



For Approval

Date : 2011/01/25Rev : V1.0

Product : POWER SUPPLY

Customer : Sunny EU

Model No: SYS1381-1224-W2E

B.P / NO : G401138112264

Description : 24V 0.5A, EU TYPE

DC PLUG : 2.1x5.5x11mm,2468#22*2C, 4.5FT

Efficiency : ERP V

Warranty : 1 Year

Check By : Robert Bao 2011/1/25

| Customer SIGN/APPROVAL | Conditional Yes <input type="checkbox"/> No <input type="checkbox"/> |
|------------------------|--|
| Date: | Yes Description: _____ |
| | _____ |
| | _____ |
| | _____ |
| | _____ |
| | _____ |

呈威電子(東莞)有限公司
 SUNNY COMPUTER TECHNOLOGY CO.,LTD.
 Add:中國廣東省東莞市橫瀝鎮村頭管理區城鄉路
 Cheng Xiang Road, Cun Tou Precinct, Heng Li town,
 Dong Guan City Guang Dong Province, China
 TEL:86-769-83377756 Fax:86-769-83377351
 E-Mail:sales@sunny-group.com

SUNNY COMPUTER TECHNOLOGY EUR.s.r.o
 Add.: Kotlanova 3,Brno,62800.
 Czech Republic
 Tel:+420-5445-00327 Fax:+420-5445-00328
 E-Mail: Sales@sunny-Euro.com



12W POWER SUPPLY

Engineering specification

Model : SYS1381-1224-W2E

Part No:

| Item No. | | page |
|----------|---|------|
| 0 | General | |
| 1 | Input Requirements | 2 |
| 2 | Output Requirements | 3 |
| 3 | Protection | 4 |
| 4 | PLD | 5 |
| 5 | COOLING | 6 |
| 6 | EMC | 7 |
| 7 | Leakage Current | 7 |
| 8 | Safety Approval | 7 |
| 9 | Hi-Pot | 7 |
| 10 | Environment | 8 |
| 11 | Vibration | 8 |
| 12 | MTBF | 8 |
| 13 | Mechanical | 8 |
| 14 | DC output connector type and pin assignment | 9 |
| 15 | Label specification | 9 |
| 16 | Package | 9 |

12W POWER SUPPLY

Engineering specification

Model : SYS1381-1224-W2E

Part No:

General

The specification defines the performance characteristics of a 10 W, Single Output level switching power supply for _____. The power supply has designed highly reliable and meet international safety and radiation requirements.

1.0 Input requirements

1.1 Input voltage range

| Type | Low range | High range |
|-----------|----------------------------|-----------------------------|
| Nominal | 115Vac | 230Vac |
| Minimum | 90Vac | 185Vac |
| Maximum | 132Vac | 264Vac |
| Frequency | 47-63Hz sine wave 1 ϕ | 47-63 Hz sine wave 1 ϕ |

Auto range - switch at approximately 150Vac \pm 5Vac

Universal range - 90~264Vac

Range - Selectable by jumper connector or wire.

Range - Selectable by switch.

1.2 Input Current

| | |
|--------------|--|
| 0.5A rms max | At AC low line input and DC output full load |
|--------------|--|

1.3 Input protection

| | |
|---------|---|
| 1A Fuse | The power supply shall be protected against power line surges and any abnormal condition. |
|---------|---|

1.4 Input surge current

| | |
|-------------|--|
| 40A/60A max | At power supply cold start, ambient temperature 25°C @115Vac /230Vac nominal AC input. |
|-------------|--|

12W POWER SUPPLY

Engineering specification

Model : SYS1381-1224-W2E

Part No:

1.5 Efficiency

| | |
|--------|---|
| 77.78% | Minimum average efficiency in active mode |
|--------|---|

* calculate the model's single average Active Mode efficiency value by testing at 100%,75%,50% and 25% of rated current output.

*Burn-in 2 hours,Full-Load before testing

*InPut AC 115V 60HZ / 230V 50HZ

1.6 Hold up time

| | |
|---------|---|
| 8ms min | At AC nominal input@ output full load (1 half cycle) |
|---------|---|

1.7 Power consumption

| | |
|--------------|-------------------------------------|
| 0.3W rms max | At AC nominal input@output min load |
|--------------|-------------------------------------|

2.0 Output requirements

2.1 Turn on delay

| | |
|-------------|---------------------------------------|
| 5000 ms max | At AC low line input@output full load |
|-------------|---------------------------------------|

* Test on delay is measured from 0 voltage output to the main output regulation.

2.2 DC output regulation

| Voltage | Loading(A) | | Tolerance Range | Regulation | |
|---------|------------|------------|------------------|------------|------|
| | Min | Normal Max | Total Regulation | Line | Load |
| +24V | 0 | 0.5A | ±5% | | |
| | | | | | |
| | | | | | |
| | | | | | |

* Total regulation involved line regulation load regulation cross regulation---etc

* Line regulation is measured from 90Vac to 132Vac or 185vac to 264vac

* Load regulation is measured all output from min load to max load at 115vac or 230vac nominal AC input voltage.

12W POWER SUPPLY

Engineering specification

Model : SYS1381-1224-W2E

Part No:

2.3 Ripple/noise *

| Voltage | Low frequency *1 | High frequency *2 | * 3 | * 4 |
|---------|------------------|-------------------|---------------|-------------------|
| (DC) | Ripple mv(p-p) | Ripple mv(p-p) | Noise mv(p-p) | Ripple/Noise(p-p) |
| +24V | — | — | — | 240mV |
| | | | | |
| | | | | |

* The ripple is measured from peak to peak with band width limit of 20MHZ

(By passed at the end of connector with 10uf electrolytic and 0.1uf ceramic disk capacitor under DC output full Load, AC nominal input 25°C ambient temperature).

* 1.2.3.4 Unless has special requirements otherwise *4 is the testing spec.

2.4 Output transient response (dv , tmax)

| | |
|--------------|---|
| 0.3 v dv max | At AC nominal input loading from 50% load to max load or peak load. |
| 8ms t max | Dynamic rise time 10uS max , duty 40mS max , Dynamic load step is slew rate of 0.5A/Us |

* Test only for main output or designed by customer.

2.5 Burn in test : Will be defined after meeting.

2.6 Led display : None

12W POWER SUPPLY

Engineering specification

Model : SYS1381-1224-W2E

Part No:

3.0 Protection

3.1 Short protection / Over current protection

The power supply will self-protect any output to ground, And auto recovery when abnormal circuit faults remove.

An output short circuit is defined as any output impedance of less than 0.1 ohms.

| Voltage | OCP Current(A) | Power in(W) | OCP method | | |
|---------|-------------------|-------------|--------------------------|--------------------------|-------------------------------------|
| | | | latch off | Current limit | Fold back |
| +24V | 0.7-1.5A | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

3.2 Over voltage protection

| Voltage | OVP range | OVP Method | | |
|---------|--------------|--------------------------|--------------------------|-------------------------------------|
| | | Latch off | Auto recovery | Voltage limit |
| +24V | 30±4V | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

3.3 No load protection

The power supply is provided with noload operation to prevent the power supply and system from damage.

3.4 Temperature coefficient: Less than $\pm 0.5\%/^{\circ}\text{C}$

12W POWER SUPPLY

Engineering specification

Model : SYS1381-1224-W2E

Part No:

4.0 PLD (power line disturbance)

4.1 LINE POWER SURGE

The power supply shall meet its specification with a rise in AC voltage to 120% of maximum rated line voltage (288 voltage for 100-240 Vac operation)for a maximum of 20 milliseconds at 50Hz and 16 millisecond at 60Hz.The surge is to be applied five times with an internal of one minute between surges.

4.2 LINE VOLTAGE SAG

The power supply shall continue to meet its specifications with a line voltage drop (and subsequent return to minimum rated voltage)to 68 Vac with a total power sag cycle time of 20 ms (rise and fall time shell equal 10 ms each).

5.0 COOLING

| Cooling Method | |
|---------------------------------|-------------------------------------|
| By ___ mm fan force air cooling | <input type="checkbox"/> |
| By nature air. | <input checked="" type="checkbox"/> |



12W POWER SUPPLY

Engineering specification

Model : SYS1381-1224-W2E

Part No:

6.0 EMC

Meet EN55022 class B, Fcc part 15 Sub part B class B.

6.1 CE spec.

- EN55022 Limits and methods of measurement of radio disturbance characteristics of information technology equipment.
- EN55011 Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical(ISM) high frequency equipment.
- EN55014 Limits and methods of measurement of radio disturbance characteristics of household electrical appliances, portable tools and similar electrical apparatus.
- EN61000-3-2 By household appliances and similar electrical equipment “Harmonics”.
- EN61000-3-3 By household appliances and similar electrical equipment “Voltage fluctuations”.
- EN50082-1 By EMS TEST:
- ESD Measurement(EN61000-4-2)
- RF Field strength Susceptibility Measurement(EN61000-4-3).
- Electrical Fast Transient/Burst Measurement(EN61000-4-4).
- Surge Immunity Test(EN61000-4-5).

7.0 Leakage current : 0.25 mA max.

8.0 Safety approval

A : GS D : _____ G : _____
 B : CB E : _____ H : _____
 C : _____ F : _____ I : _____

9.0 HI-POT

- HI-POT---A IEC 320 3pin primary to secondary (FG) 1500Vac 10mA 1min
- HI-POT---B IEC 320 2pin primary to secondary 3000Vac 10mA 1min

| | |
|---|--|
| PROPERTY OF SUNNY COMPUTER TECHNOLOGY CO.,LTD. DO NOT BE USED OR DUPLICATED WITHOUT PERMISSION OF THE OWNER | DATE : 2010 / 01 / 13 FINAL REV : V1.0 FILE ADDRESS : TCRD1737.DOC |
|---|--|

12W POWER SUPPLY

Engineering specification

Model : SYS1381-1224-W2E

Part No:

10. Environment

TEMPERATURE AND HUMIDITY

OPERATING TEMPERATURE 0 DEGREES C TO 40 DEGREES C.

OPERATING HUMIDITY 8% TO 90% RH.(RELATIVE HUMIDITY).

STORAGE TEMPERATURE -20 DEGREES C TO 85 DEGREES C.

STORAGE HUMIDITY 5% TO 95% RH.(RELATIVE HUMIDITY).

11. Vibration

SWEEP AND RESONANCE SEARCH

| FREQUENCY | DURATION | AXIS | AMPLITUDE |
|-----------|------------|-------|-----------|
| 5-20-500 | 30 MINUTES | X,Y,Z | 1G |

12. M.T.B.F

The design and construction of this power supply shall exhibit a minimum Mean Time Between Failure (MTBF) of 50,000 hours full rated load operation at 25 °C, according to the MIL-HDBK-217F.

13. Mechanical

13.1 Dimension unit : (mm)(max)

$L \times W \times H = 63 * 29 * 45 (\pm 0.2) \text{mm}$

13.2 Weight :

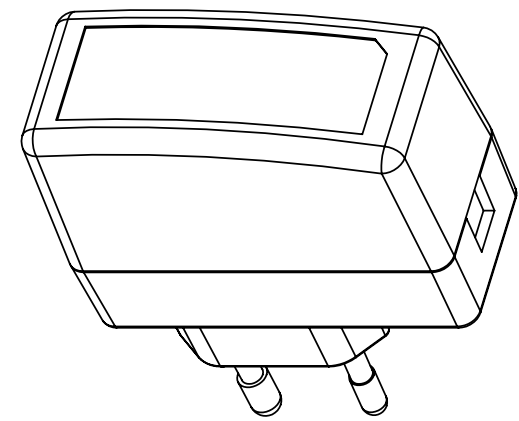
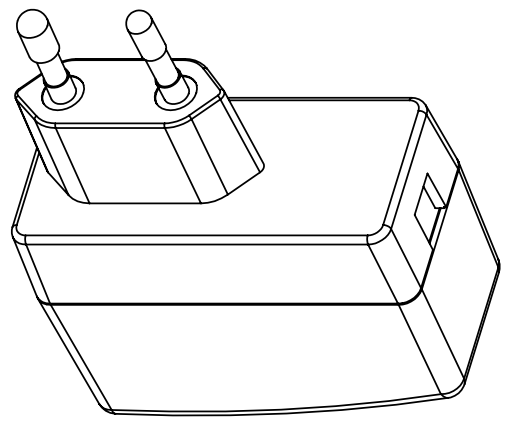
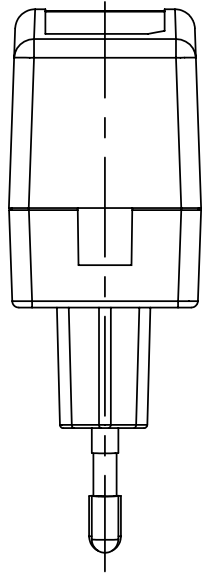
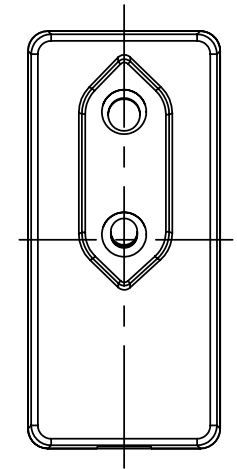
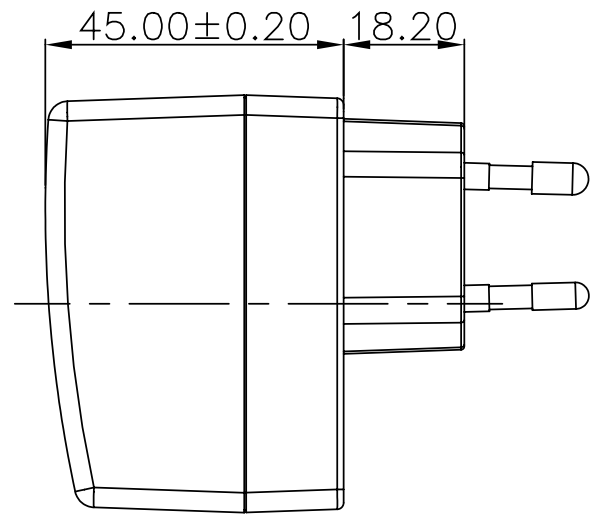
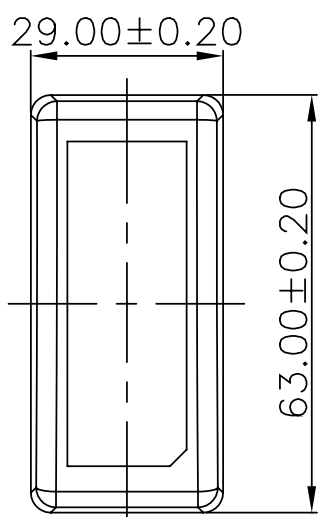
13.3 Drawing : As Attachment()

14. DC output connector type and pin assignment : As Attachment(mm)

15. Label specification : As Attachment(TBD)

16. Package : As Attachment(TBD)

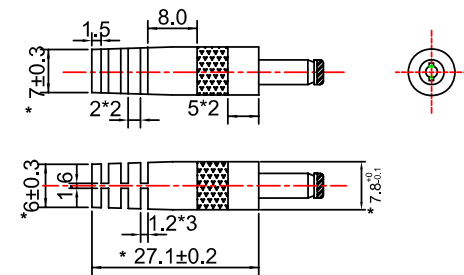
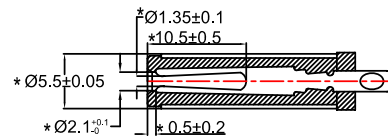
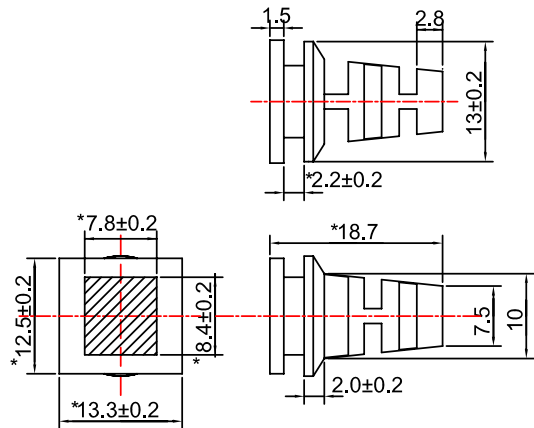
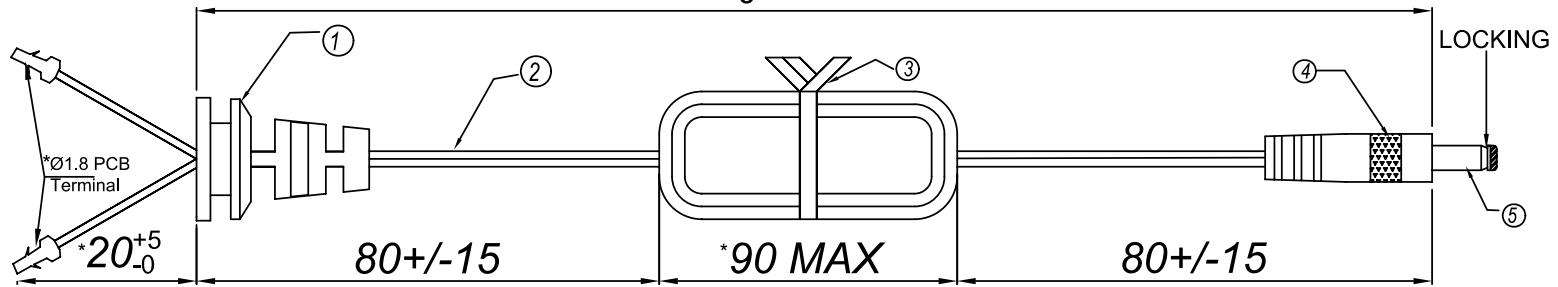
| REV. | DESCRIPTION | DATE |
|------|-------------|------|
| | | |



TEL:(0769)83377756-9 83377358
 FAX:(0769)83377351-2
 Email:sales@sunny-group.com

| | | | | | | |
|--------------|-------------|----------------|--------------------------------|----------|-----------|--------------|
| MODEL NAME | SYS1381-W2E | | | APPROVED | | ISSUED STAMP |
| PART No. | | 公差等級 B | 材質 | CHECKED | | |
| DRAWING NAME | | 長度區分 RANGE | 容許公差區分(MM) COMMON TOLERANCE | DESIGN | | |
| PART NAME | APPERANCE | 低於 8 LESS THAN | A B C D | DRAWN | 元國忠 07/25 | |
| DWG PATH: | | 8~25 | ±0.05 ±0.1 ±0.2 ±0.4 | DOC.No. | | |
| | | 25~80 | ±0.08 ±0.15 ±0.3 ±0.6 | | | |
| | | 80~250 | ±0.12 ±0.25 ±0.5 ±1.0 | | | |
| | | 250~800 | ±0.25 ±0.4 ±0.8 ±1.5 | | | |
| | | 800~2500 | ±0.5 ±0.8 ±1.5 ±3.0 | | | |
| | | ANGULAR | ±1.0 ±1.5 ±3.0 ±6.0 | | | |
| | | | ±0.15 ±0.3 ±0.5 ±0.8 | | | |
| | | | | SCALE | 1:1 | SHEET 1of1 |

1370⁺¹⁰⁰₋₀ (4.5 FEET)



*Printed(+V) ——— Stripe(-V)

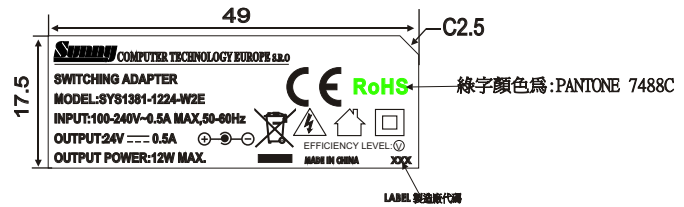
| | | | |
|-----|---|-------|--|
| 5 | SPRING LOADED CENTER/LOCKING/FEMALE BARREL YELLOW | 1 PC | 2.1(+0.1/-0)*5.5(+/-0.05) *11(+/-0.3) |
| 4 | PLUG TYPE:P073 | 1 PC | |
| 3 | MINI TIE=130mm BLACK | 1 PC | |
| 2 | CORD MATERIAL:2468#22*2C PVC.BLACK 80°C. | 1 PC | UL APPROVAL |
| 1 | SR TYPE:SR18 | 1 PC | |
| NO. | SPECIFICATION | Q' TY | REMARK |



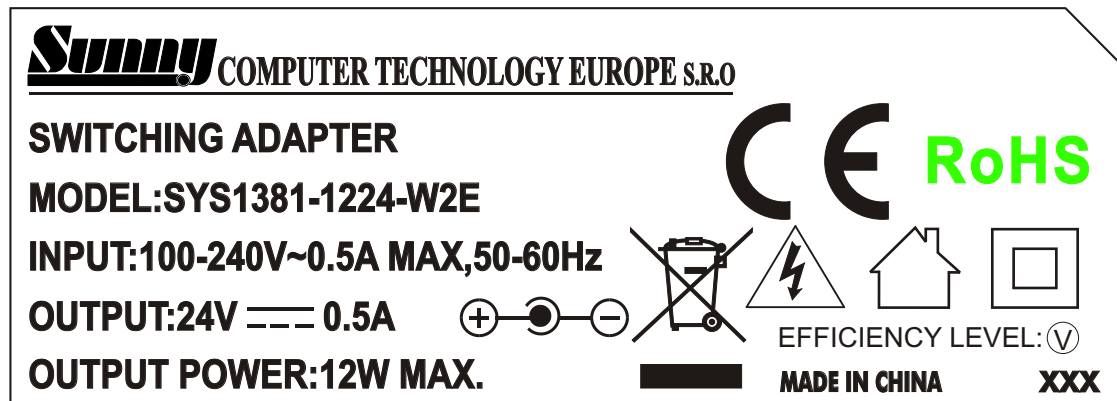
Tel:+420-5445-00327
Fax:+420-5445-00328
Email:sunny@sunny-euro.com

| | | | | | | | | | |
|--------------|---------------------------|----------------|---------------------------------|----------|--------|--------------|-----|-------|------|
| MODEL NAME | | | | APPROVED | | ISSUED STAMP | | | |
| PART NO. | G1074670042004040** | 公差等級 B | 材質 SEE TABLE | CHECKED | | | | | |
| DRAWING NAME | 2.1*5.5*11 | 長度分區 RANGE | 容許公差分區 COMMON TOLERANCE (MM) | DESIGN | | | | | |
| PART NAME | 2468#22*2C+SR18+P073+4.5F | 低於 8 LESS THAN | A B C D | DRAWING | Li dan | 2010/05/06 | | | |
| DWG PATH: | | 8-25 | ±0.05 ±0.1 ±0.2 ±0.4 | DOC.No. | | SCALE | 1:1 | SHEET | 1of1 |
| | | 25-80 | ±0.08 ±0.15 ±0.3 ±0.6 | | | | | | |
| | | 80-250 | ±0.12 ±0.25 ±0.5 ±1.0 | | | | | | |
| | | 250-800 | ±0.25 ±0.4 ±0.8 ±1.5 | | | | | | |
| | | 800-2500 | ±0.5 ±0.8 ±1.6 ±3.0 | | | | | | |
| | | ANGULAR | ±1.0 ±1.5 ±3.0 ±6.0 | | | | | | |
| | | | ±0.15' ±0.3' ±0.5' ±0.8' | | | | | | |

| | | |
|-----|-------------|----------|
| REV | DESCRIPTION | DATE |
| A0 | 最新發行 | 11/01/11 |



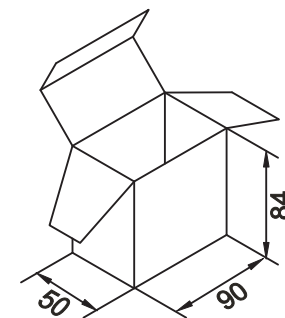
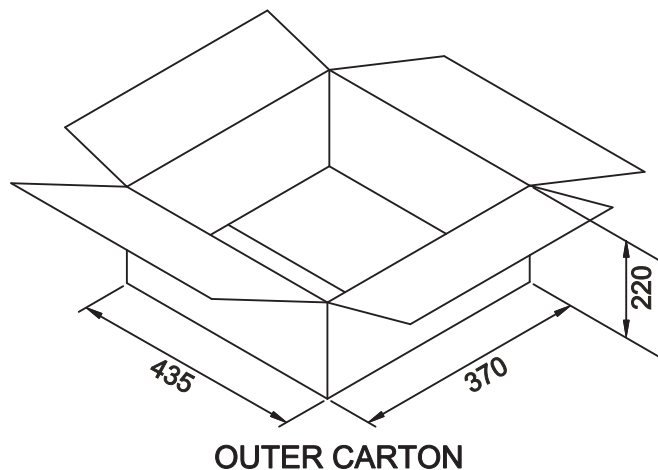
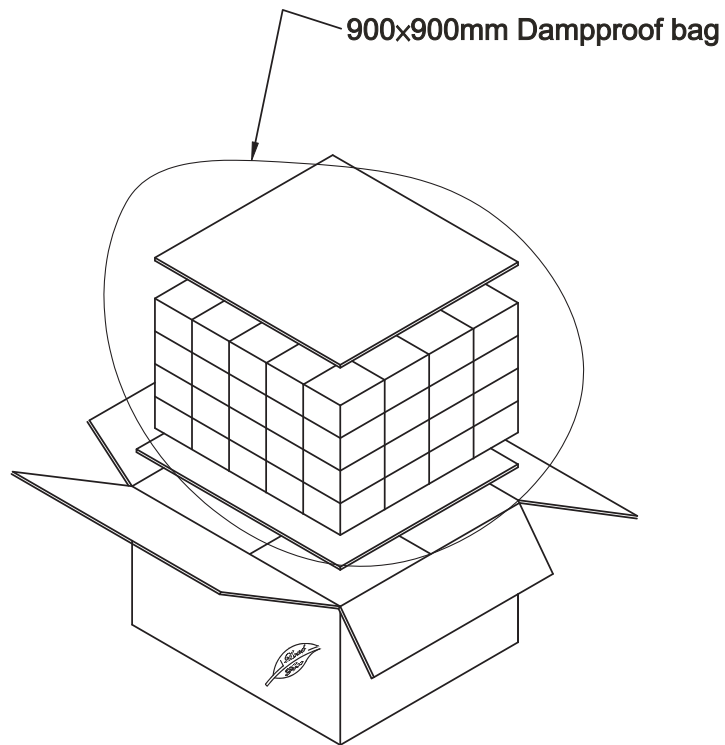
SCALE:1.0X



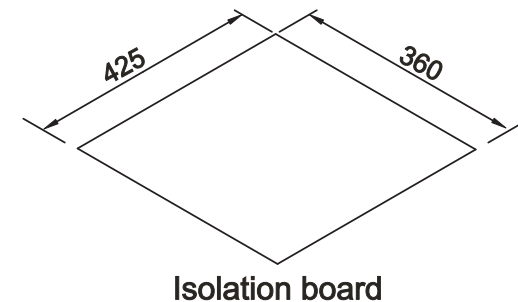
SCALE:3.0X

- NOTE:
- 1>黑底白字霧面
 - 2>.Material: 合成紙
 - 3>.Thickness : 180#
 - 4>.Tolerance:+/-0.1mm

| | | | | | | | | |
|--|-------------------------|------------------|--|---|------------|--------------|-------------|--------|
| <p>TEL : +420-5445-00327 FAX: +420-5445-00328 Email:sunny@sunny-euro.com</p> | MODEL NAME | SYS1381-1224-W2E | | | APPROVAL2 | ISSUED STAMP | | |
| | PART NUMBER | G1151025135A0 | UNIT | mm | APPROVAL1 | | | |
| | DRAWING NAME | LABEL | TOLERANCES UNLESS OTHERWISE SPECIFIED | | ENGINEER | | | |
| | PART NAME | | LINEAR | 0.0 +/- 0.1 0.00+/- 0.01 0.000+/- 0.001 | DRAWING BY | | 陳書平11/01/11 | |
| | DWG PATH:D:\COREL\LABEL | | ANGLE | ANGLE+/- 2degree | DOC.NO. | | | |
| | | | | | SCALE | 1:1 | SHEET | 1 Of 1 |





GIFT BOX



OUTER CARTON: 435(L)*370(W)*220(H)

Q'TY: 5(L)*4(W)*4(H)=80PCS

| | | | |
|----|------------------|-------|-----------------|
| 4 | G11720638A1**K=K | 1PC | OUTER CARTON |
| 3 | G11740324A0**A=A | 2PCS | Isolation board |
| 2 | G11710433A0** | 80PCS | GIFT BOX |
| 1 | G1175089***** | 1PC | POLY BAG |
| NO | SPECIFICATION | Q'TY | 80PCS |

| | | | | | | | | | |
|---|--------------|-------------------|---|---------------------------------|----------|--------------|--------|--|------------------|
|  TEL:+420-5445-00327 FAX:+420-5445-00328 Email:sunny@Sunny-euro.com | MODEL NAME | SYS1381/1390 RoHS |  | | APPROVED | ISSUED STAMP | | | |
| | PART NO | | 公差等級 | 材質 | CHECKED | | | | |
| | DRAWING NAME | PACKING | 長度區分 RANGE | 容許公差區分 (MM) COMMON TOLERANCE | DESIGN | | | | |
| | PART NAME | | 低於ø LESS THAN | A B C D | DRAWN | | | | Chenshuping09/19 |
| | DWG PATH: | | ø-25 | ±0.05 ±0.1 ±0.2 ±0.4 | DOC.NO. | | | | |
| | | 25-80 | ±0.08 ±0.15 ±0.3 ±0.5 | | SCALE | SHEET | 1 OF 1 | | |
| | | 80-250 | ±0.12 ±0.25 ±0.5 ±1.0 | | | | | | |
| | | 250-800 | ±0.25 ±0.4 ±0.8 ±1.5 | | | | | | |
| | | 800-2500 | ±0.5 ±0.8 ±1.5 ±3.0 | | | | | | |
| | | ANGULAR | ±1.0 ±1.5 ±3.0 ±5.0 | | | | | | |
| | | | ±0.15° ±0.3° ±0.5° ±0.8° | | | | | | |