



HON-KWANG ELECTRIC CO., LTD.  
HON-KWANG ELECTRIC(SHENZHEN) CO., LTD  
HON-KWANG ELECTRIC(KUNSHAN) CO., LTD

## SPECIFICATION FOR APPROVAL

# Jameco

CUSTOMER: \_\_\_\_\_

DESCRIPTION: I.T.E POWER SUPPLY REV: (A0)

MODEL NO: HK-AP-120A050-US PART NO: HKSC-180118

DESIGNED NO: 180118-0323 DATE: MAR.23th.2018

CUSTOMER APPROVED SIGNATURES			VENDOR APPROVED SIGNATURES		
					

鳳冠電機股份有限公司  
鳳冠電機(深圳)有限公司  
鳳冠電機(昆山)有限公司

# HON-KWANG ELECTRIC(SHENZHEN) CO., LTD

## SPECIFICATION CHANGE HISTORY

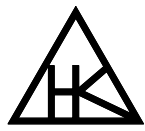
CUSTOMER	<b>Jameco</b>		PART NO	HKSC-180118	
MODEL NO	HK-AP-120A050-US		REV	(A0)	
REV	DATE	DESCRIPTION			REMARKS
A0	18.03.23	新發行承認書.			鐘國珍
SAFETY APPROVAL:			ENGINEER APPROVAL:		
SAFETY APPROVAL:			ELECTRICAL		STRUCTURAL
			張偉松	王令彬	曹健



MODEL NO. :	HK-AP-120A050-US	PAGE NO. :	1 OF 9
PART NO. :	HKSC-180118	ISSUED DATE:	2018.03.23
DESCRIPTION :	I.T.E POWER SUPPLY	REV:	(A0)

## CONTENTS

1. INTRODUCTION
2. INPUT REQUIREMENTS
3. OUTPUT REQUIREMENTS
4. EFFICIENCY
5. LINE REGULATION
6. HOLD UP TIME
7. TURN ON TIME
8. TEMPERATURE COEFFICIENT
9. DIELECTRIC STRENGTH (Hi-Pot) TEST
10. INSULATION RESISTANCE
11. PROTECTION
12. ENVIRONMENTAL CONDITIONS
13. EMI/ EMC
14. RELIABILITY AND QUALITY CONTROL
15. SAFETY
16. OVERALL DRAWING
17. PACKING
18. MARKING
19. TEST REPORT



MODEL NO. :	HK-AP-120A050-US	PAGE NO. :	2 OF 9
PART NO. :	HKSC-180118	ISSUED DATE:	2018.03.23
DESCRIPTION :	I.T.E POWER SUPPLY	REV:	(A0)

## 1.0 INTRODUCTION

This document specifies a switching power supply with a output of +12V, and electronic process. The switching power supply will provide power for technology equipments including electrical business equipment. The adaptor meets the requirement of lead free and RoHS.

## 2.0 INPUT REQUIREMENTS

2.1 Input Voltage Range: 100VAC to 240VAC

2.2 Input Frequency Range: 47 Hz to 63 Hz

2.3 Input In-rush Current: 50A Max

2.4 Input Power Consumption at no-load : 0.1W Max

Test condition will be tested after No load operating for 30min then measure it.

2.5 Input Current: 0.2A Max

## 3.0 OUTPUT REQUIREMENTS

3.1 Output Voltage: +12V

3.2 Output Regulation: 11.4-12.6V

3.3 Output Load Range: 0-0.5A

3.4 Output Ripple & Noise: 300mV Max @20MHz bandwidth with  
10UF/50V capacitance and 104/50V ceramic capacitor.

4.0 EFFICIENCY:  $\geq 78.88\%$  @ average of 25/50/75/100% loads 115V&230VAC input

Test condition will be tested after full load operating for 30min then measure it.

5.0 LINE REGULATION:  $\pm 2\%$  maximum

6.0 HOLD UP TIME: 10ms Min at 110VAC full load.

7.0 TURN ON TIME: 2S Max at 110VAC full load.



MODEL NO. :	HK-AP-120A050-US	PAGE NO. :	3 OF 9
PART NO. :	HKSC-180118	ISSUED DATE:	2018.03.23
DESCRIPTION :	I.T.E POWER SUPPLY	REV:	(A0)

8.0 TEMPERATURE COEFFICIENT: 0.05%/°C

## 9.0 DIELECTRIC STRENGTH (Hi-Pot) TEST

9.1 Primary to Secondary :AC 3000 Vrms ,4mA,1minute for type test,  
2 second for production test.

## 10.0 INSULATION RESISTANCE

Primary to secondary: 50M OHM to 500VDC.

## 11.0 PROTECTION

### 11.1 Input Protection

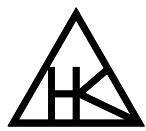
The switching power supply has a 10 ohm resistance current fuse to protect itself.

### 11.2 Output Protection

#### 11.2.1 Output Current:

Overload conditions shall decrease the output voltage. Removal of an output overload shall provide automatic recovery for the output voltage.

#### 11.2.2 Short Circuit Protection: Auto Recovery.



MODEL NO. :	HK-AP-120A050-US	PAGE NO. :	4 OF 9
PART NO. :	HKSC-180118	ISSUED DATE:	2018.03.23
DESCRIPTION :	I.T.E POWER SUPPLY	REV:	(A0)

## 12.0 ENVIRONMENTAL CONDITIONS

The switching power supply can withstand the following environmental conditions:

12.1 Storage Temperature:-20°C ~ +70 °C

Relative Humidity: 10% ~ 95%

12.2 Operation Temperature:0°C~40°C

Relative Humidity: 10%~95%

## 13.0 EMI / EMC

The switching power supply has approved by the following standards:

FCC PART 15 Class B; IC ICES-003

## 14.0 RELIABILITY AND QUALITY CONTROL

### 14.1 Burn-in

The burn-in test will be performed at least 2 hours at 40 centigrade degrees under full load condition.

### 14.2 MTBF

When the operation is complying with this specification, the switching power supply's MTBF will be 50,000 hours at 25 centigrade degrees.

## 15.0 SAFETY

The switching power supply has approved by the following standards:

UL 60950-1, 2nd Edition,2014-10-14

CSA C22.2 NO.60950-1-07, 2nd Edition,2014-10



# 鳳冠電機(深圳)有限公司

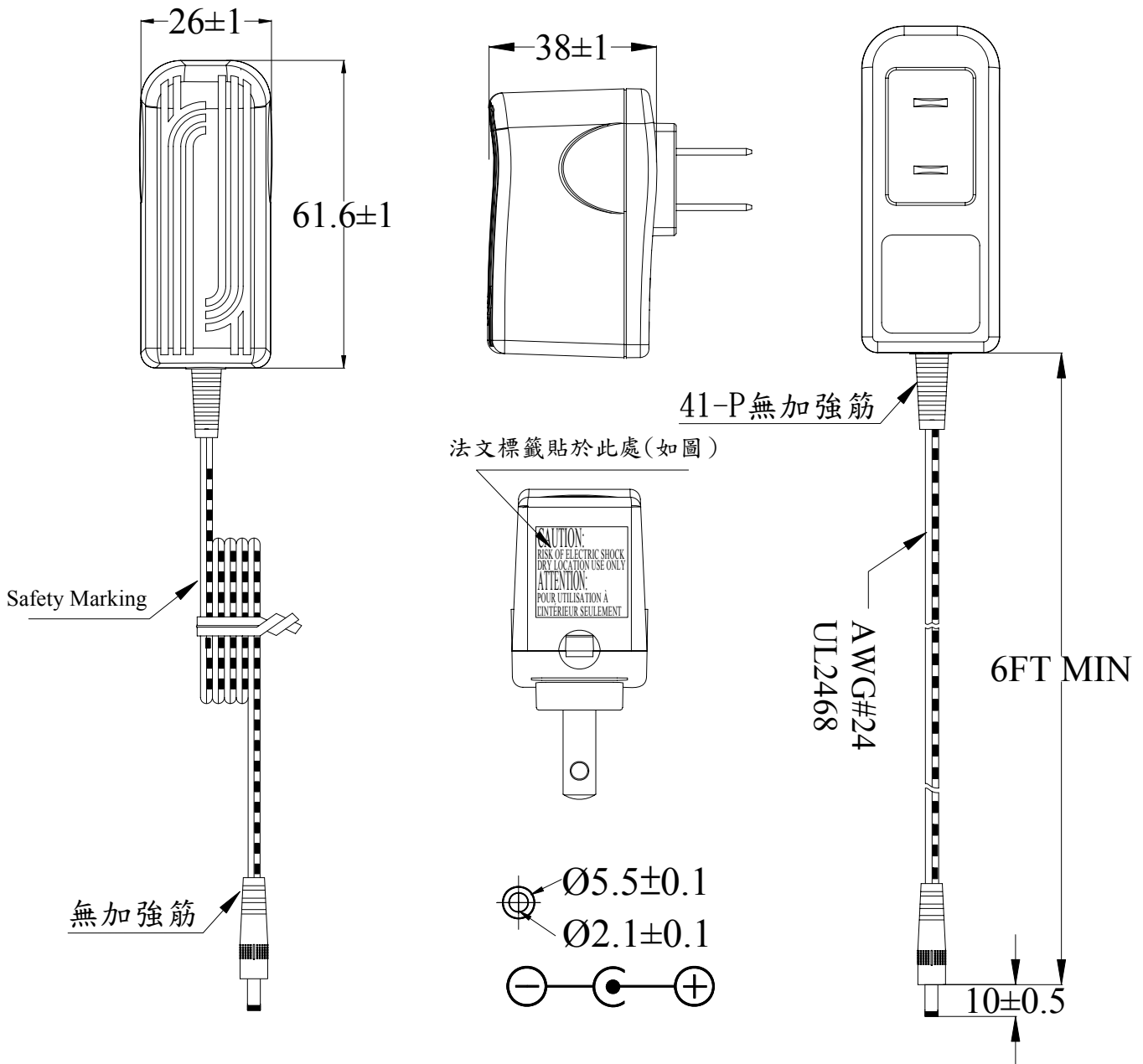
HON-KWANG ELECTRIC (SHEN ZHEN)CO.,LTD.

MODEL NO. :	HK-AP-120A050-US	PAGE NO. :	5 OF 9
PART NO. :	HKSC-180118	ISSUED DATE:	2018.03.23
DESCRIPTION :	I.T.E POWER SUPPLY	REV:	(A0)

## 16. OVERALL DRAWING

UNIT: mm

COLOR: BLACK





# 鳳冠電機(深圳)有限公司

HON-KWANG ELECTRIC (SHEN ZHEN)CO.,LTD.

MODEL NO. :	HK-AP-120A050-US	PAGE NO. :	6 OF 9
PART NO. :	HKSC-180118	ISSUED DATE:	2018.03.23
DESCRIPTION :	I.T.E POWER SUPPLY	REV:	(A0)

## 17. PACKING

### 17.1 Inner Box

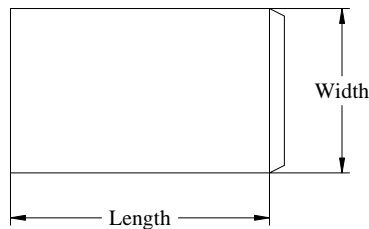
UNIT: mm



PE BAG

Length :

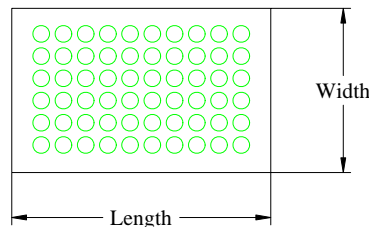
Width :



BUBBLE BAG

Length:

Width:

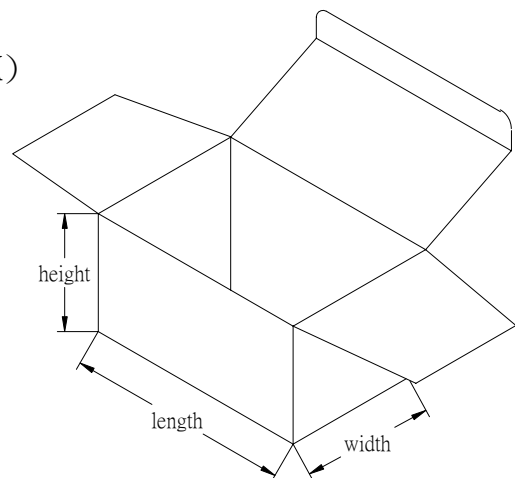


BOX(  Normal BOX  Corrugated BOX)

Length:82

Width:67

Height:30



### NOTICE:

Its probably different from the white box of the sample and the figure dimension.  
The white box is used to pack during product.

注意:樣品使用的小白盒尺寸可能與此圖面尺寸不同,此圖面尺寸是用于生產時的包裝。





# 鳳冠電機(深圳)有限公司

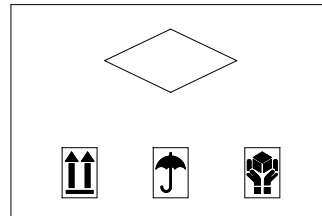
HON-KWANG ELECTRIC (SHEN ZHEN)CO.,LTD.

MODEL NO. :	HK-AP-120A050-US	PAGE NO. :	7 OF 9
PART NO. :	HKSC-180118	ISSUED DATE:	2018.03.23
DESCRIPTION :	I.T.E POWER SUPPLY	REV:	(A0)

## 17. PACKING

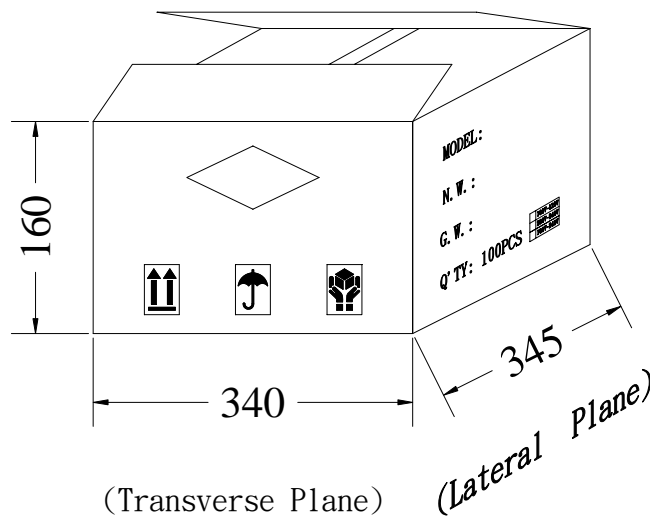
### 17.2 Carton

UNIT: mm



MODEL:  
N. W. :  
G. W. :  
Q' TY: 100PCS

	100V-120V
	200V-240V
	100V-240V





# 鳳冠電機(深圳)有限公司

HON-KWANG ELECTRIC (SHEN ZHEN)CO.,LTD.

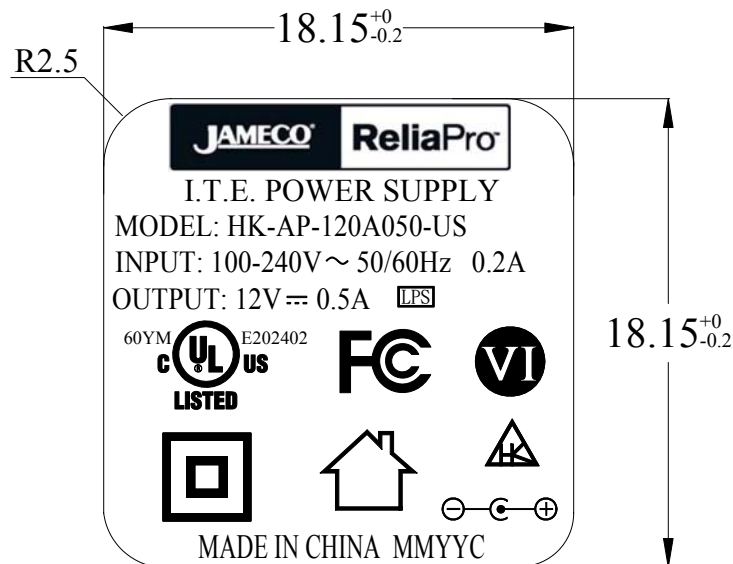
MODEL NO. :	HK-AP-120A050-US	PAGE NO. :	8 OF 9
PART NO. :	HKSC-180118	ISSUED DATE:	2018.03.23
DESCRIPTION :	I.T.E POWER SUPPLY	REV:	(A0)

## 18. MARKING

100# CPC 壓花底+上光 NAME-PLATE:WHITE CHARACTERS BLACK BACKGROUND.

UNIT: mm

$\begin{matrix} M & M & Y & Y & C \\ | & | & | & | & | \\ \text{month} & & \text{year} & & \\ & & & & \text{made in China} \\ & & & & \text{by Hon-kwang} \end{matrix}$



法文標籤貼於CASE上

銅板紙表面上光 NAME-PLATE: BLACK CHARACTERS WHITE BACKGROUND.

