



Specification for Approval

Customer : Aikoh Electronics Corp.

Part Name : Medical Power Supply

Description : 12 Volts / 5 Amps

Model No. : ATM065T-P120 (Level VI)

Customer P / N : AKM-M12050

Product P / N : ATM065TP120515211

Issued Date : 11-Jun.-2020

Version : A1

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 ; 86-0769-8905-5998 ; 86-0769-8136-9008

FAX : 86-0769-8136-9009



60 W
Medical Power Supply
SPECIFICATION

Model No. : ATM065T-P120 (Level VI)
Description : 12Volts / 5Amps
Part No. : ATM065TP120515211
Version : A1
Date : 11-Jun.-2020



Table with 5 columns: Approved, Reviewed, Checked, Prepared, Sales. Each cell contains a red circular stamp with a signature and date.



1. Feature :

- ◆ **Input** : Universal 100 ~ 240 Vac / 50 ~ 60 Hz Input, without any slide switch.
- ◆ **Output** : +12V / 0~5A
- ◆ **Case Dimension** : 119 (L) *60 (W) * 36 (H) mm
- ◆ **Efficiency** : Eff (av) \geq 88%
- ◆ **Safety** : I.T.E:PSE/ CB / CCC / BSMI
Medical: UL / cUL/ T-mark
- ◆ **EMI** : CE / FCC 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 DoE VI / ErP (Stage 2) / GEMS / NRCAN / CEC / EPA

2. Input :

2.1 Voltage	Universal 100~240Vac, single phase
2.2 Frequency	50 ~ 60 Hz
2.3 Current	1.6A Max.
2.4 Inrush Current	200A Max(Mains electricity from wall)& 80A Max(AC SOURCE Chroma 6530) / 240Vac (Cold Start At 25 °C , Full Load)
2.5 Efficiency	Eff (av) \geq 88% (At 115 Vac & 230 Vac)
2.6 Power Consumption	Pi \leq 0.21 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	+12V \pm 5%
	Current	5A Max.
	Regulation	11.40Vmin. ~ 12.00Vtyp. ~ 12.60Vmax.
	Ripple & Noise	150mV Max.
	Total Power	60 W Max.

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



4. Protection :

4.1 Over Voltage Protection (OVP)	(V out *150%) Max.
4.2 Short Circuit Protection (SCP)	Automatic recovery after short-circuit fault being removed
4.3 Over Current Protection(OCP)	(I out *170%) 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 、 EMI and EMC Requirement :

5.1 Safety Requirement

- a. Safety : I.T.E:PSE/ CB / CCC / BSMI
 Medical: UL / cUL/ T-mark
- b. Dielectric Strength : Cut off current 10mA

(1)	Primary to Secondary	4000Vac for 1 Minute
(2)	Primary to Frame Ground	1500Vac for 1 Minute

c. Insulation Resistance :

(1)	Primary to Secondary	10 M ohm for 500Vdc
(2)	Primary to Frame Ground	10 M ohm for 500Vdc

5.2 EMI Requirement : CE / FCC Class B ; Conduction & Radiation Met.

5.3 Leakage Current : Less than 0.3mA

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

8. Mechanical :

8.1 Weight : 310 g Typical

8.2 Cable Type : Black UL1185 16AWG
(Wire + Plug)

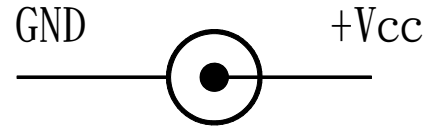
Plug : $\phi 5.5 * \phi 2.5 * 10.5 \text{mm}$
(Tuning Fork & Cannelure)

8.3 Cable Length : 1500mm

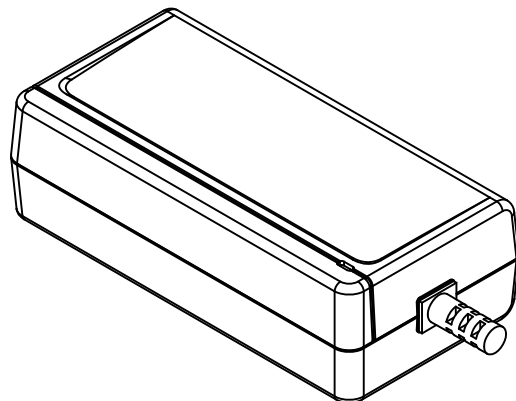
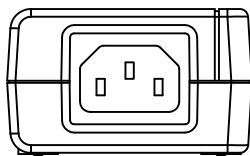
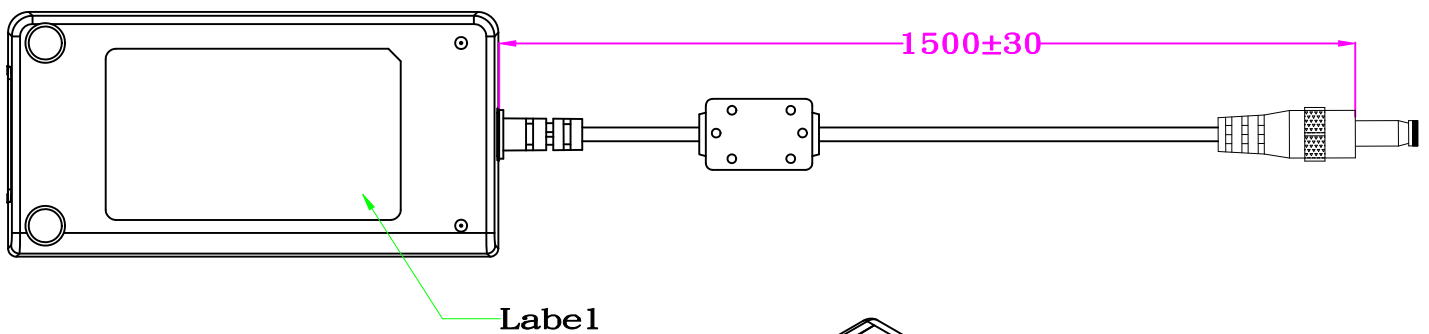
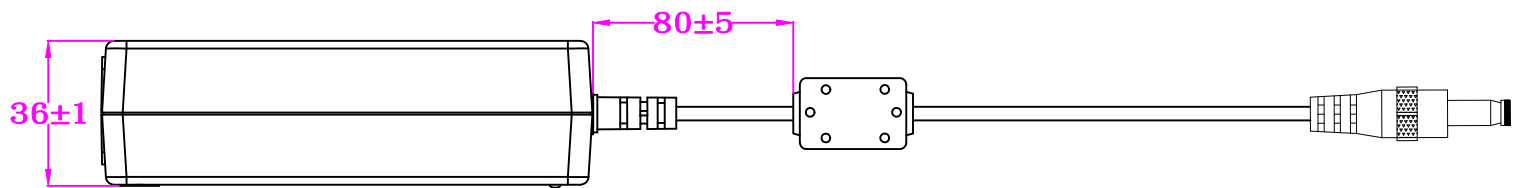
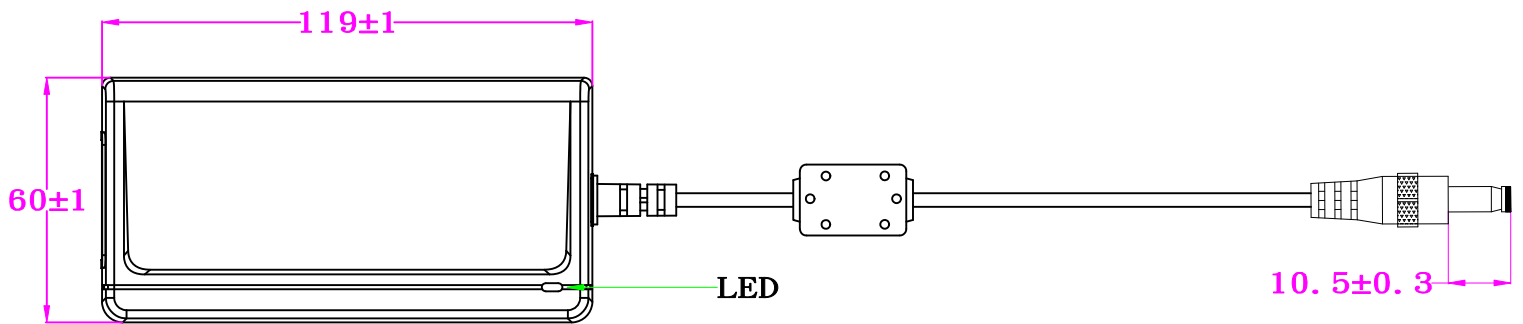
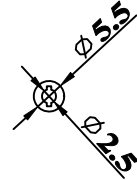
8.4 Case Dimension : 119mm(L)*60mm(W)*36mm(H)

8.5 Material Flammability : UL 94V-0

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



Output Cable Plug Pin Assignment

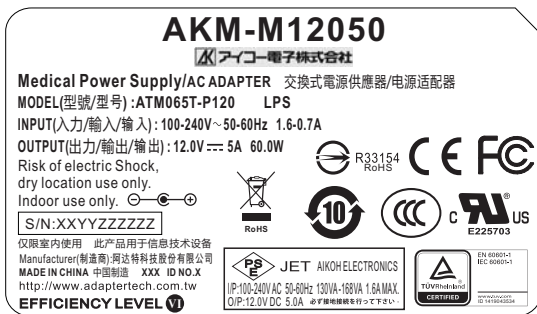




Adapter Technology Co., Ltd.

8.7 Spec. Label Materials : Metalized Polyester Label (Silver Gloss)
Color : Silver Background with Black Printing
Label Dimension : 70.8mm(L)*40.8mm(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.

S/N:XXYYZZZZZZ

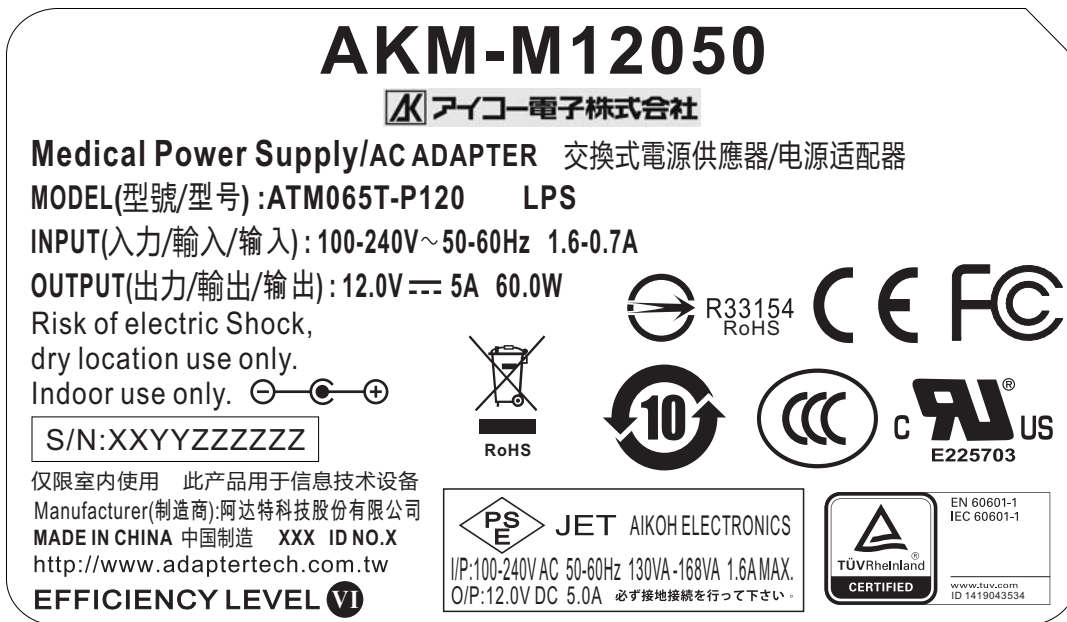
XX=Year(2 yard)

16:2016

YY=Week(2 yard)

ZZZZZZ=Serial number (6 yard)

200%



Label Part No.:9443111440

REV. : A



A. Line Regulation Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
90Vac / 50 % Load	11.40 V ~ 12.60V	12.18 V	12.16 V	12.15 V
115Vac / 50 % Load	11.40 V ~ 12.60V	12.18 V	12.16 V	12.15 V
132Vac / 50 % Load	11.40 V ~ 12.60V	12.18 V	12.16 V	12.15 V
180Vac / 50 % Load	11.40 V ~ 12.60V	12.18 V	12.16 V	12.15 V
230Vac / 50 % Load	11.40 V ~ 12.60V	12.18 V	12.16 V	12.15 V
264Vac / 50 % Load	11.40 V ~ 12.60V	12.18 V	12.16 V	12.15 V

B. Efficiency Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac	88 % Min.	89.10 %	89.07%	89.10 %
230Vac	88 % Min.	89.38 %	89.15%	89.47 %

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

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	11.40 V ~ 12.60V	12.33 V	12.33 V	12.31 V
115Vac / 50 % Load	11.40 V ~ 12.60V	12.18 V	12.16 V	12.15 V
115Vac / 100 % Load	11.40 V ~ 12.60V	12.03 V	12.00 V	11.98V
230Vac / 0 % Load	11.40 V ~ 12.60V	12.25 V	12.33 V	12.31 V
230Vac / 50 % Load	11.40 V ~ 12.60V	12.18 V	12.16 V	12.15 V
230Vac / 100 % Load	11.40 V ~ 12.60V	12.03 V	12.00 V	11.98V



D. Ripple & Noise Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	150mV Max.	63.4 mV	60.8 mV	65.4 mV
230Vac / 100 % Load	150mV Max.	61.2 mV	62.1 mV	63.3 mV

E. Inrush Current

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
230Vac / 100 % Load	200A Max (Mains electricity from wall)	108A	123 A	131 A

F. Over Current Protection

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	(Iout *170%) Max.	122 %	120 %	121 %
230Vac / 100 % Load	(Iout *170%) Max.	121 %	122 %	123 %

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	≤ 0.21 W	0.05 W	0.05 W	0.05 W



INSTALLATION INSTRUCTION

Manufacturer: ADAPTER TECHNOLOGY CO LTD

Models: ATM065T-Px (where x = 120, 150, 180, 190, 240,300,360 or 480)

1. The switching power supply is intended used for medical electrical equipment.
The equipment has not been evaluated applied parts that suitable for direct patient contact! It shall be evaluated for the end system configuration.

2. Circuit diagrams, descriptions and component parts list will be made available only upon request when servicing is required. Please, contact the address below for related information.

ADAPTER TECHNOLOGY CO LTD

6F-9, No.258, Liancheng Rd., Zhonghe District, New Taipei City 235, Taiwan

3. Environmental conditions:

Transportation temperature, humidity, pressure	-20 to +80°C / 10% ~ 90 %, 540 ~ 1060 hPa
Storage temperature, humidity, pressure	-20 to +80°C / 10% ~ 90 %, 540 ~ 1060 hPa
Operation temperature, humidity, pressure	0°C ~ 40°C / 20% ~ 80 %, 540 ~ 1060 hPa

4. Although the equipment has been evaluated according to IEC60601-1-2. The EMC assessment shall be conducted for the end system configuration.

5. Input Rating: 100-240Vac, 50-60Hz, 1.6A-0.7A

6. The output load shall not exceed the rating:

Output:

Model	O/P Voltage	O/P Current
ATM065T-P120	12V	5A
ATM065T-P150	15V	4.34A
ATM065T-P180	18V	3.62A
ATM065T-P190	19V	3.43A
ATM065T-P240	24V	2.71A
ATM065T-P300	30V	2.17A
ATM065T-P360	36V	1.81A
ATM065T-P480	48V	1.36A

7. Any inspection and maintenance tasks must be carried out only by authorized by the manufacturer service personnel.

8. The classification of the equipment is:

- Class I
- The equipment has not been evaluated applied parts
- Not AP or APG type
- Not intended for use in the presence of flammability an aesthetic mixture with air or with oxygen or nitrous oxide
- Intended for continuous operation
- Protection class IPX0

The equipment provided with two fuses (F1, F2) on line and neutral conductor, fuse rated T3.15AL, 250Vac, size approximately 8.5 x 8.5 x 4.0 mm.


9. Expected service life of the power supply: 100,000 hours

10. WARNING: To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth

11. WARNING: Do not modify this equipment without authorization of the manufacturer

12. The requirements of IEC/EN 60601-1 shall be observed during the installation in the final system.

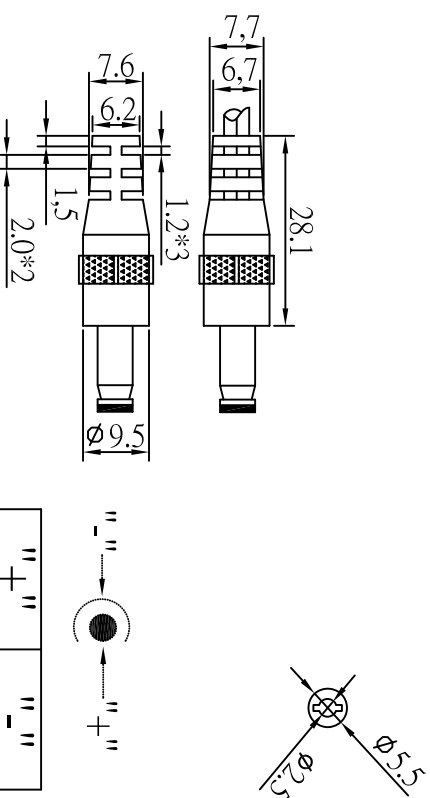
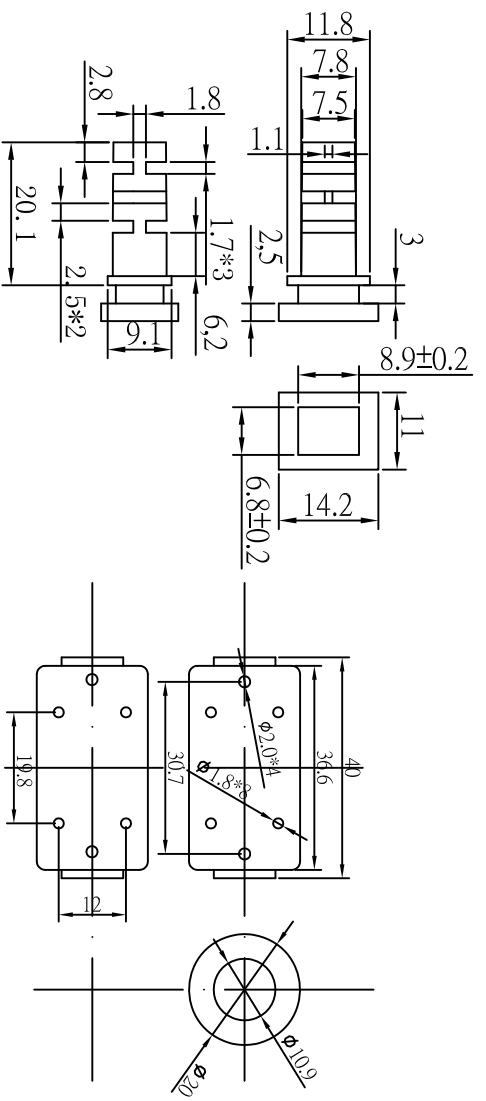
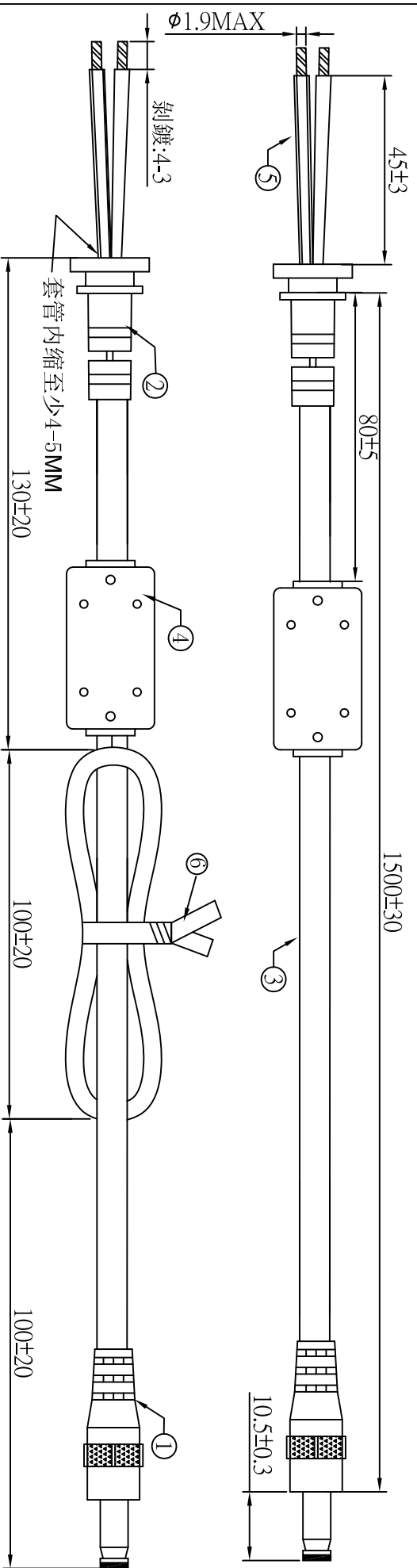


13.  "Do not dispose this product in the household waste, please, follow the respective national law for proper disposal."

ATM065T-P系列外箱印刷:

側嚙:上方印刷圖示





" + "	" - "
芯线	隔离线

注意:此圖面所需材料符合"ROHS"標準

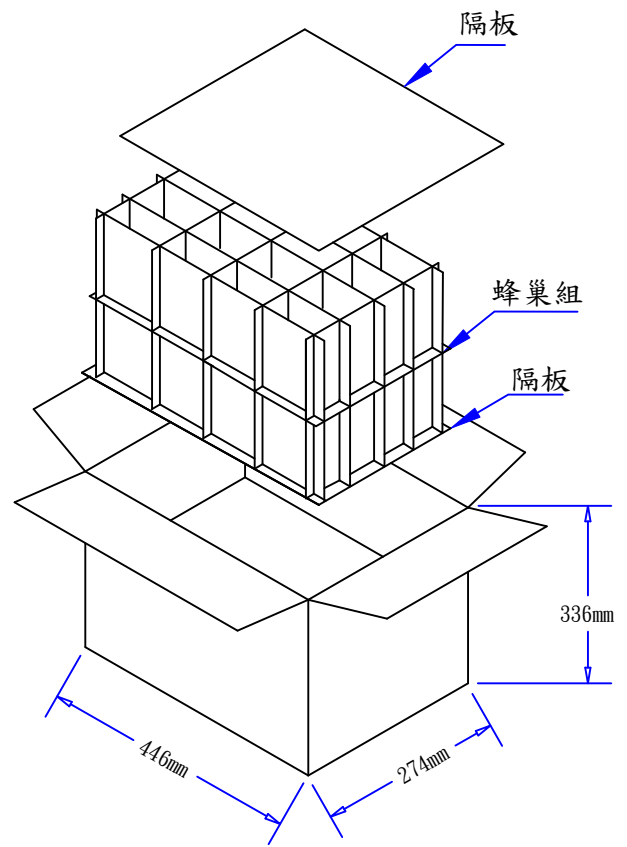
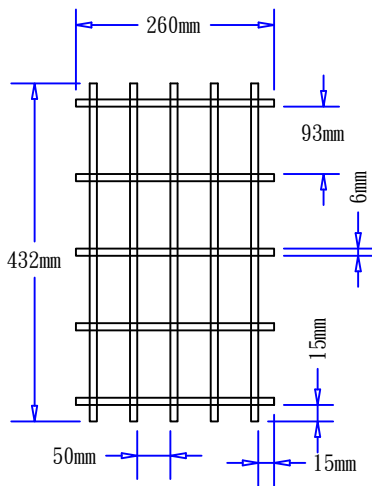
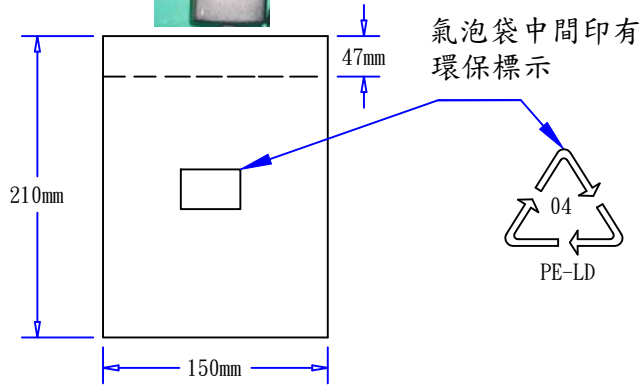
- ① 5.5*2.5*21 音叉车沟黑色半边,外模P-69號模(二次成型),用料外PVC60P黑色
- ② SR-310號模(包胶),用料PVC75P黑色,吊重:1米/20磅/60秒
- ③ UL 1185 16AWG(0.16*65) 单芯隔离线加粗 (0.16*65) BK亮 OD:4.2 裁線長度:1560+10/-0
- ④ 鐵芯規格:1.4*28.5*6.35,外模SR-118號模用料PVC60P黑色
- ⑤ 热缩套管 ϕ 2.0*51
- ⑥ PE无鐵芯 紫帶10CM黑色
- ⑦ 單位:MM

一 般 公 差 表	
1.0mm以下	±0.6mm
2.0mm以下	±0.8mm
3.0mm以下	±1.0mm
10.0mm以下	±1.2mm

料號	阿達特	制圖	王炜鑫
客戶	阿達特	審核	
頁數	01	批准	

01	新出	2020/06/10	泰岳電子有限公司
圖號	變更內容	日期	圖號
ADT-6354		2020/06/10	

REVISIONS				
SHOW	REV	DESCRIPTION	DATE	APPROVED
△	A	依阿達特尺寸, 初版制作	2009/06/07	
△	A	由中分包裝方式改為邊分方式, 材質改為K-K	2013/06/04	



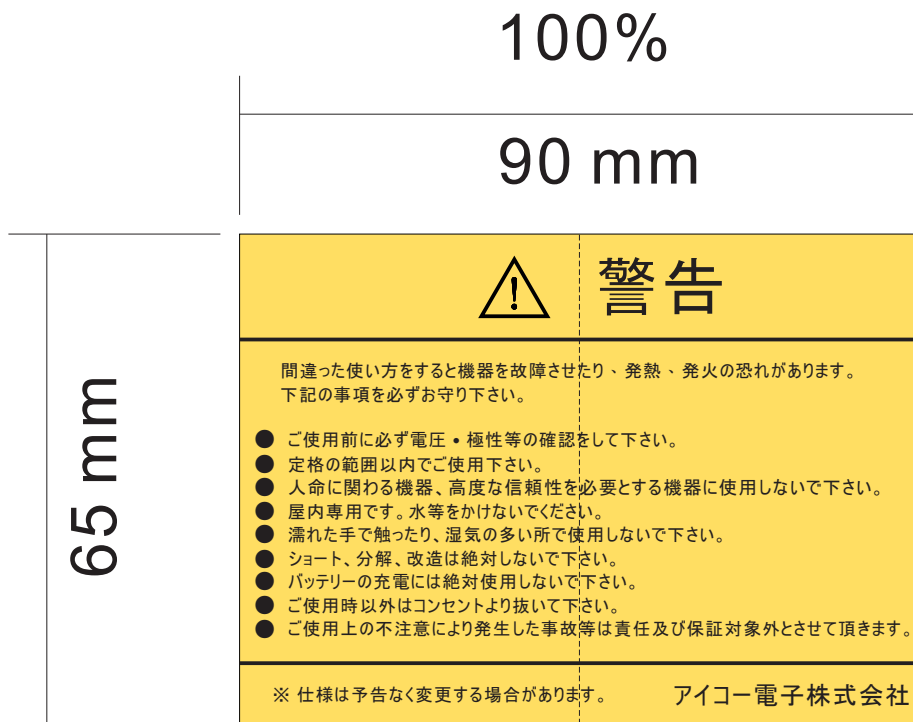
PIS36W00023 包裝(FOR 36W~65W)(K=K) 環保雙面氣泡袋-刀卡-32

- [9550022501](#) 1. 隔板: 432*260*6mm K=K 3/32
- 2. 數量: 4*4*2=32PCS
- [9520031001](#) 3. 外箱: L*W*H=446*274*336mm K=K 1/32
- [9560023901](#) 4. 五刀卡: 432*150*6mm(邊分) K=K 10塊/32
- [9560024001](#) 5. 五刀卡: 260*150*6mm(邊分) K=K 10塊/32
- [9540000901](#) 6. 環保氣泡袋: 210*150*47mm 無色透明, 單端開口, 中間位置印環保標志
- 7. 外箱標注為外徑尺寸.
- 8. 成品裝入氣泡袋後封口, 銘板面需位於環保標志側, 再豎向側立裝入蜂巢內, 方向須統一.
- 9. 上述物品須完全符合環保ROSH標準.

阿達特科技股份有限公司

DRAWING NO. PIS36W00023		APPROVAL 1 BY	
UNIT	MODEL NO. 36W-65W(環保氣泡袋)	APPROVAL 2 BY	
mm	FILE NO. ADT-0121-01	CHECKED BY(ENGINEER)	
SCALE	REV. A	SHEET 1/1	DRAWN BY 李金朝 DATE: 2013/06/04

8.7 Spec. Label Dimension : 90mm(L)*65mm(W)+/-0.1mm



此虛線為對折線，不需印刷。
對折方式：字朝外對折
放入氣泡袋內

Label Part No. : 9476000300



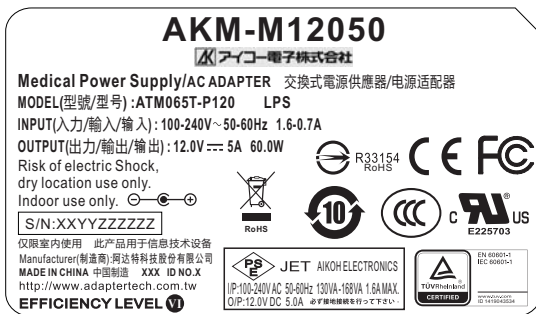
圖面僅供參考



Adapter Technology Co., Ltd.

8.7 Spec. Label Materials : Metalized Polyester Label (Silver Gloss)
Color : Silver Background with Black Printing
Label Dimension : 70.8mm(L)*40.8mm(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.

S/N:XXYYZZZZZZ

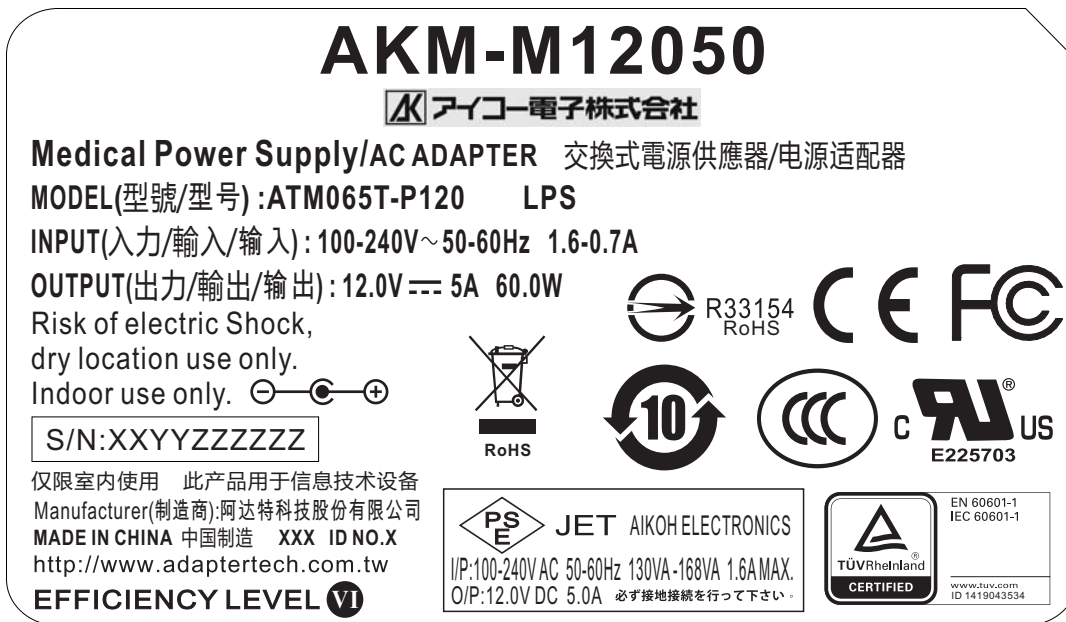
XX=Year(2 yard)

16:2016

YY=Week(2 yard)

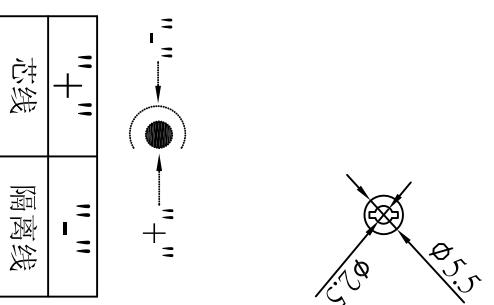
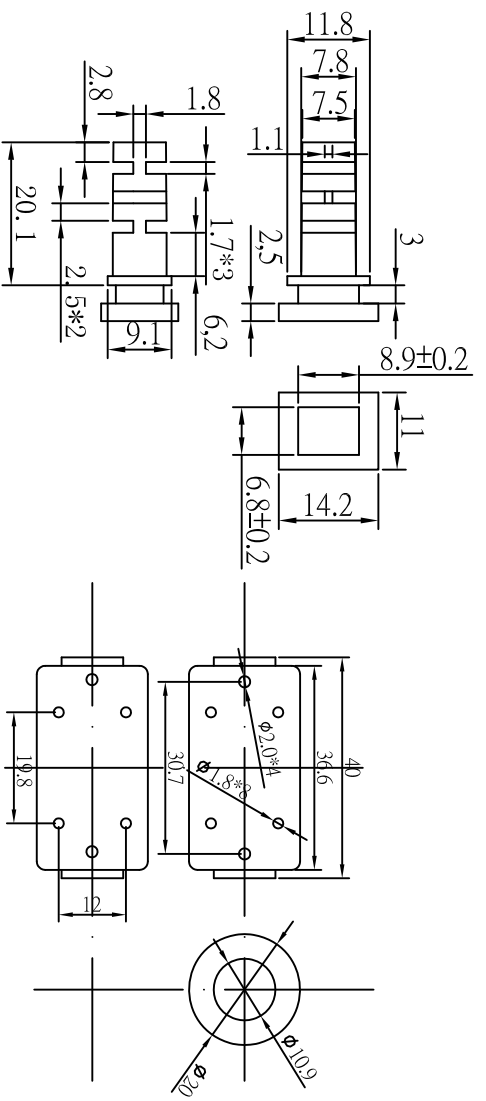
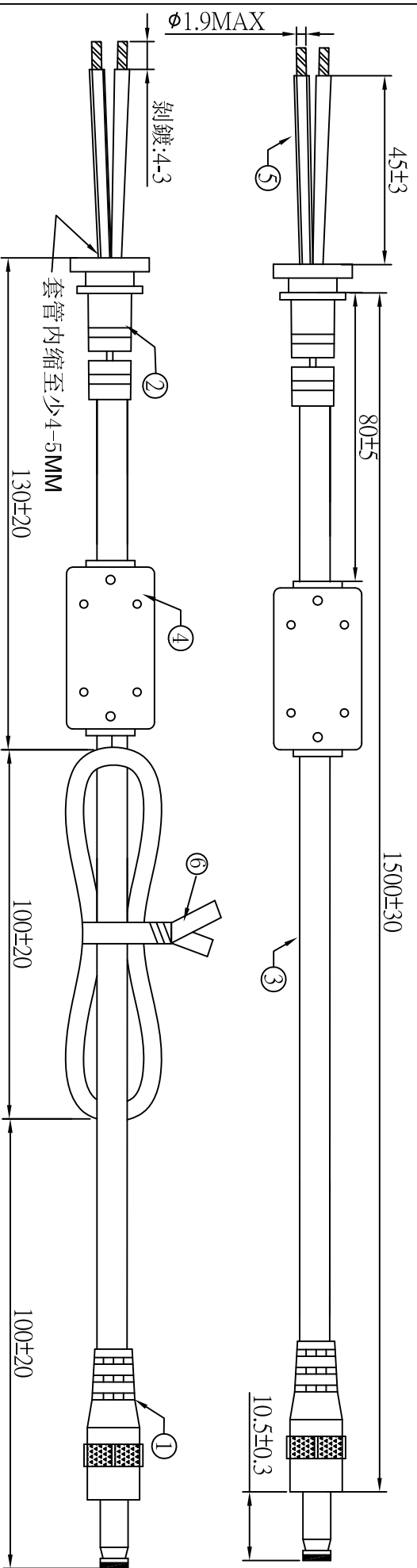
ZZZZZZ=Serial number (6 yard)

200%



Label Part No.:9443111440

REV. : A



注意:此圖面所需材料符合"ROHS"標準

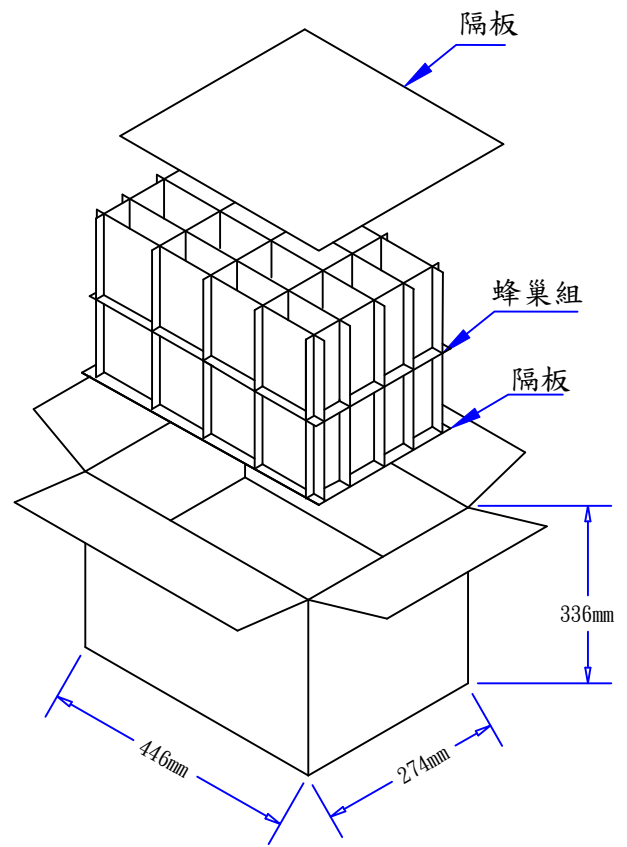
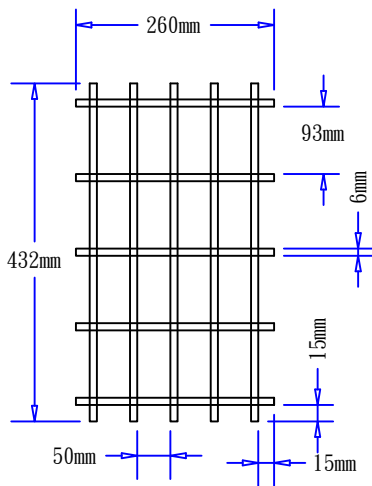
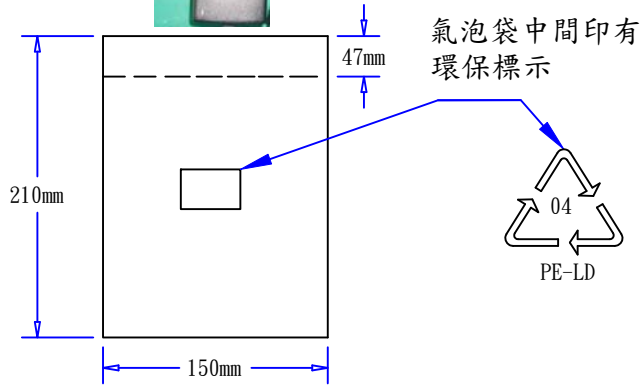
- ① 5.5*2.5*21 音叉车沟黑色半边,外模P-69號模(二次成型),用料外PVC60P黑色
- ② SR-310號模(包胶),用料PVC75P黑色,吊重:1米/20磅/60秒
- ③ UL 1185 16AWG(0.16*65) 单芯隔离线加粗 (0.16*65) BK亮 OD:4.2 裁線長度:1560+10/-0
- ④ 鐵芯規格:1.4*28.5*6.35,外模SR-118號模用料PVC60P黑色
- ⑤ 热缩套管φ2.0*51
- ⑥ PE无鐵芯 紫帶10CM黑色
- ⑦ 單位:MM

一	般	公	差	表
1.0mm以下	±0.1mm	1.50mm以下	±0.6mm	
2.0mm以下	±0.15mm	2.0mm以下	±0.8mm	
3.0mm以下	±0.2mm	3.0mm以下	±1.0mm	
10.0mm以下	±0.5mm	30.0mm以上	±1.2mm	

料號	阿達特			制圖	王炜鑫
客戶	阿達特			審核	
頁數	01			批准	

01	新出	2020/06/10	泰岳電子有限公司
版次	變更內容	日期	圖號 ADT-6354 日期 2020/06/10

REVISIONS				
SHOW	REV	DESCRIPTION	DATE	APPROVED
△	A	依阿達特尺寸, 初版制作	2009/06/07	
△	A	由中分包裝方式改為邊分方式, 材質改為K-K	2013/06/04	



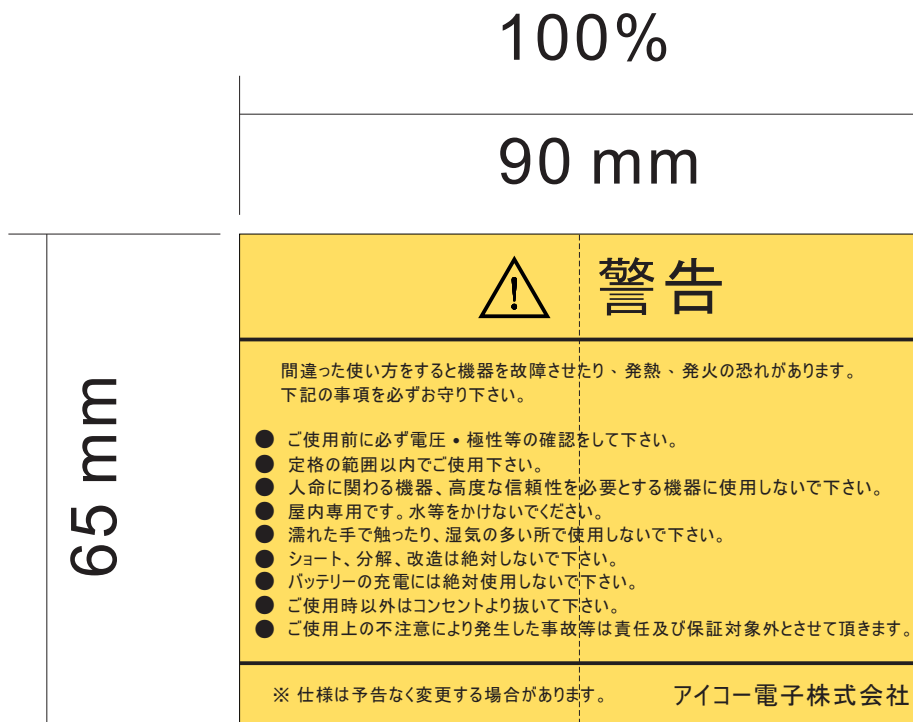
PIS36W00023 包裝(FOR 36W~65W)(K=K) 環保雙面氣泡袋-刀卡-32

- [9550022501](#) 1. 隔板: 432*260*6mm K=K 3/32
- 2. 數量: 4*4*2=32PCS
- [9520031001](#) 3. 外箱: L*W*H=446*274*336mm K=K 1/32
- [9560023901](#) 4. 五刀卡: 432*150*6mm(邊分) K=K 10塊/32
- [9560024001](#) 5. 五刀卡: 260*150*6mm(邊分) K=K 10塊/32
- [9540000901](#) 6. 環保氣泡袋: 210*150*47mm 無色透明, 單端開口, 中間位置印環保標志
- 7. 外箱標注為外徑尺寸.
- 8. 成品裝入氣泡袋後封口, 銘板面需位於環保標志側, 再豎向側立裝入蜂巢內, 方向須統一.
- 9. 上述物品須完全符合環保ROSH標準.

阿達特科技股份有限公司

DRAWING NO. PIS36W00023		APPROVAL 1 BY	
UNIT	MODEL NO. 36W-65W(環保氣泡袋)	APPROVAL 2 BY	
mm	FILE NO. ADT-0121-01	CHECKED BY(ENGINEER)	
SCALE	REV. A	SHEET 1/1	DRAWN BY 李金朝 DATE: 2013/06/04

8.7 Spec. Label Dimension : 90mm(L)*65mm(W)+/-0.1mm



此虛線為對折線，不需印刷。
 對折方式：字朝外對折
 放入氣泡袋內

Label Part No. : 9476000300



圖面僅供參考

使用上の注意事項

- このアダプターは屋内専用となります。
- 定格の範囲内でご使用下さい。
- 周囲温度40℃以上の高温環境下で使用しないで下さい。
- 湿気の多い場所でのご使用や、水などをかけたり濡れた手で触るなどしないで下さい。
- バッテリーの充電には使用しないで下さい。
- ショート、分解などの改造はしないで下さい。
- 人命に関わる機器、高度な信頼性を必要とする機器に使用しないで下さい。
- 使用上の誤りや取り扱いの不注意により発生した事故等は保証を致しません。
- ご使用の際は機器側との適合性について十分ご注意下さい。
- 不使用时は必ずコンセントより抜いて下さい。

お願い事項

- chemSHERPA 等の記入系対応不可となります。
- 仕様書やその他資料類含め英文又は中文のみ対応可能となります。
- RoHS：メーカー書式の RoHS 証明書のみ対応可能です（中文）
- 万一不具合の際は解析調査後、修理又は交換或いは返金対応となります（販売後 1 年以内の物）
- 4M 変更連絡の対応は不可となります。
- ラベル内に記載の安規マークは PSE のみ保証となり、その他の国の安規マーク期限切れの際、更新するしないは製造メーカーの判断に委ねられます。
- 保証期間は 1 年間となります。
- 仕様は予告なく変更する場合がございます。