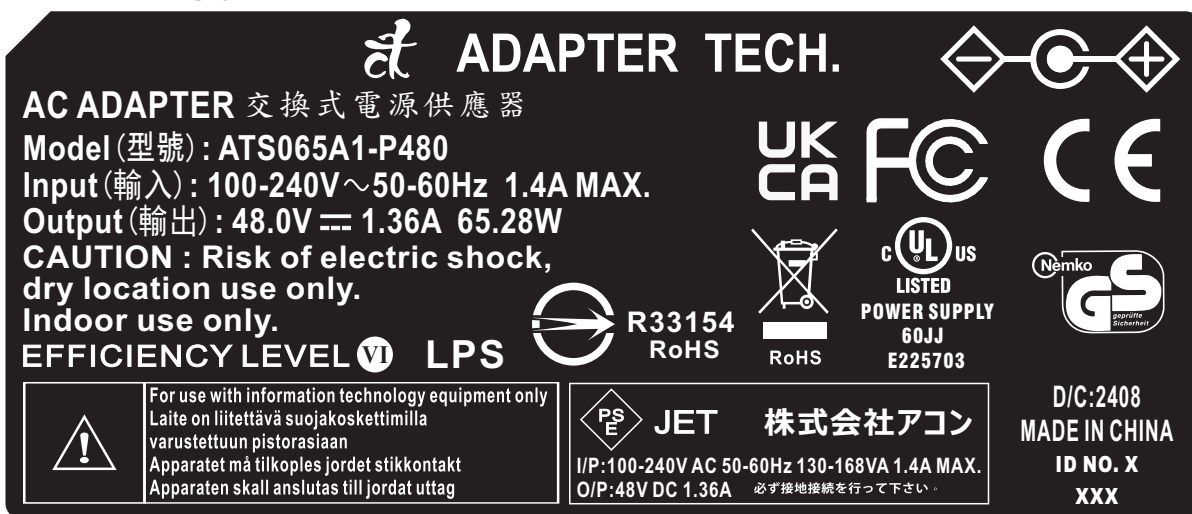
Adapter Technology Co., Ltd.

8.7 Spec. Label materials : Metalized polyester label (silver Gloss)
Color : Black Background with Silver Printing
Label dimension: 79(L)*33.5(W) 0.1mm
Label thickness : 75#

100%



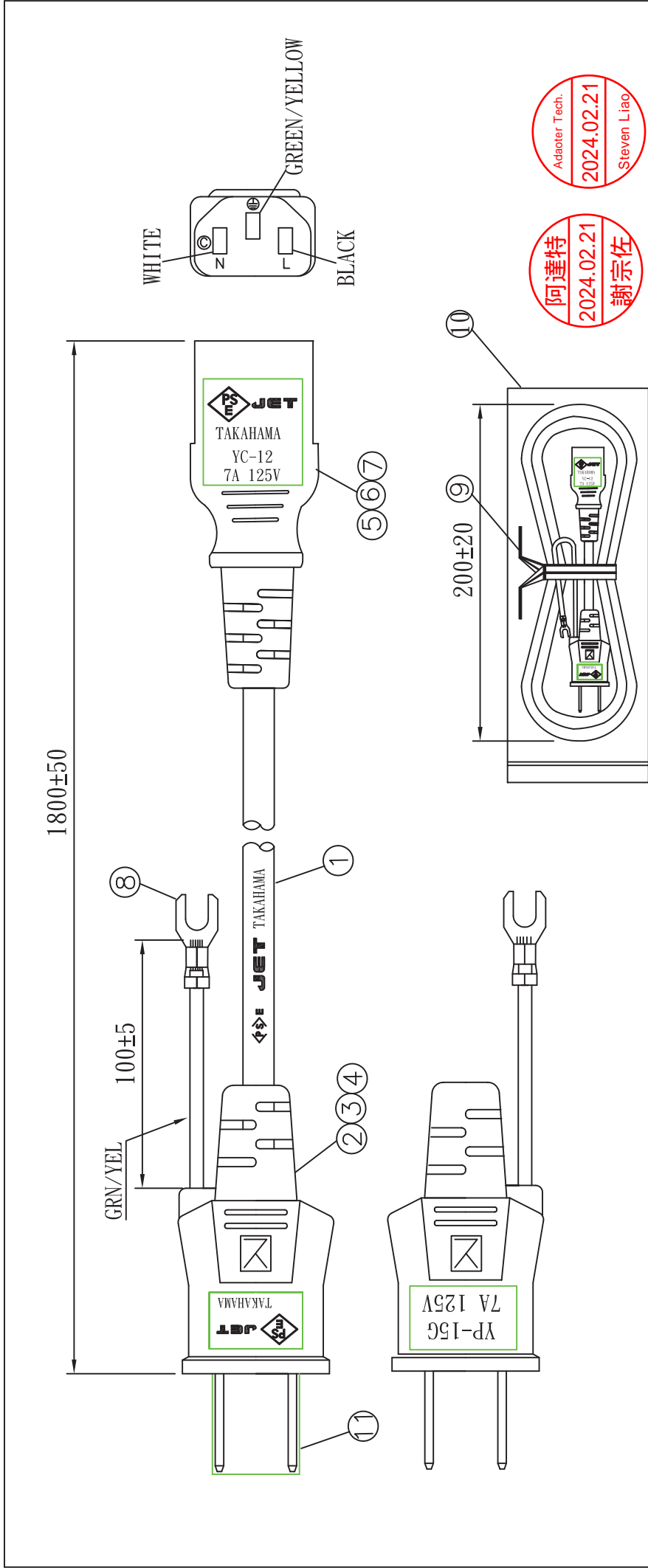
200%



"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.:9443131230

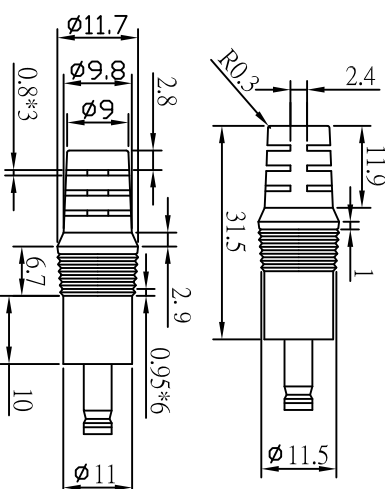
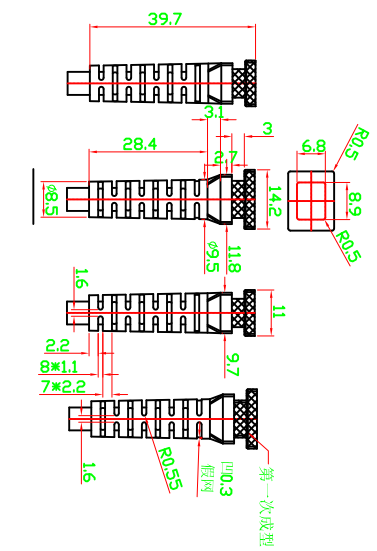
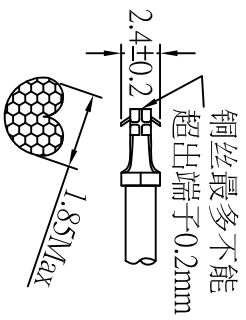
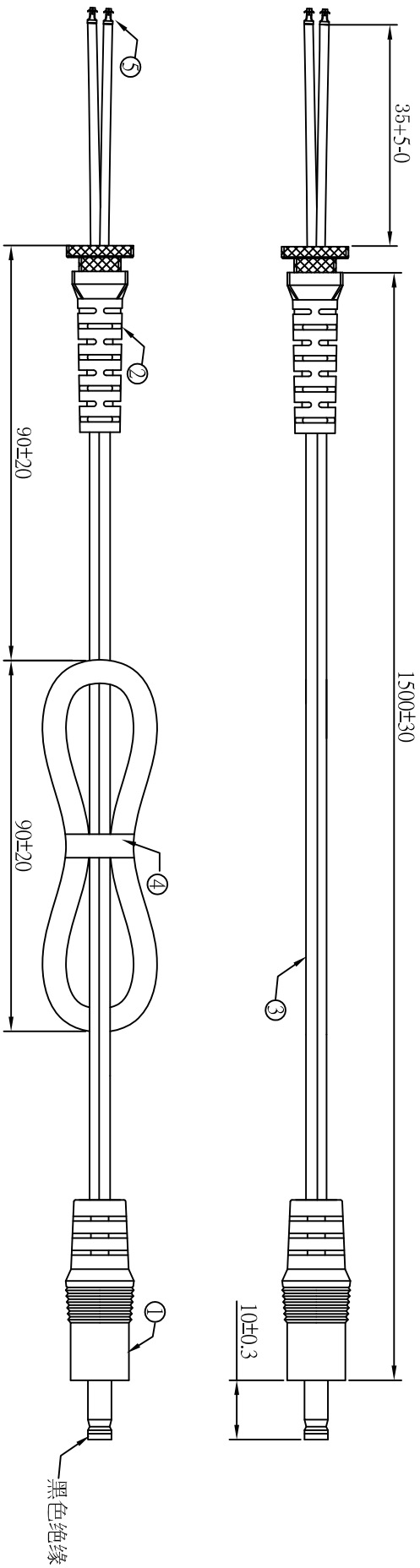


CORD MARKING:

PS JET TAKAHAMA VCTF 3G 0.75mm² 20XX -F-

NO.	SPECIFICATION	Q'TY	REMARK
1	VCTF 0.75/3C BLACK PSE	1PC	
2	YP-15G TER:98675BS-1	2PCS	
3	TP-15G INNER BODY	1PC	
4	YP-15G PVC PLASTIC:50P BLACK	23g/PC	
5	YC-12 PVC PLASTIC:50P BLACK	18g/PC	
6	YC-12 TER:97740PS-0	3PCS	
7	YC-12 INNER BODY	1PC	
8	"Y"TER:96552BS-2	1PC	
9	MINI TIE:L=130mm	1PC	
10	LOCK BAG:250*110*0.04mm	1PC	
11	SLEEVE WHITE	1PC	

YUNG LI CO.,LTD			
Approved	Date	Customer	阿達特
Checked	Date		
Drawn	黃方	15.12.24	
Cat. No.	YP-15G/YC-12	P/N.	R427A218011
Drawing No.	CY-P0335	Material	P.V.C
	Rev. B	Unit	mm
		HEFT(g)	



"+"	"-"
条纹	印字

注:此图面所用材料需符合ROHS标准

- 1 5.5*1.7*23音叉車溝黑色半邊(內縮0.5MM),外模P-184號模(二次成型),用料外PVC60P黑色

- 2 SR-BY-056 号模 (阿达特模号: 外模:SR-A004002/內模:SR-A003001-IN) (二次成型),外模用料

- 3 PVC75P黑色,內模用料PVC25P黑色,吊重:1米/20磅/60秒

- 4 UL 2468 22AWG(0.16*17)*2C BK OD:1.8*3.6 裁線長度:1560+10-0

- 5 PE无鐵芯扎帶10CM黑色

- 6 1.8双钩机板端*2PCS(进文提供:P1815-A)

- 單位:MM

2024.02.21
Adaoer Tech
Steven Liao

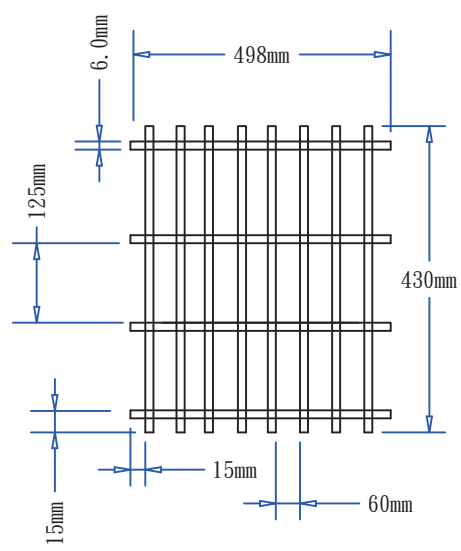
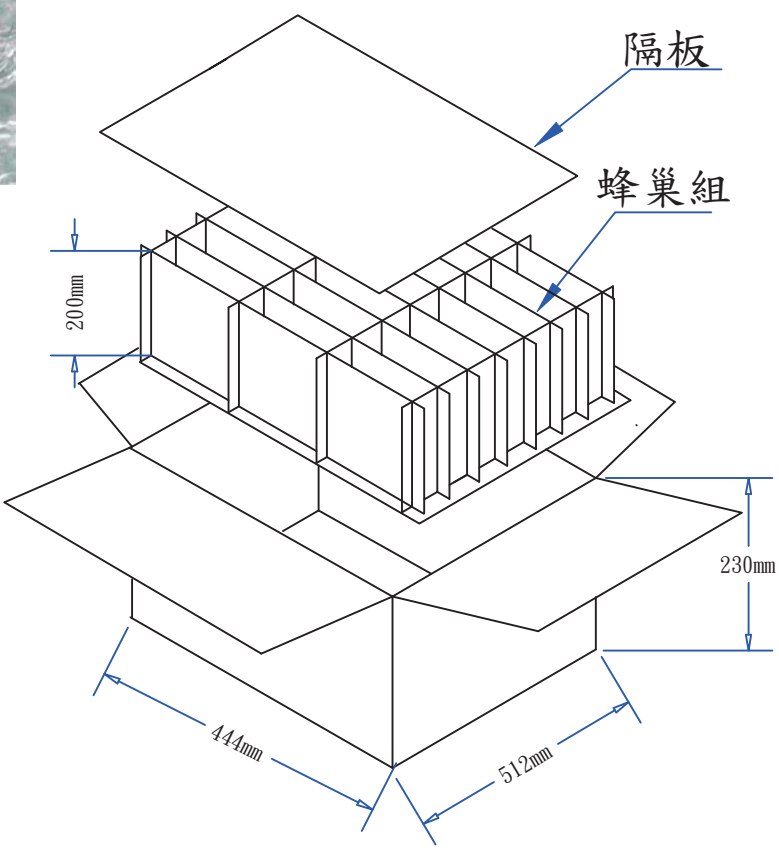
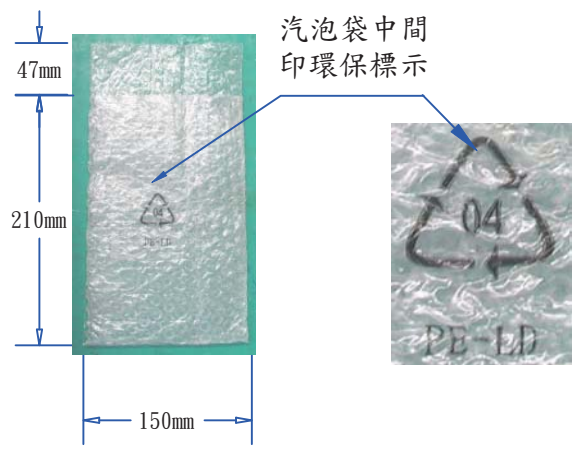
2024.02.21
阿達特
謝宗佐

一般公差表	
10mm以下	±0.1mm 15mm以下 ±0.8mm
20mm以下	±0.15mm 20mm以下 ±0.9mm
30mm以下	±0.20mm 30mm以下 ±1.0mm
100mm以下	±0.50mm 300mm以上 ±1.2mm

料號	D1M19238620152001810		
客戶	阿達特	制圖	吳遠松
頁數	01	審核	
		批准	

01	新出	2024/02/19	泰岳電子有限公司
圖號	變更內容	日期	ADDT-7491
圖號	日期	2024/02/19	

<input checked="" type="checkbox"/> 用膠帶封口	REVISIONS				
<input type="checkbox"/> 無需膠帶封口	SHOW	REV	DESCRIPTION	DATE	APPROVED
	△	A	初版制作	13/05/11	SUN
	△	B	更新格式	21/12/21	SUN



PIS36W00022 包裝(FOR 36W~65W)(K=K) 環保雙面氣泡袋-刀卡-21

- 9550022201** 1. 隔板:498(L)*430(W)*6mm K=K 2/21
- 2. 數量:7*3*1=21PCS
- 9520030701** 3. 外箱:512(L)*444(W)*230(H)mm K=K 1/21
- 9560023701** 4. 4刀卡:430(L)*200(W)*6mm(邊分) K=K 8/21
- 9560023801** 5. 8刀卡:498(L)*200(W)*6mm(邊分) K=K 4/21
- 9540000901** 6. 環保氣泡袋:210(L)*150(W)*47mm 無色透明,短邊單端開口,長邊中間印環保標志. 1/1
- 7. DC線材擺放在本體旁裝入氣泡袋中對折袋口,銘板與環保標示同一側,SR朝上裝入蜂巢內,AC線大頭朝上裝入蜂巢位於DC線側,方向必須統一.
- 8. 外箱標注為外徑尺寸
- 9. 上述所有材料須符合環保ROHS標準.



阿達特科技股份有限公司
Adapter Technology Co., Ltd.

DRAWING NO. PIS36W00022		APPROVAL 1 BY		
UNIT	MODEL NO. 36W-65W(附AC線)	APPROVAL 2 BY		
mm	FILE NO. ADT-0181	CHECKED BY(ENGINEER)	Sun	2021/12/21
SCALE	REV. B	SHEET	1/1	DRAWN BY
				Moon
				2021/12/21
Apply for sales		Apply for engineer		Use the sales