

Specification

Model No : PB-1180-1M01

Description : 12V 18W single output AC adapter

Revision : A

Issued Date : Jan 09, 2013

MMI #: 584136-001-00

LITEON

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Change List			
ECN No	REV	Revision Description	Date
	X01	Initial	06/25/2012
	A	Update PE bag drawing (Add Japan/Korea recycling marking)	01/09/2013

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1. Description

This product is an external AC to DC adapter power transfer device; it is able to provide 18W single dc output with constant voltage source.

2. Electrical

2.1 Input Voltage (AC ~).

- a. Single input 115 Vac Nominal.
- b. From 100-132 Vac Maximum.

2.2 Input Frequency

60Hz +/- 3Hz

2.3 Inrush Current

Less than 50A at 115VAC input for a cold start at 25 °C

2.4 Input Protection

2A Fuse or similar value, Slow-Blow, not user-replaceable.

2.5 Efficiency.

Average 25 / 50 / 75 / 100% load power efficiency need to $\geq 81\%$ at 115Vac/60Hz to compliance with EPA 2.0 level 5 and CoC 2009 efficiency requirement. Test condition will be tested after full load operating for 30min then measure it.

2.6 Safety Test

- a. Leakage current less than 0.25mA.
- b. Hi-pot test: 4242Vac, 10mA, 1MINUTE between Primary to Secondary.
- c. Insulation: 500Vdc, 2Sec between Primary to Secondary circuit, IR shall $\geq 10M\Omega$.

2.7 Turn On Delay time

The output voltage shall rise from 0 volt and settle within regulation in less than 2sec at full load.

2.8 Hold Up time

The hold up time $\geq 10ms$ at 115Vac,full load condition.

2.9 No load power consumption

AC input power P_{in} shall be less than 0.3W at no load and 115Vac, 60Hz condition.

2.10 DC output requirement.

Vout	+12.0V	Remark
Vout min	11.4V	Vdc
Vout typ	12.0V	Vdc
Vout max	12.6V	Vdc
Ripple/noise	2000	mVpp
Iout max	1500	mA
Iout min	0	mA

Ripple and Noise.

Measured with 20MHz bandwidth at minimum V_{in} , minimum F_{LINE} , I_{OMAX} load.

2.11 Output circuit protection.

- OCP: Over current protection with auto-recovery function
- OVP: Over voltage protection with latch function.

2.12 Audible Noise Level

Not to exceed 35dBA in AC mode, measured 1 meter from any surface.

3. Environment

3.1 Temperature

- Operation : 0 to 40 °C for nominal input condition.
- Storage : -40 to 85 °C

3.2 Humidity

- Operation : 10-90% for nominal input condition.
- Storage : 5-95%.

3.3 Component De-rating

Under nominal output load conditions and any input operating conditions, all components shall meet Lite-ON guideline. All magnetic components shall not exceed their designed safety rated temperatures for the insulation.

3.4 Cooling

Enclosure temperature rise (hot spot) shall less then 27°C at 25°C ambient, full load and nominal Vac condition.

3.5 Altitude

-100 to 8,000 feet

4. Safety / EMC

4.1 Safety.

The power supply shall comply the following international regulatory standards:

for short	Country	Certified Status	Standard/标准
UL	USA/美国	/	UL 60950-1
CSA	Canada/加拿大	/	CSA C22.2 NO.950

4.2 EMS.

Test Item	Test Specification.	IEC standards	Performance Criteria
ESD	Contact +/- 6KV	61000-4-2	B
	Air +/- 8KV		
RS	Fr: 26MHz-1.0GHz, Field Strength : 3V/M	61000-4-3	A
EFT	1KV on AC power line	61000-4-4	B
SURGE	Power line +/- 1KV , 2 ohms for DM Power line +/- 2KV , 12 ohms for CM	61000-4-5	B
CS	3V/M	61000-4-6	A
DIPS	95% voltage reduction, 1/2 cycle@50Hz	61000-4-11	B
	30% voltage reduction, 25 cycle@50Hz		B
	>95% voltage reduction, 250 cycle@50Hz		C

4.3 EMI for both Conduction & Radiation.

Referring Standards	Spec / Certified
EN 55022	CISPR 22, class B

5. Reliability

5.1 Lifetime.

8760 hours at full load & 100Vac input, ambient temperature 40°C.

5.2 Vibration Test (Packed unit)**1. Condition:**

- Model of Vibration: Random Wave
- Acceleration: 6G
- Frequency: 10-1000Hz
- Dwell at all resonant: 15 minutes /axis
- Axis: X,Y,Z

2. Pass Fail Criteria:

- All samples will be performed function test and visual inspection after test, Any parameter, function loss during or after test will be classified as fail. And It will be judged as fail if affects any safety issues. Any cosmetic failure will be not allowed.
- Any mechanical failure such as solder crack, component damage, PCB broken issues will be judged as fail.

5.3 Drop Test (Packed unit)**1. Condition:**

The unit should be capable of withstanding the ISTA procedure 2A Drop test (Referring to ISTA-2A)

2. Pass Fail Criteria:

- All samples will be performed function test and visual inspection after test. Any parameter, function loss due to component damage, PCB broken and solder joint problem will be defined as fail.
- Any case crack on the surface and joint will be judged as fail when perform inspection from test pin and test finger judgment for the result.

5.4 Audible Noise Level:

Not to exceed 35dBA in AC mode, measured 1 meter from any surface.

5.5 M.T.B.F

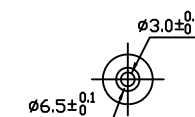
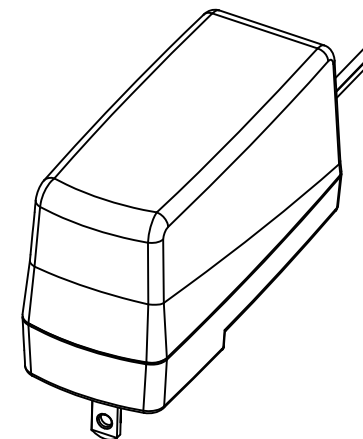
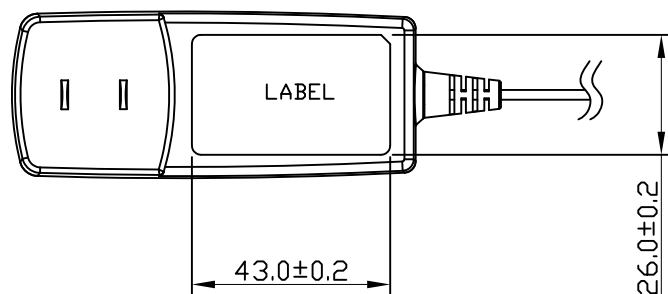
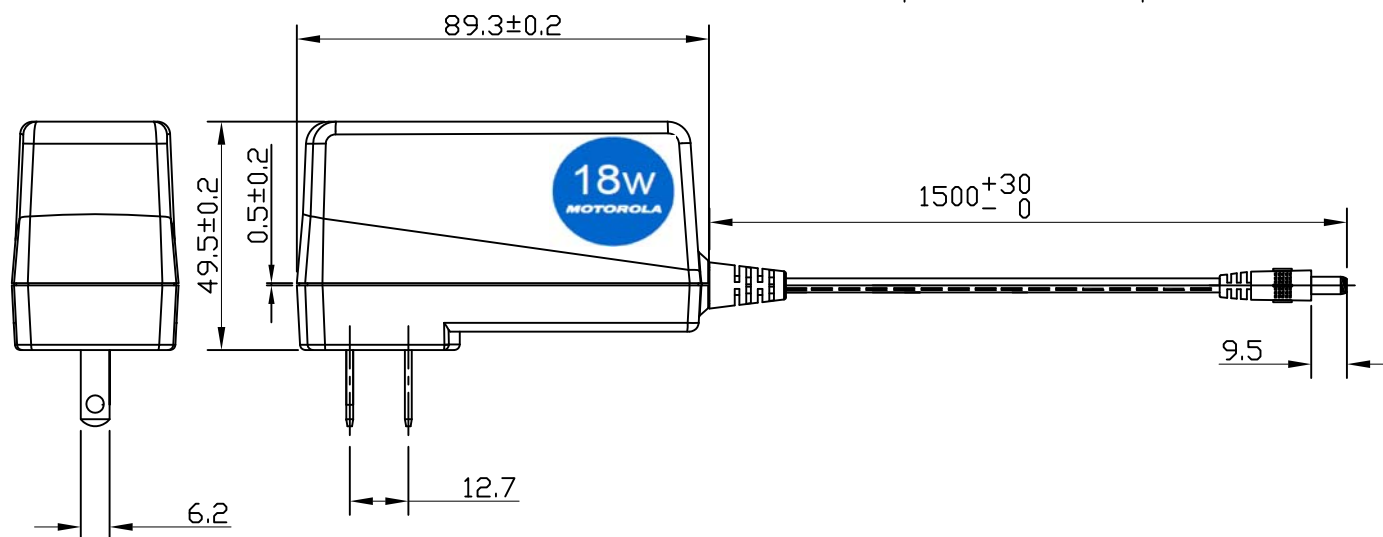
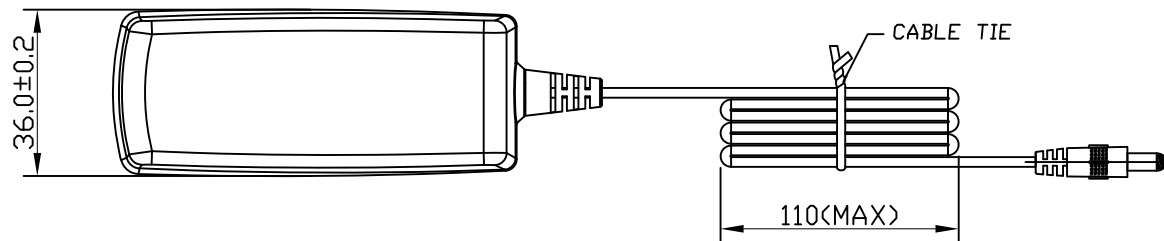
Shall exceed 130,000 hours, measured at max load and nominal input voltage.

5.6 Warranty Period

Warranty period is 26 months from date of manufacture.

6. Mechanical

Please see all mechanical drawing as below



NOTES:

1. TOLERANCES TO BE ± 0.5 mm.

2. PARTS SPECIFIED AS FOLLOWS:

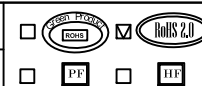
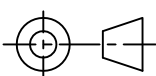
2-1. MATERIAL:

- * UL RECOGNIZED PLASTIC(QMFZ2)
- * RATED 94V-0 AT 1.5 mm THK.
- * SABIC 945(GG)
- * COLOR : BK1D965 (BLACK)
- * TEXTURE :
- (a)MT-11020 / VDI33
- (b)EDM FINISH , POLISH TO SPI-B1

2-2. CABEL:

- * UL2468 1500mm,VW-1 2C,80°C 300V
- * PVC HARDNESS:SHORE A75-85
- * JACKET COLOR:BLACK
- * 3P PLUG:BARREL TYPE -6.5X3.0X9.5mm

A	RELEASED	11-JUN-2012	
REVISION	DESCRIPTION	DATE	CHECKER
SHEET	1/1	2D FILE	OUTLINE_PB-1180-1M01_18W
CODE		3D FILE	-----
UNIT:mm	SCALE: 1:000	DESIGNER	PEGGY WU
		APPROVER	

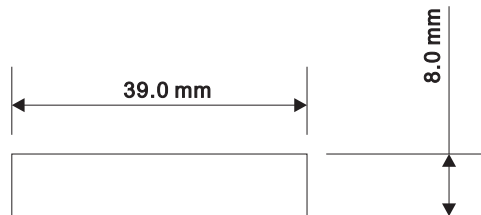


LITEON

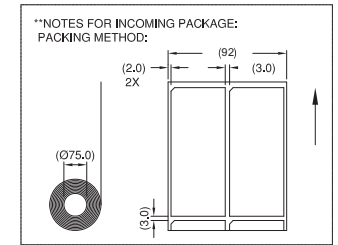
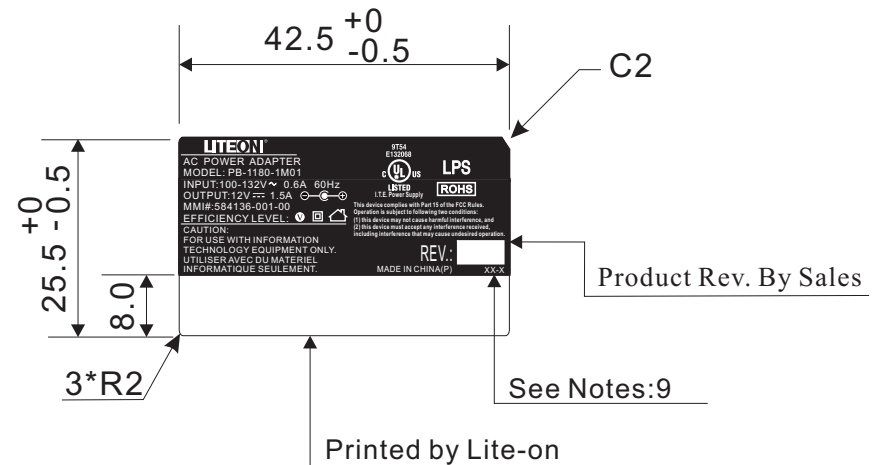
TITLE: OUTLINE	PART NO: -----
PROJECT: PB-1180-1M01	DRAWING NO: 0-001195
	REV: A

1. ALL DIMENSIONS ARE IN mm		
TOLERANCES TO BE	0.2mm.	
2. THE ARRANGEMENT OF LAMINATE WITH		
(1)MYLAR FILM(MAT)	0.025 ± 10%	
(2)ACRYLIC ADHESIVE	0.018 ± 10%	
(3)SYNTHESIS (#75)	0.076 ± 10%	
(4)ACRYLIC ADHESIVE	0.035 ± 10%	
GRAND TOTAL THK.	0.154	10%

3. THE LINES ARE 0.5mm WIDE.
4. COLOR: CHARACTERS, LOGOS AND LINES SHALL BE WHITE, BASE TO BE BLACK.
5. APPROVED VENDOR MUST BE UL RECOGNIZED & CSA CERTIFIED.
6. THIS LABEL SHALL BE MARKED WITH THE CSA VENDOR IDENTIFICATION MARK AS SPECIFIED IN THE CSA LIST. LOCATE APPROX. AS SHOWN.
7. LETTERING SHOULD BE CLEAR-CUT.
SURFACE TO BE FREE OF DEFECT.
8. BY PRINTING CENTER PRINT, REFER TO DN-9205268, DRAWING NO.393-138171A-1 PRINT 38X8 BARCODE ACCORDING TO MOTOROLA'S REQUIREMENT.



9. LABEL MANUFACTORY ID (EXAMPLE: CM-1)
10. REV: XX, WORD HEIGHT: 2.0
(PRODUCT REV.-SALES WILL PROVIDE THE REVISION OF LABEL)



A	RELEASED	2012.06.25	
REVISION	DESCRIPTION	DATE	CHECKER

SHEET			2D FILE	---	DESIGNER	Peggy Wu	☐  ☒ 		TITLE: LABEL	PART NO.: 603713(93-M1801DL1-ROHS)		
CODE			3D FILE	---	APPROVER		☐  ☐ 		PROJECT:PB-1180-1M01	DRAWING NO.:493-603713	REV.:A	
UNIT:mm	SCALE:1:1											

Printed by Lite-On
Unless otherwise specified

1. Color of Bar code, Letters should be Black.
2. Bar code use Code 128, C Type.
3. Dimension Unit : mm.
4. Letters should be clear-cut, surface should be free of defect.
- 5.

Format and Identification for Label (Printed by Liteon)

Format:

PPPPPPPPMMYYJJSSSSBBCCVTTT (30 digits)

Where

- 1). P P P P P P P P P : Product part number (9 digits)
 - Beginning 9 digits of the Motorola part number of the module or product.
- 2). M M : Manufacturing Site (2 digits)
 - Use 01 in TWN ; 04 in China .
- 3). Y Y : Manufacturing Year (2 digits)
 - Use the last 2 digits of the Year, for example: Y2K use 00, Year2001 use 01.
- 4). J J J : Week of the year (3 digits)
 - Use the sequence of the week in the year by Decimal number, for example: 001 means the first week in the year, 052 means the last week of the year.
 - Range : 001~052 (52 weeks)
- 5). S S S S S : Serial number (5 digits)
 - Use Decimal number to identify the Manufacturing number of this module or product in the same week.
 - Range : 00001~99999 (reset to 00001 weekly)
- 6). B B : Model version (2 digits)
 - Use 01, 02 , 03 ~ 99 for each stage from PTT / EVT / DVT samples, Pilot Run and Mass Production.
 - Range : 01~99
- 7). C C : Control code (2 digits)
 - Use Decimal number for special change of H / W or F / W tracking.
 - Use 00, unless otherwise specified.
 - Range : 00~99
- 8). V V : Vendor code (2 digits)
 - Use Liteon Vender Code : 05
- 9). T T T : PPR code (3 digits)
 - Use : 000



A	RELEASED	2012.06.25	
REVISION	DESCRIPTION	DATE	CHECKER

SHEET			2D FILE	---	DESIGNER	Peggy Wu	☐  ☒ 		TITLE: LABEL	PART NO.: 603713(93-M11801DL1-ROHS)	
CODE			3D FILE	---	APPROVER		☐  ☐ 		PROJECT:PB-1180-1M01	DRAWING NO.:493-603713	REV.:A
UNIT:mm	SCALE:1:1										

NOTES: UNLESS OTHERWISE SPECIFIED.

1. ALL DIMENSIONS ARE IN mm.

TOLERANCES TO BE ± 0.25 mm.

2. THE ARRANGEMENT OF LAMINATE WITH MATERIAL THICKNESS AS FOLLOWS:

- | | | |
|---|------------------|-------|
| ① | OPP FILM(CLEAR) | 0.025 |
| ② | ACRYLIC ADHESIVE | 0.011 |
| ③ | POLYESTER(#50) | 0.050 |
| ④ | K.K. #9 ADHESIVE | 0.035 |

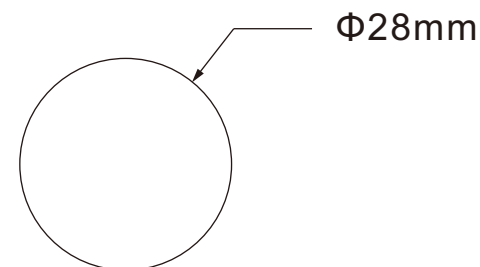
GRAND TOTAL THK. $0.121 \pm 10\%$

3. COLOR:

Background color:
RGB: 0/104/183,(Pantone 300C for reference)
CMYK: 100/50/0/0
Broadcast RGB: 0/104/183,
Text color: Pantone White

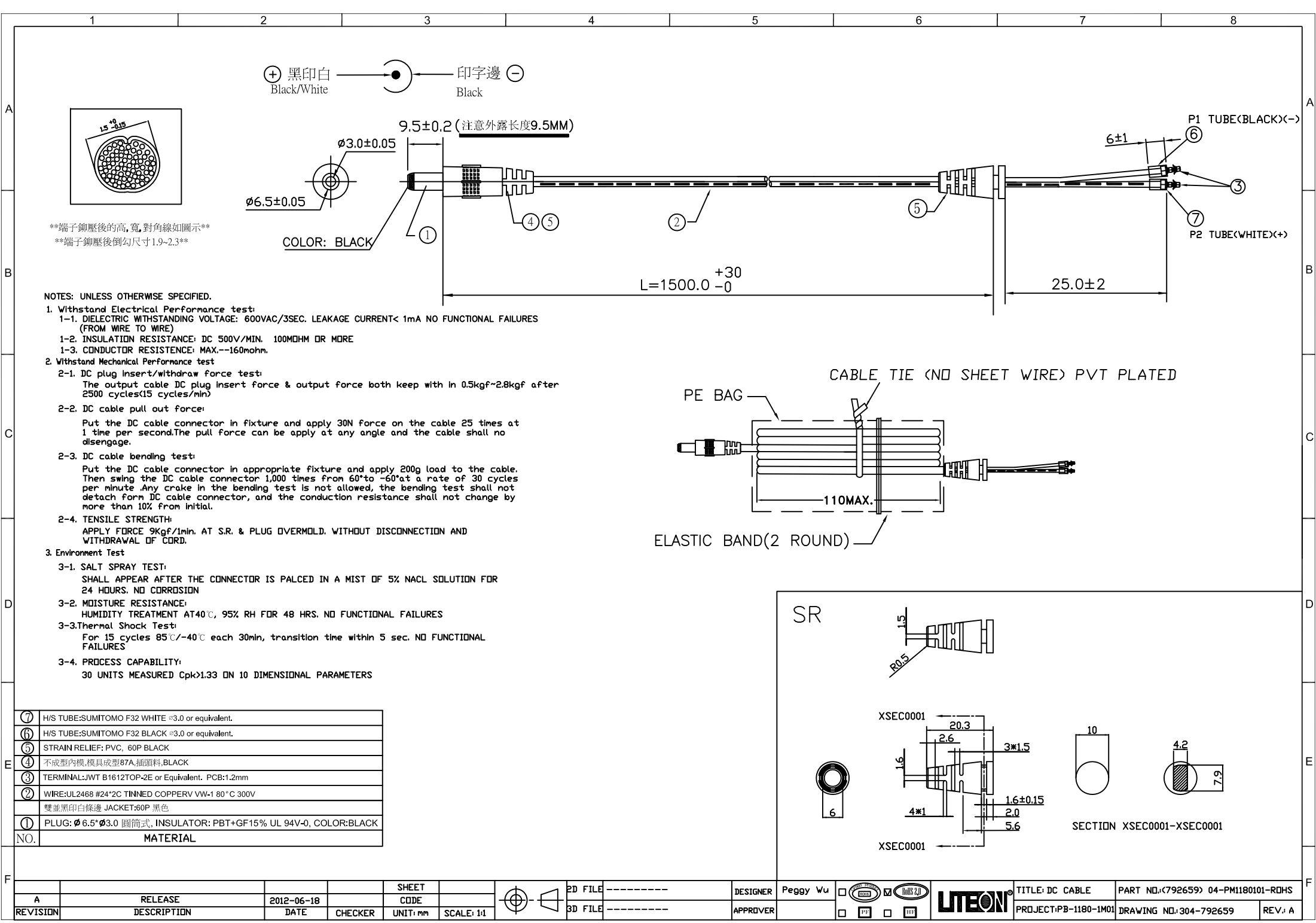
4. LABEL MUST BE UL RECOGNIZED AND CSA CERTIFIED.

5. Label must pass thermal test of 72 hours at 85 degrees C without releasing, bubbling or discoloring.



A	RELEASED	2011.01.20	
REVISION	DESCRIPTION	DATE	CHECKER

SHEET			2D FILE	---	DESIGNER	Peggy Wu	☐		☒		LITEON®	TITLE: LABEL	PART NO.: 793243(93-M11801DL1-ROHS)	
CODE			3D FILE	---	APPROVER		☐		☐			PROJECT:PB-1180-1M01	DRAWING NO.:493-793243	REV.:A
UNIT:mm	SCALE:1:1													

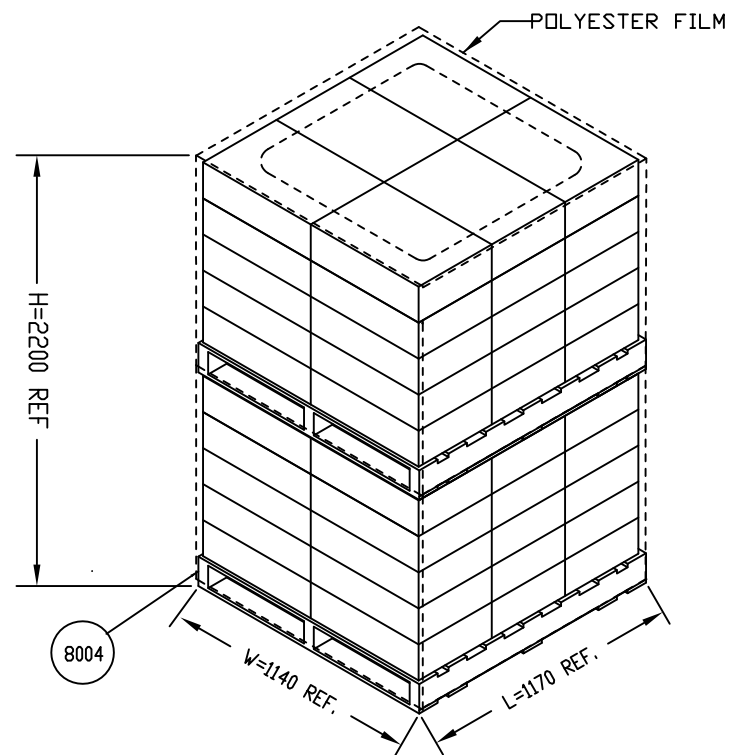
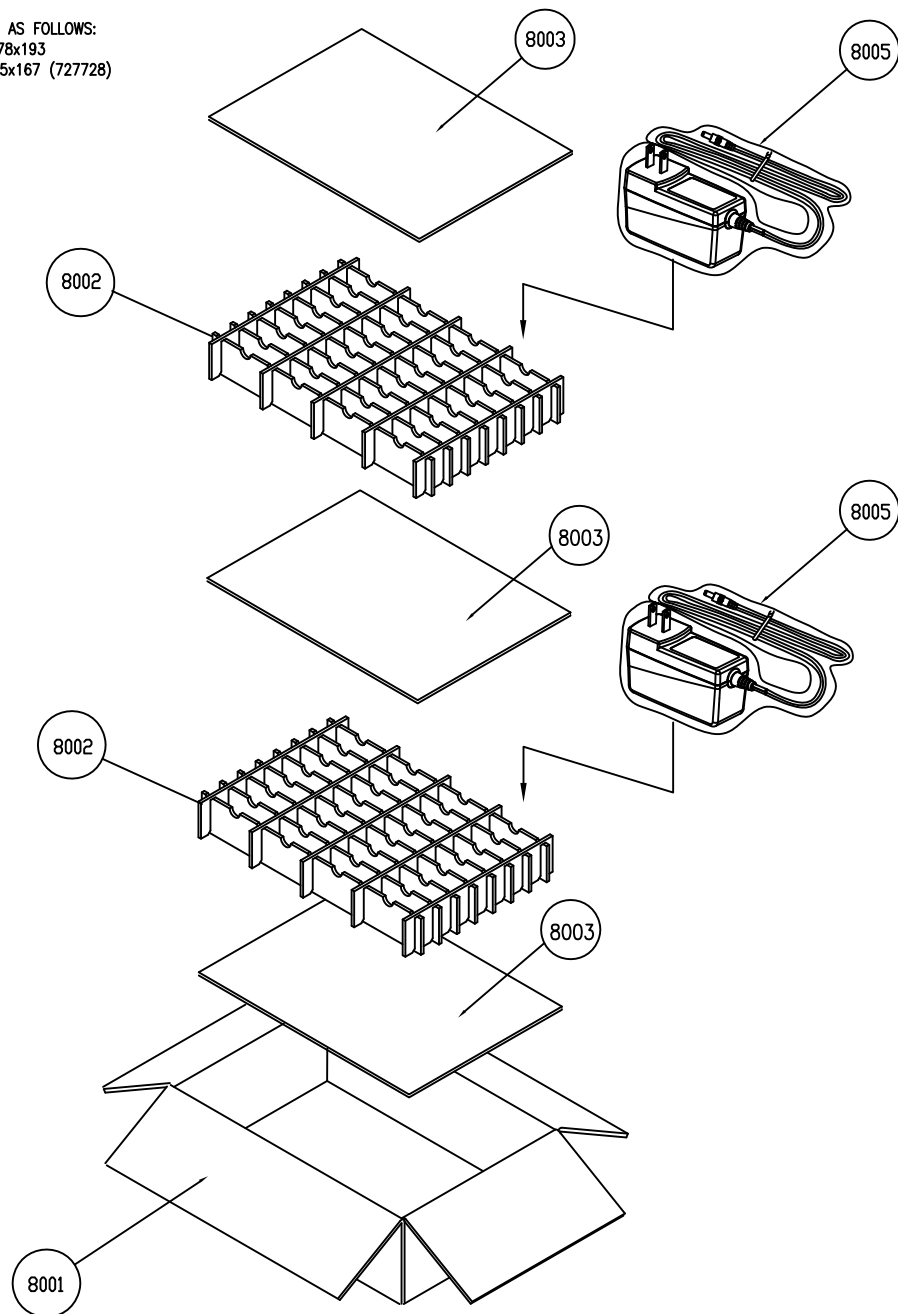


NOTES:

CARTON DIMENSIONS AS FOLLOWS:

1.OD(WxLxH)=556x378x193

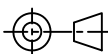
2.ID(WxLxH)=543x365x167 (727728)



PALLET ASS'Y DRAWING:

PART NAME	QUANTITY
CARTON	1 CARTON= 56 UNITS
PALLET	1 PALLET= 5 LAYERS = 30 CARTONS = 1680 UNITS
POLYESTER FILM	2 LAYERS MIN.
40 FT CONTAINER	1 CONTAINER= 40 PALLETS
20 FT CONTAINER	1 CONTAINER= 20 PALLETS

REVISION	RELEASED DESCRIPTION	04-MAY-2012 DATE	CHECKER	SHEET CODE	UNIT:mm	SCALE:1:1
A						



2D FILE -----
3D FILE -----

DESIGNER PEGGY WU
APPROVER



LITEON

TITLE: PACKING
PROJECT: PB-1180-1M01
PART NO.: -----
DRAWING NO.: P-001106
REV.: A

