

## ELECTRICAL PERFORMANCE / 電器性能

### 1. SAFETY STANDARD / 安規標準

1.1 The green mode power supply shall be certified by the following international regulatory standards :  
 電源應符合下列的國際標準 :

	Country	CertifiedStatus	Standard / 標準
PSE	Japan / 日本	APPROVED	J61558,J60950, J55012
UL	USA / 美國	APPR VED	UL1310,UL 60950-1: 2007
cUL	CAN / 加拿大	APPROVED	CAN/CSA-C22.2 No. 60950-1 (2007),61558-1
FCC	USA / 美國	APPROVED	Part 15 Class B
<b>CE</b>	<b>Europe / 歐洲</b>	<b>APPROVED</b>	<b>EN 55022:55024/EN 60950-1/EN 61558-1/EN 61558-2-16</b>
<b>GS</b>	<b>Europe / 德國</b>	<b>APPROVED</b>	<b>EN 60950-1/EN 61558-1/EN 61558-2-16/AfPS GS 2 14</b>
BS	UK / 英國	APPROVED	BS EN 60950-1/BS EN 61558-1/BS EN 61558-2-16
SAA	Australia / 澳洲	APPROVED	AS/NZS 60950-1:2011& AS/NZS 3112:2011
CCC	CN / 中国	APPROVED	GB4943-2001,GB1317625.1-2003

### 2. INPUT FEATURE / 輸入特性

2.1 INPUT VOLTAGE RANGE : **90Vac** to **264Vac**. 輸入電壓範圍可以從 **90Vac** 到 **264Vac**.

2.2 RATED INPUT VOLTAGE : **100Vac** to **240Vac**. 額定輸入電壓從 **100Vac** 到 **240Vac**.

2.3 INPUT FREQUENCY RANGE : **47Hz** to **63Hz**. 輸入頻率範圍從 **47Hz** 到 **63Hz**.

2.4 INPUT CURRENT : **1.0A** max. (I/P100-240Vac). 最大輸入電流不超過 **1.0A** (輸入條件 100-240Vac)

2.5 INRUSH CURRENT : **100A** max. at **100-240Vac** input for a cold start at 25°C. 在標準開機條件下 · 最大浪湧電流不超過 **100A** (輸入條件 **100-240Vac**).

2.6 EFFICIENCY : Higher than **87.51%** at 100-240Vac input and output (25%, 50%, 75% & 100% load.).  
 效率高於 **87.51%** (輸入 100-240Vac · 輸出 25%, 50%, 75% & 100% 負載)

### 3. OUTPUT FEATURE / 輸出特性

RATED OUTPUT / 額定輸出 : <b>19VDC</b>	SPEC. LIMIT / 規格限定		REMARK / 備註
	Min. value	Max. value	
Output regulation / 輸出電壓規格	<b>18.05V DC</b>	<b>19.95VDC</b>	<b>≤ +/-5%</b>
Output load / 輸出負載規格	<b>0.0A</b>	<b>2.0A</b>	
No Load Power consumption/空載功耗	-	<b>0.1W</b>	<b>Input voltage:100-240VAC</b>
Ripple and Noise / 輸出紋波及雜訊	-	<b>190mVp-p</b>	<b>20MHz Bandwidth 10uF Ele. Cap. &amp; 0.1uF Cer. Cap</b>
Output Overshoot / 輸出過沖幅度	-	<b>10%</b>	
Line regulation / 電壓調整率	-	<b>+/- 1%</b>	
Load regulation / 負載調整率	-	<b>+/-5%</b>	
Turn-on delay time / 開機延遲時間	-	<b>3000mS</b>	
Hold up time / 關機維持時間	<b>10mS</b>	-	<b>Input volta e:115Vac</b>
	<b>20mS</b>	-	<b>Input voltage:230Vac</b>

### 4. ELECTRIC WITHSTANDING STRENGTH(HI-POT) / 絕緣介電強度 (耐壓) Primary to Secondary

**AC3000V/10mA**, **1** minute for type test. **3** second for production. 一次側對二次側 : **AC3000V/10mA**  
 標準測試 **1** 分鐘 · 量產測試 **3** 秒鐘.

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### 5. PROTECTION FEATURE / 保護特性

#### 5.1 OVER - CURRENT PROTECTION / 過電流保護：

The green mode power supply shall be hiccupped when any output operating in overload condition(set@ Max load **120 ~ 160 %**) under any line condition for an indefinite period of time. The power supply shall be self - recovery when the fault condition is removed.在任何時候任何輸入條件，當輸出操作在超載條件最大電源的 (**120 ~ 160 %**) 時，電源供應器將進入打嗝模式，當故障被移走後，電源要能自動恢復到正常。

#### 5.2 SHORT CIRCUIT PROTECTION / 輸出短路保護：

The power supply shall be hiccupped and no damage shall occur when any output operating in a short circuit condition under any line condition for an indefinite period of time. The power supply shall be self - recovery when the fault condition is removed.在任何時候，任何輸入條件下，當輸出操作在短路情況下，電源供應器將進入打嗝模式，當故障消失後，電源要能自動恢復正常。

### 6. ENVIRONMENTAL CONDITIONS / 環境條件

#### 6.1 OPERATING / 操作條件：

The power supply shall be capable of operating continuously in any mode without performance deterioration in the following environmental conditions.在下列環境條件下，電源供應器要能夠連續操作在各種模式，且不能造成性能的退化。

6.1.1 Ambient Temperature : - 20°C ~ 40°C 環境溫度： - 20°C ~ 40°C

6.1.2 Relative Humidity : 10% ~ 90% 相對濕度： 10% ~ 90%

6.1.3 Vibration : 1.0mm, 10 - 25Hz · 15 minutes per cycle for each axis (X, Y, Z)

6.1.4 Cooling : The power supply will operate with convection cooling .Blocking of vents must not cause damage to The power supply. 電源供應器將操作在對流冷卻的環境下，即使將通風口阻塞電源也不允許有任何損傷發生。

#### 6.2 NON - OPERATING / 非操作條件：

The power supply shall be capable of withstanding the following environmental conditions extended periods of time, without sustaining electrical or mechanical damage and subsequent operational deficiencies : 電源供應器要能夠長期的經受下列的環境條件，且不允許有電氣級機械方面的損傷和併發的操作的缺失。

6.2.1 Ambient Temperature : - 30°C ~ 70°C 環境溫度： - 30°C ~ 70°C

6.2.2 Relative Humidity : 10% ~ 90% 相對濕度： 10% ~ 90%

6.2.3 Vibration and Shock / 振動和衝擊

The power supply shall be designed to withstand normal transportation vibration per MIL-STD-810D, method 514 and procedures X, as it s mounted in the chassis assembly and packed for shipping.電源供應器裝配及出貨的包裝設計，均要能承受正常運輸的振動，並符合 MIL - STD - 810D 方法 514 和程式 X。

### 7. EMC STANDARDS / 電磁相容性標準

#### 7.1 EMI STANDARDS / EMI 標準

The power supply met the radiated and conducted emission requirements for FCC CLASS B,EN55022 CLASS B.本電源供應器符合輻射及傳導要求，滿足 FCC CLASS B, EN55022 CLASS B.

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## ELECTRICAL PERFORMANCE / 電器性能

### 7.2 EMC STANDARDS / EMC 標準

The power supply shall meet the following EMC standards : 本電源供應器滿足下列 EMS 標準

EN 55022: 2010+AC: 2011, EN55024:2010; FCC Part 15 Subpart B, IC ICES-003

### 8. Energy Saving (Level VI / Level 6) 符合節能 6 級標準 · 測試標準如下 :

8.1 US DOE: Office of Energy Efficiency and Renewable Energy 10 CFR Parts 429 and 430

8.2 CEC: Appliance Efficiency Regulations (California Code of Regulations, Title 20, Sections 1601 through 1608) dated July 2015

8.3 NRCAN: Amendment 11 to the Energy Efficiency Regulations for External Power Supplies, published on October 12, 2011 in the Canada Gazette, Part II

8.4 Other (Specify): International Efficiency Marking Protocol for External Power Supplies - Level VI

8.5 Other (Specify): Australian (GEMS) and New Zealand : AS/NZS4665.1-2005+A1:2009;  
AS/NZS4665.2-2005+A1:2009

8.6 Other (Specify): EU Directive for Energy-related Products ErP 2009/125/EC and Implementing Measure (IM) no. EC278/2009 for External Power Supply

8.7 Other (Specify): Code of Conduct on Energy Efficiency of External Power Supplies Version 5

### 9. RELIABILITY AND QUALITY CONTROL / 可靠性及品質控制

9.1 BURN-IN / 燒機 The power supply shall undergo a minimum of 2-4 hours Burn-In test under full load at 40°C ~ ±5°C 電源應在 40°C ~ ±5°C 和滿載條件下烘烤 2-4 小時。

9.2 COMPONENT DERATING / 元件溫度要求 Semiconductor junction temperatures shall not exceed the manufacturer' s maximum thermal rating. 半導體結溫不允許超過其製造商要求的最大溫度值。

9.3 QUALITY GUARANTEE/品質保證 : 2 years warranty. 2 年品質保固。

10.WEIGHT / 重量 The weight of the power supply shall be about 102g 電源的重量大約為 102g.

11. MECHANICAL REQUIREMENT / 結構參數 The power supply size : L87.5\*W42.5\*H31mm. 外型尺寸 : L87.5\*W42.5\*H31mm.

12. INSULATION RESISTANCE / 絕緣阻抗 Input to output : 50M OHM(500VDC) 輸入對輸出 50 兆 歐姆 ( 500VDC )

13.LEAKAGE CURRENT / 漏電流 The leakage current shall be less than 0.25mA for class II when power supply is operated maximum input voltage and maximum load. 當電源供應器操作在最大輸入及最大負載情況下 · 其漏電流應小於 0.25mA, 滿足 class II 等級。

### 14. MAJOR MEASURE EQUIPMENT / 主要測量設備

A. AC SOURCE / 交流輸入電源 : AFC - 500W

B. POWER METER / 電源功率計 : CHROMA 2100

C. ELECTRONIC LOAD / 電子負載 : PRODIGIT 3310C

D. OSCILLOSCOPE / 存儲示波器 : TDS-2012B

E. DIGITAL MULTIMETER / 數字式萬用表 : Fluke 4.5

F. DC POWER / 直流輸入電源 : WYK - 6030

G. HI - POT TESTER / 耐壓測試儀 : LANKE ELECTRONICS 7112

H. INSULATION RASISTANCE TESTER / 絕緣電阻表 : YD2681A

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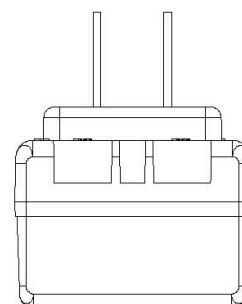
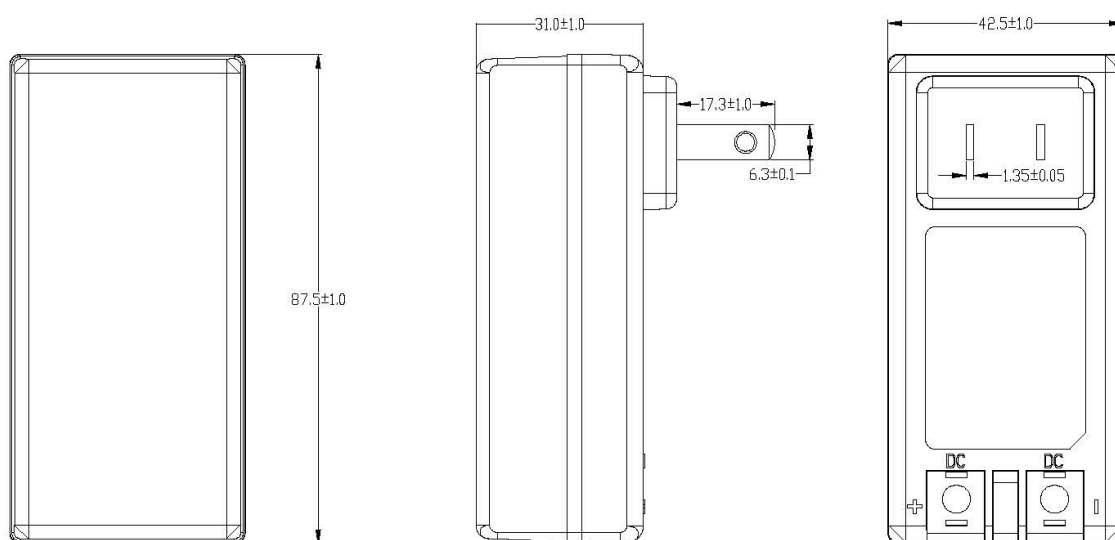
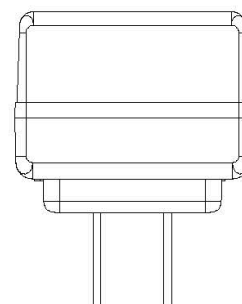
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# PRODUCT OUTLINE DIMENSION / 產品外觀尺寸

Unit / 單位:mm

Tolerance / 公差:±1

Color/顏色 : 黑色/Black



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## RATING LABEL / 銘牌

Unit / 單位:mm

Tolerance / 公差:+0/-0.2mm



注：

- 1.黑底灰字- Black ground Grey text.
- 2.鐫雕清晰，耐擦拭-Silk Screen printing, wipe resistance。
- 3.符合環保要求-Compliance to RoHS.
4. YYMM製造周期，年月-Cycle: YYMM,YY of the Year,MM of the Month.

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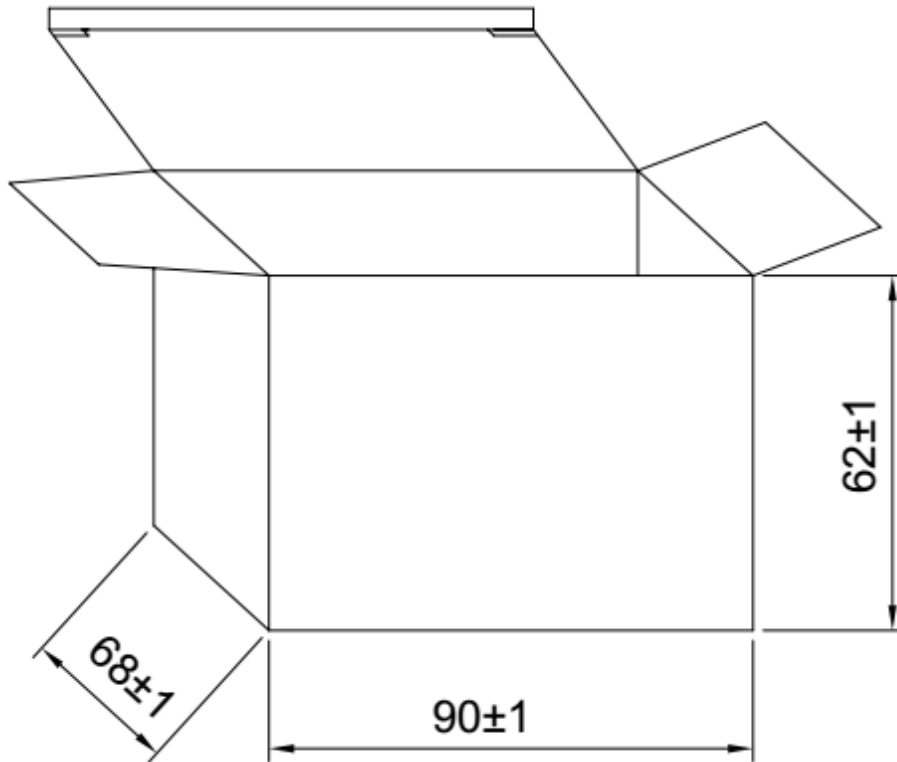
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# PACKING / 包裝圖



L:90mm W:68mm H:62mm

## NOTE:

1. MATERIALS:450磅
2. TOLERANCE:±1.0
3. UNIT:mm
4. SIZE:L 90\_W 68\_H 62

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