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# SPECIFICATION FOR APPROVAL

• **CUSTOMER** : LG Electronics inc.

• **ITEM** : Power Supply Unit.

• **P/NO**

Model Name	Customer	Supplier
LGP4750-13PL2	EAY62810801	OPVP-0178

• **DATE** : 2013.08.20

• **Revision** : 2.5

• **Remark** : MP (PCB REV 2.0)

**Producing District : CSG ( CHINA SUZHOU GENMAO )**

**생산지 : CSG ( 중국 소주 겐마오 )**

★ **Safety Standard Parts [안전규격부품 List]**

Power Cord, Power Plug, X/Y-Capacitor, Power Switch, Fuse, SMPS Trans, Stand-By Trans, Photo coupler, Insulation(절연) Resistor, Discharge(방전) Resistor, Fusing Resistor, FBT.CPT, CPT Socket, DY, D-Coil, Line Filter, PCB Material, Front / Back-cover Material Relay(1-2차간), Varistor, Adapter

★ **EMC Standard Parts [전자규격 부품 List]**

Power Plug, Line Filter, X-Capacitor, Y-Capacitor, SMPS Trans, Tuner, Saw-Filter, Shield Case, Oscillator, Pattern Change

★ **Green [유해물질 확인사항]**

This item must meet the standards of LG Electronics for six major substances as designated by RoHS for control.

(Cd: 10ppm under, Pb/Hg/Cr+6/PBB/PBDE: 100 ppm under)

**Lien Chang Electronic Enterprise Co., Ltd.**  
**ADD : No.2, Lane 234, Hsin Shu Rd., Hsin Chuang**  
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# Documentation For Approval

<b>Model Name</b>	<b>Customer</b>	<b>Supplier</b>
<b>LGP4750-13PL2</b>	<b>EAY62810801</b>	<b>OPVP-0178</b>

<b>Written</b>	<b>Checked</b>	<b>Approved</b>
Miki	Peter	C.T



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## Revision History

Rev No.	Contents	Date of Approval	Checked	Remark
0.1	Apply to PV (PCB REV 0.2) PCB P/No : EAX64905501(1.7)  PV 1st Edition.	12.10.19	Peter	
0.2	Apply to PV ( PCB REV 0.21) PCB P/No : EAX64905501(1.8) Temperature improvement : change to H/S1 direction(180°) in order to improve workmanship,  PV 2nd Edition	12.11.13	Peter	
0.3	Apply to PV ( PCB REV 0.22 ) PCB P/No : EAX64905501(1.9)  PV 3rd Edition	12.11.26	Peter	
1.0	Apply to MP ( PCB REV 1.0 ) PCB P/No : EAX64905501(2.0)  MP 1 <sup>st</sup> Edition - Add UL Mark	12.12.07	Peter	
1.1	Apply to MP ( PCB REV 1.0 ) PCB P/No : EAX64905501(2.0)  FEELUX TRAN'S 13S-LM05 /13S-DD05 Field smell 不良, 刪除 Trans tape maker	13.02.08	Peter	
2.0	Apply to MP ( PCB REV 2.0 ) PCB P/No : EAX64905501(2.2)  1. PCB is modified (It will be applied from 5/15) 2. AC Socket is modified	13.04.17	Peter	
2.1	Apply to MP ( PCB REV 2.0 ) PCB P/No : EAX64905501(2.2)  1. no use vendor delete, and remain actual vendor	13.05.14	Peter	
2.2	Apply to MP ( PCB REV 2.0 ) PCB P/No : EAX64905501(2.2)  1. Add WANSHENG CERAMIC CAP 4M	13.05.21	Peter	



## Revision History

Rev No.	Contents	Date of Approval	Checked	Remark
2.3	<p>Apply to MP ( PCB REV 2.0 ) PCB P/No : EAX64905501(2.2)</p> <p>LGE RQA test is finished and the result is passed. 1.adding a aluminum cap supplier : SUSCON</p> <p>SG 2.2uF 50V 5x11 SE 33uF 200V 10x20</p>	13.05.23	Peter	
2.4	<p>Apply to MP ( PCB REV 2.0 ) PCB P/No : EAX64905501(2.2)</p> <p>1.ION FLUX Model : ILF714 →ILF710 2.13Y LPB &amp; 直下 Low Model Renesas PFC IC defect solution 4M : D607 1N4148 → (ZD602) Zener 3.6V 變更 3. DCDC Bonding point change : Silicon bond 2Point + Three Bond 6Point</p>	13.07.14	Peter	
2.5	<p>Apply to MP ( PCB REV 2.0 ) PCB P/No : EAX64905501(2.2)</p> <p>&lt;DONGIL&gt; AC Socket modify : add cover , DAC-18C3M1→DAC-18C3M1c (It will be applied from 9/23)</p>	13.08.20	Peter	



## CTQ Management

No.	Contents	Page
1	2.1.1 Power Factor	7
2	2.2 Power Output Characteristics	8
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# Specification



**LGP4750-13PL2 LCD TV Power specification**

**1. INTRODUCTION**

**1.1 Scope**

This approval is the description related to every electrical and structural specifications and reliability For Power Supply Unit used on 47/50 inch LGE LED TV.

**1.2 Customers product related items**

Product : Power Supply Unit  
Part code : EAY62810801

**1.3 Product name**

Product name : LGP4750-13PL2  
Revision code : 2.5

**2. SPECIFICATION**

**2.1 Input Requirements**

Nominal Input Voltage	AC 100V to AC 240V
Input Voltage Variation	AC 90V to AC 264V
Input Current	Under 2.5Arms . (at 100Vac & Nominal Load) Under 1.2Arms . (at 240Vac & Nominal Load)
Nominal Frequency	50 / 60 Hz
Frequency Variation Range	47 Hz to 63 Hz
Phase	Single
Leakage Current	0.35mA_peak. (100Vac ~ 240Vac)
Surge Immunity	± 4kV / 1000ns / 0° to 360°
Hold-up Time	More than 20ms at 100Vac and maximum output load ※When it doesn't meet 20ms hold up time, 1. PSU restarts. 2. No hardware failure.(All components)
Lightning Surge	2kA Normal, Common Mode
Inrush Current	80A zero-peak max at cold start and any specified line, load, temperature conditions.

**2.1.1 Power Factor**

**over than 0.90 at 90 – 264Vac & max load condition**





**LGP4750-13PL2 LCD TV Power specification**

**2.2 Power Output Characteristics**

Output	Voltage Variable range [V]	Rated Current (Min, Max) [Amean]	Voltage Regulation [V]	Ripple Voltage [mVp_p]
3.5V (STBY)	3.325V ~ 3.675V	0.3W Under (15mA)	-	-
		1.4A (0.2~1.4A) (ON condition)	± 5%	250 mVp_p
12V	11.4V ~ 12.6V	1.4A (0.2~1.4A)	± 5%	350 mVp_p
24V	22.8V ~ 25.2V	0.6A (0.1~0.6A)	± 5%	500 mVp_p
LED B+	93.2~118.5V	0.4A (0.380~0.420A)	± 5%	-
	93.2~118.5V	0.4A (0.380~0.420A)		

\* On Condition : In a moment of Power\_ON Signal activated, the current of 3.5V output should be limited within 40mA(Max) at LCD TV condition for stability.

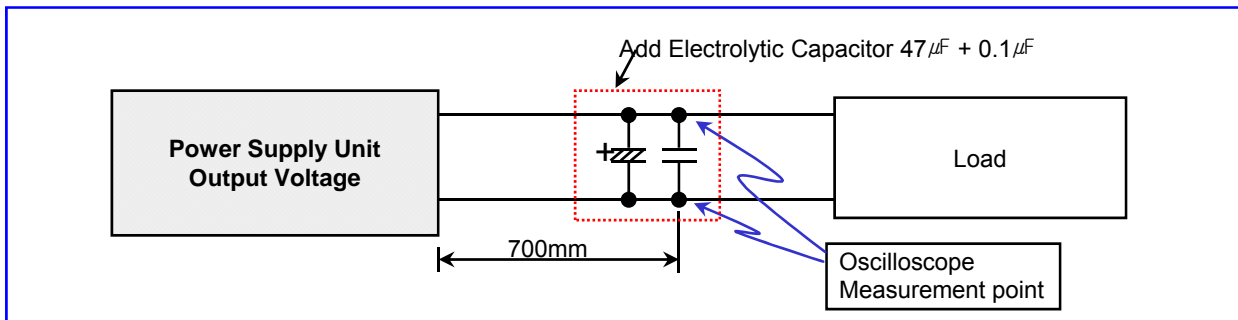
Do not turn "Power\_ON" Signal on at the load condition of 3.5V output, more than 40mA.

\* Total regulation for each output circuit includes the results of input voltage variation, load variation, warm-up drift and temperature change.

\* The following instruments shall be used for measuring ripple noise.

1. Probe having impedance ratio of 1:1.
2. Oscilloscope having frequency characteristic of 100MHz or more.

Test Point : power output each pin



※ Ripple and noise are measured at the end of output cable which are added a 0.1uF ceramic capacitor and 47uF electrolytic capacitor. ( connected parallel )

**2.2.1 Stand By Power Consumption**

Output Voltage	3.5V (STBY)	12V	24V
Load [A]	0.015	Don't Care (Power-Off)	
Wattage [W]	Less than 0.3W Under (230Vac / 50Hz)		



**LGP4750-13PL2 LCD TV Power specification**

**2.3 Environment Requirement**

Operating Temperature Range	-10°C to 40°C (60°C :No Hardware Failure, TV SET Condition)
Operating Humidity Range	30 to 85 %
Storage Temperature Range	-25 to 85 deg.
Storage humidity Range	5 to 90 %
Power board Storage Condition	Temperature 40°C, Humidity 90%
MTBF (Mean Time Between Failure)	50,000 hour
Cooling Condition	Natural Air
Shock	98 m/s <sup>2</sup> Shock test consists of pivoting the power supply, from one edge of it's bottom side, on a flat surface (such as wood having thickness of 10mm or more) and allowing the opposite edge to fall from a height of 50mm to this surface. The test is performed three times on each edge of the bottom side of the power supply

**2.4 Dielectric Strength Voltage and Insulation Resistance**



Dielectric Strength Voltage	AC 1.5KV or DC 2,121V 1 Min 10 mA (Test SPEC) AC 1.8KV 1 Sec 10 mA (PSU Mass Production) Between Primary and All Secondary Circuits.
Insulation Resistance	Insulation resistance shall be more than 8M ohm (at DC 500V) Between Primary Live, Neutral line and Secondary.

- \* Above tests are performed at room temperature in non-condensing atmospheric conditions
- \* Frame grounds are connected to secondary circuits.

**2.5 Burn-in**

More than 2 hours at 45°C (±5°C), Normal input voltage.  
AC on/off must be test 1 time after burn-in.  
80% Load of specification.

**LGP4750-13PL2 LCD TV Power specification**

**2.6 Interface**

Appellation	Explanation	Signal Direction	Action
POWER ON	Vcc Circuit ON/OFF	Input	High : Vcc ON Low : Vcc OFF

**2.7 Product Safety**



Safety Standards to be applied	Design to meet the requirements as follows UL60950, IEC60950, IEC60065 and 60950
EMI/RFI Standards to be applied	Design to meet the requirements as follows FCC and EN55020, EN55013 Class B with 4dB minimum margin.

**2.8 Construction**

Weight	Less than 400g
Unit Size (typ.)	159(W) X 240(D) X 26.1(H)

**2.9 Function of protection**

Protection	Output Circuit	Trip point		Notes
		Min	Max	
Over Current	STBY 3.5V	1.8A	5.0A	Auto Re-start
	12V	4.0A	15.0A	Latch
	24V	2.5A	8.0A	Latch
Short Circuit	STBY 3.5V	-	-	Auto Re-start
	12V	-	-	Latch
	24V	-	-	Latch

- \* This Power Supply has above-mentioned protections.
- \* Short circuit protection between different output terminals is not considered.
- \* Trip point for over voltage indicates the operating point when the output voltage slowly increases.
- \* The conditions of Over Current measurement  
Multi output(3.5V,12V,24V) is nominal load state except an over current measurement.



## LGP4750-13PL2 LCD TV Power specification

### 2.10 Sound Noise Characteristics.

PSU Noise Specification

22.5 dB(a) / 20.u Pa 2.0E-5 Pa

(1/1 octave, A-weighting, to 1khz ~ 16khz Total overall

Measure Location : Anechoic Room

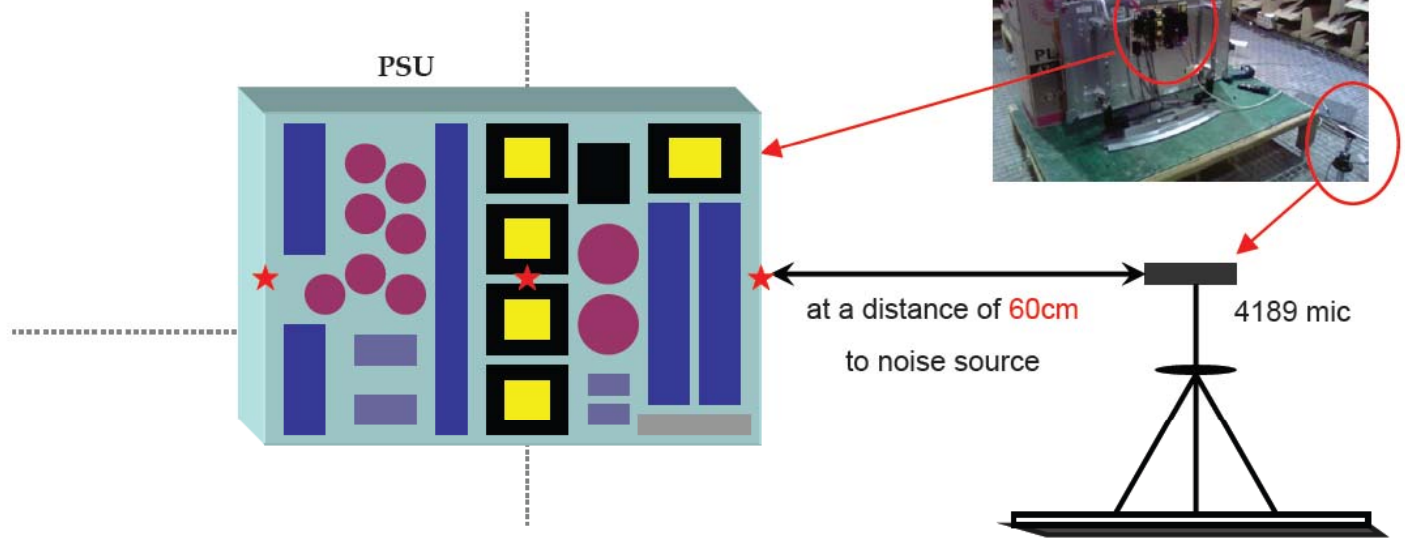
Measure Condition : At a distance of 60cm mic

Full white pattern, at AC 110V/220V

The max specification

(measure 3 points, at PSU center and left & right on the side)

#### PSU NOISE MEASURE POINT

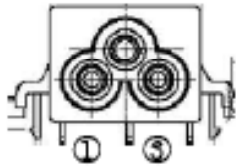




## 2.11 Connector Specification

### 2.11.1 Connectors Usage

SK100 DONGIL TECH (DAC-18C3M1 c)	
Pin No.	Assignment
1	LIVE
2	GND
3	NEUTRAL



P801 YEONHO (SMAW200A-H07AA2)	
Pin No.	Assignment
1	LED-
2	Remove
3	LED+
4	Remove
5	LED-
6	Remove
7	LED+

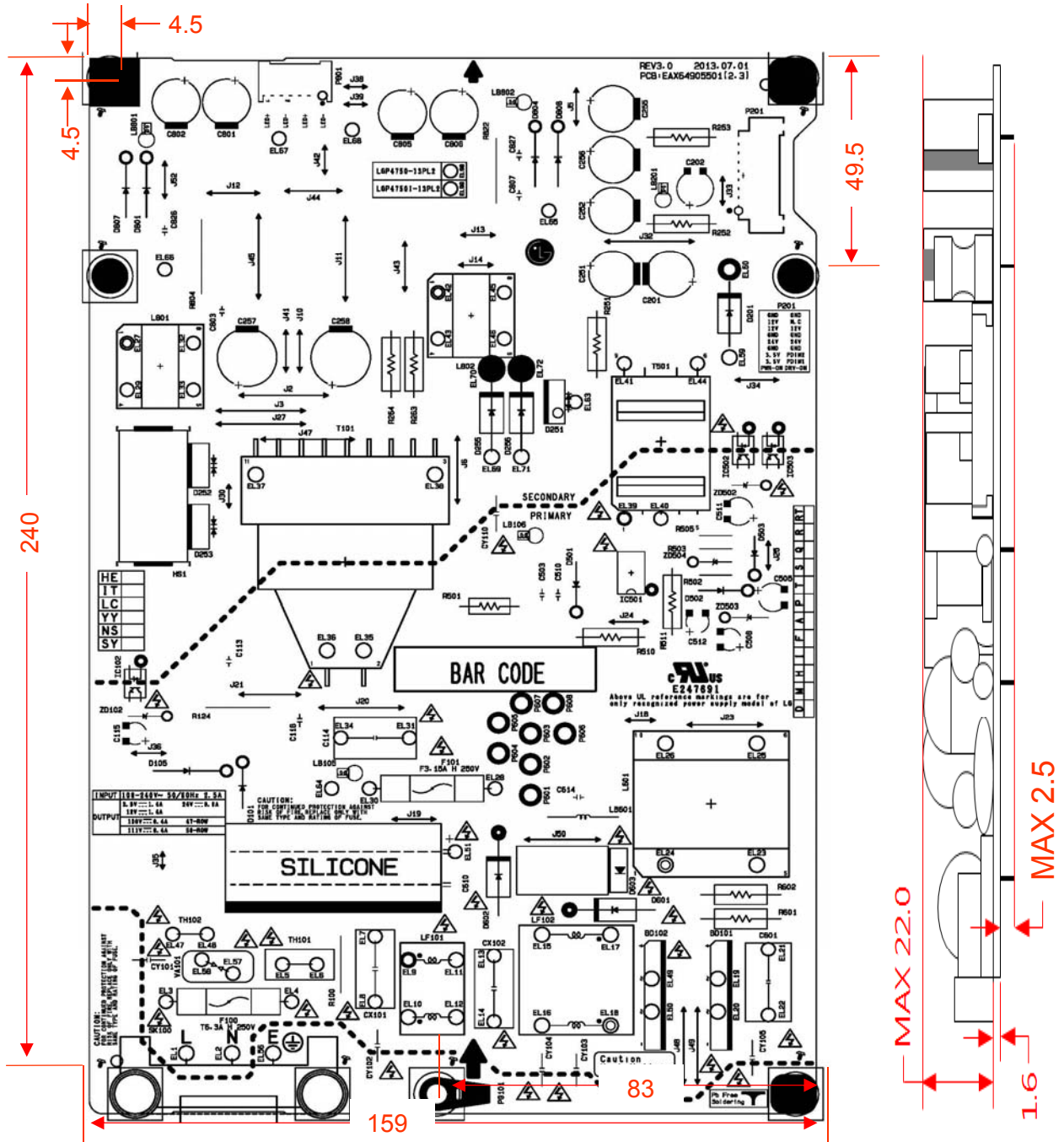
P201 YEONHO (SMAW200-H18S2)			
Pin No.	Assignment	Pin No.	Assignment
1	Power on	2	DRV-ON
3	3.5V	4	PDIM1
5	3.5V	6	PDIM2
7	GND	8	GND
9	24V	10	24V
11	GND	12	GND
13	12V	14	12V
15	12V	16	N.C
17	GND	18	GND



**LGP4750-13PL2 LCD TV Power specification**

2.12 PCB Dimension.

- 1) Power board PCB : 159mm × 240mm × 1.6(T)mm
- 2) Component height : Max 22.0mm (Except LF101,LF102 : Max 23.0mm)
- 3) Lead Cutting : Max 2.5mm
- 4) PCB Material : FR-1 KB,DS,L,R-8700 CTI-600

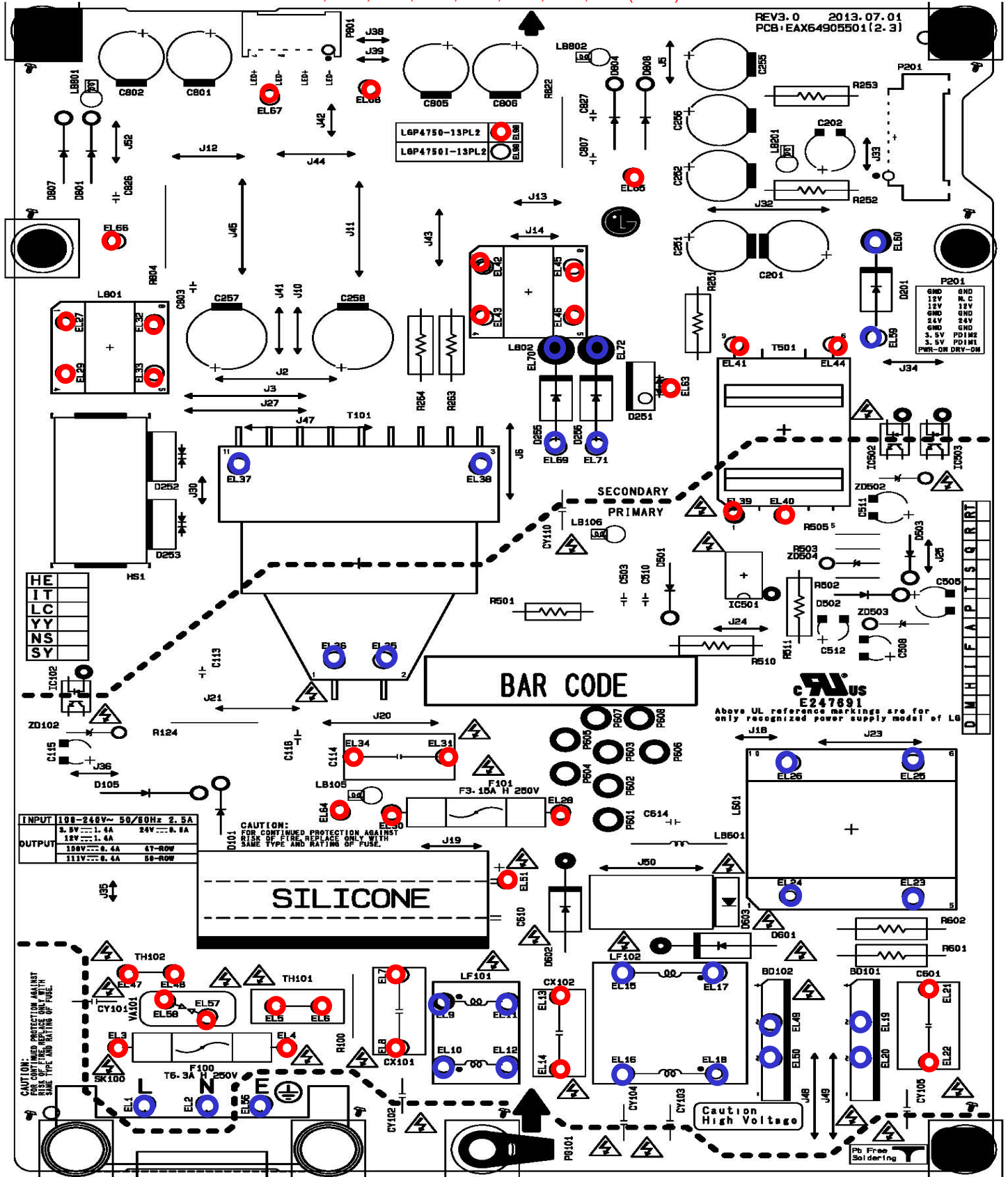


LGP4750-13PL2 LCD TV Power specification

2.13 Apply to the Eyelet point.

Apply to the Eyelet point 2.0Φ : EL1,EL2,EL9,EL10,EL11,EL12,EL15,EL16,EL17,EL18,EL19,EL20,EL23,EL24,EL25,  
EL26,EL35,EL36,EL37,EL38,EL49,EL50,EL56,EL59,EL60,EL69,EL70,EL71,EL72(29EA)

Apply to the small Eyelet point 1.6Φ : EL3,EL4,EL5,EL6,EL7,EL8,EL13,EL14,EL21,EL22,EL27,EL28,EL29,EL30,EL31,  
EL32,EL33,EL34,EL39,EL40,EL41,EL42,EL43,EL44,EL45,EL46,EL47,EL48,EL51,EL57,  
EL58,EL63,EL64,EL65,EL66,EL67,EL68,EL98(38EA)



**2.14 Electrical Characteristics**

No.	Test Item	Test method																		
1	Intermittent Operation stability Test	The switching regulator shall ON/OFF for 20,000 time at an Interval of 10 sec at maximum load, after that electrical Characteristics shall be satisfied.																		
2	Low temperature operation	The switching regulator is left at the operating guarantee Minimum temperature for 2 hours without applying electricity. After that power shall be turned on, and then the electrical Characteristics shall be satisfied.																		
3	Low temperature Storage test Leave At low temperature	The switching regulator is left at minimum storage Temperature for 96 hours or more. Then the switching regulator is left at a room temperature and humidity for 1 hour or more, after that electrical characteristics shall be satisfied.																		
4	Heat cycle storage test	<p>The switching regulator is 10 consecutive temperature cycle that shown below is performed and then leave them at room temperature and humidity for 1 hour or more. After that, electrical characteristics shall be satisfied.</p> <table border="1"> <thead> <tr> <th>Time</th> <th>Temperature</th> </tr> </thead> <tbody> <tr> <td>30 minutes</td> <td>25°C</td> </tr> <tr> <td>30 minutes</td> <td>25°C -&gt; -20°C</td> </tr> <tr> <td>60 minutes</td> <td>Minimum storage temperature (-20°C)</td> </tr> <tr> <td>30 minutes</td> <td>-20°C -&gt; 25°C</td> </tr> <tr> <td>30 minutes</td> <td>25°C</td> </tr> <tr> <td>30 minutes</td> <td>25°C -&gt; 70°C</td> </tr> <tr> <td>60 minutes</td> <td>Maximum storage temperature (70°C)</td> </tr> <tr> <td>30 minutes</td> <td>70°C -&gt; 25°C</td> </tr> </tbody> </table>	Time	Temperature	30 minutes	25°C	30 minutes	25°C -> -20°C	60 minutes	Minimum storage temperature (-20°C)	30 minutes	-20°C -> 25°C	30 minutes	25°C	30 minutes	25°C -> 70°C	60 minutes	Maximum storage temperature (70°C)	30 minutes	70°C -> 25°C
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30 minutes	70°C -> 25°C																			
5	Heat shock test	<p>Heat shock test performed under following conditions without applying electricity and then leave them at room temperature and humidity for 1 hour or more. After that, electrical characteristics shall be satisfied.</p> <p>Condition : -45°C (30minutes), 120°C (30minutes),            Switching time : Less than 5 minutes, 200 cycles.</p>																		



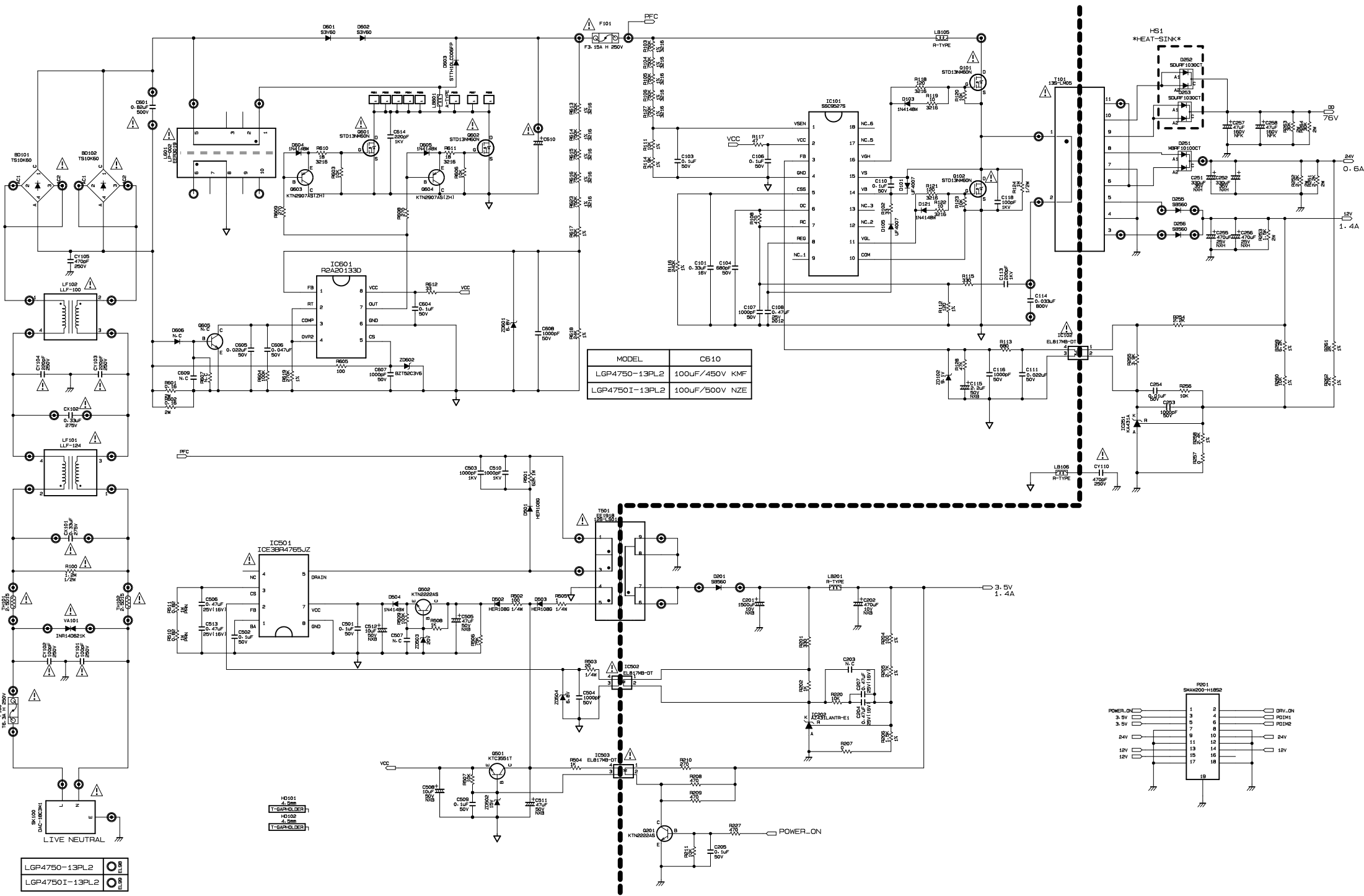


## 2.15 Mechanical Characteristics

No.	Test Item	Test method
1	Appearance	<p>There shall be no contaminant or dirt on the switching regulator which has adverse effect on electrical characteristics.</p> <p>There shall be no excessive unevenness or scratches on the plated or painted surface.</p>
2	Vibration	<p>While applying electricity :</p> <p>Vibration frequency : 5 ~ 100Hz</p> <p>Acceleration : 4.9 m/s<sup>2</sup></p> <p>Vibration in X,Y,Z direction for 30 minutes</p> <p>While applying electricity :</p> <p>Vibration frequency : 5 ~ 100Hz</p> <p>Acceleration : 14.7 m/s<sup>2</sup></p> <p>Vibration in X,Y,Z direction for 30 minutes</p> <p>After that electrical characteristics shall be satisfied.</p> <p>There shall be no damage to appearance and construction.</p>
3	Shock	<p>Shock : 98 m/s<sup>2</sup></p> <p>On the oak more than 10mm thickness with the flat face, raise the one side for 50mm, and it carries out each side free fall for three sides.</p> <p>There shall be no damage to appearance and construction.</p>



# Schematic Diagram



MODEL	C610
LGP4750-13PL2	100uF/450V KMF
LGP4750I-13PL2	100uF/500V NZE

LGP4750-13PL2	
LGP4750I-13PL2	

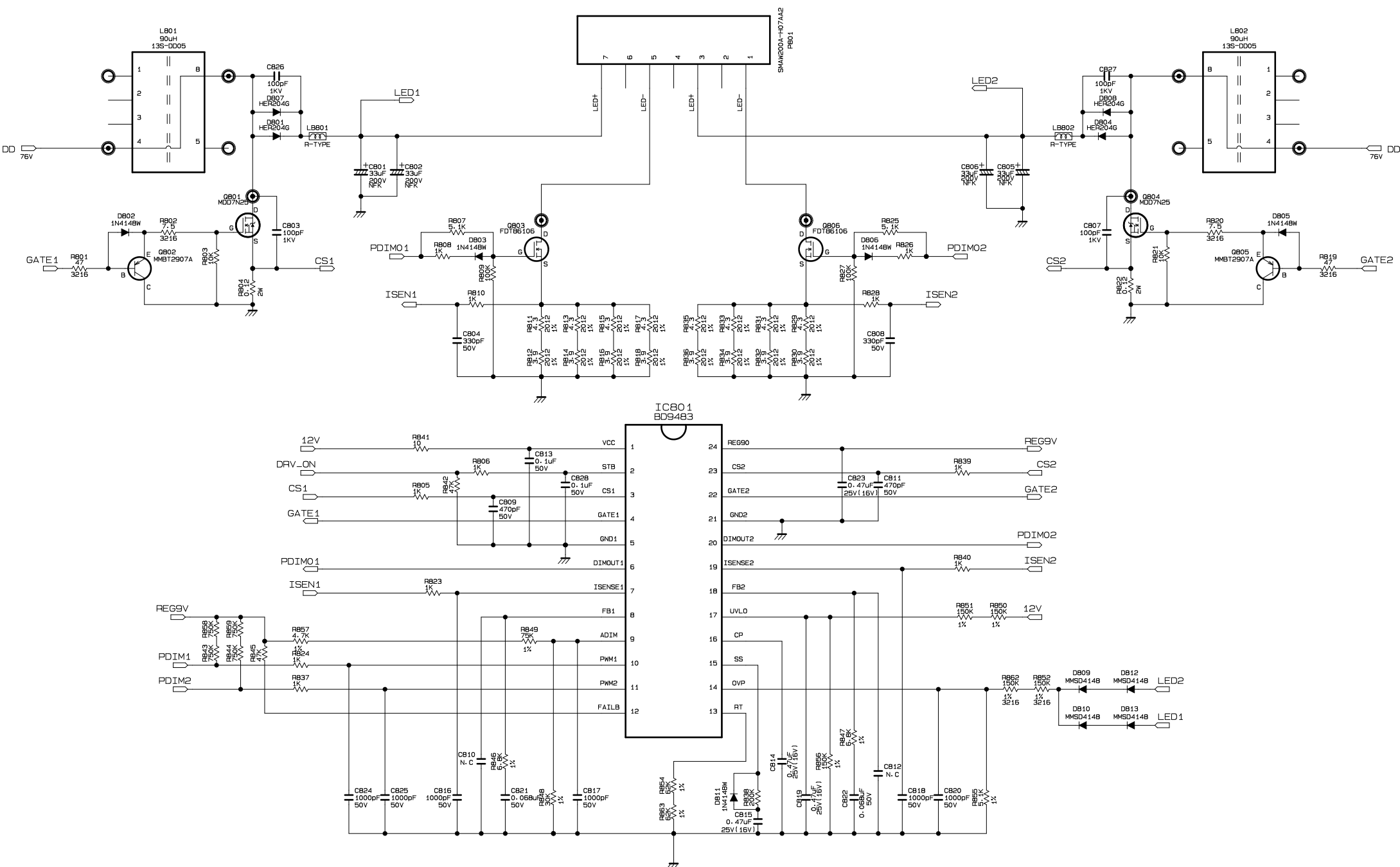
THE SYMBOL MARK OF THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION. FILRE AND ELECTRICAL SHOCK HAZARDS. WHEN SERVICING IF IS ESSENTIAL THAT ONLY MANUFACTURES SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SYMBOL MARK OF THE SCHEMATIC.

**SECRET**  
LGElectronics

LG ELECTRONICS

MODEL	LGP4750-13PL2	DATE	'13.07.01
BLOCK	PFC*STBY*MULTI	SHEET	1 / 2

47-ROW : 100V/O. 4A  
50-ROW : 111V/O. 4A



THE SYMBOL MARK OF THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION. FILRE AND ELECTRICAL SHOCK HAZARDS. WHEN SERVICING IF IS ESSENTIAL THAT ONLY MANUFACTURES SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SYMBOL MARK OF THE SCHEMATIC.

SECRET  
LGElectronics



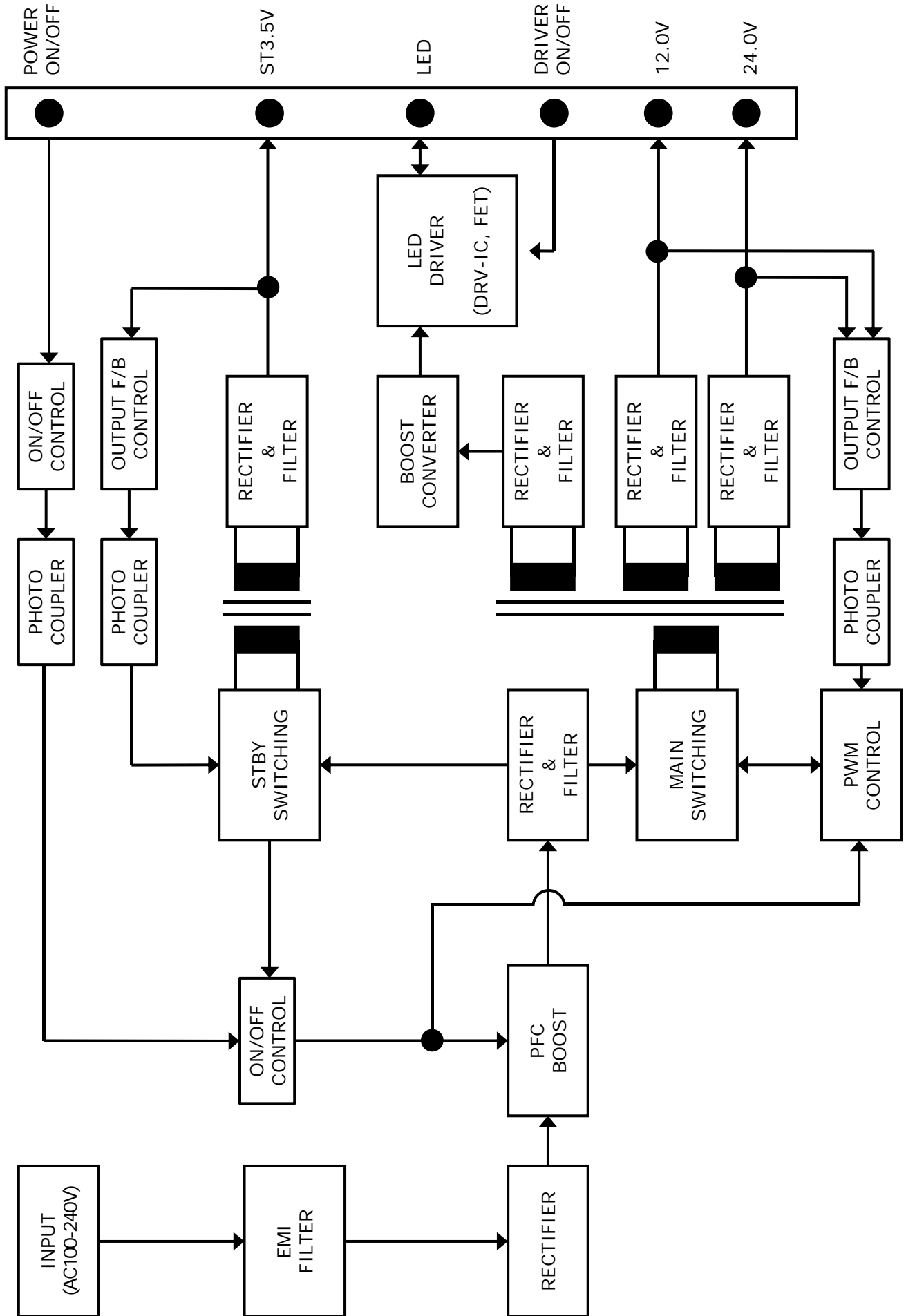
MODEL LGP4750-13PL2  
BLOCK PFC\STBY\MULTI

DATE '13.07.01  
SHEET 2 / 2

# Block Diagram



**LGP4750-13PL2 LCD TV Power specification**





# Parts List



**LGP4750-13PL2 LCD TV Power specification**

NO.	L/V	Qty	UNIT	LOCATION	SPECIFICATION	DESCRIPTION	MAKER
	M				DIODE ASS'Y	HEAT SINK ASS'Y	
1	M	1	EA	HS1	LGP4750-13PL2 HS1(30X15X18.3)	HEAT SINK	MINGXUE HUAPENG YAOFENG
2	M	2	EA	D252,D253	SDURF1030CT 300V 10A ITO-220AB U10A3CIC 300V 10A TO-220IS SFF1005G 300V 10A ITO-220AB	DIODE	SENSITRON KEC TSC
3	M	2	EA	FOR D252,D253	M/S S/W + $\phi$ 3.0 7L SILVER PLATE HEAD M/S S/W + $\phi$ 3.0 8L PAN HEAD BHM Screw , M3.0 * 6.0L, w ith Clamfix, Cr3+WH Plating	SCREW	RUI YOU ROEN
4	M	0.02	GR	FOR D252,D253	KD-3 H-SC-7	SILICON GREASE	SANCHEN XUNWEI
	M				LGP4750-13PL2 MI COMPONENTS	MI ASS'Y	
5	M	2	EA	BD101,BD102	TS10K60 600V 10A KBJ1006G 600V 10A D10XB60 600V 10A	DIODE	TSC LITEON DACHANG
6	M	1	EA	C610	KMF 100uF 450V M RB P7.5 $\phi$ 18x35.5 SK 100uF 450V M RB P7.5 $\phi$ 18X35.5	CAPACITOR, ALUMNUM	SAMYOUNG SUSCON
7	M	2	EA	CX101,CX102	PCX2 337 0.33uF 275V P15 CTX 0.33uF 275V P15 MPX 0.33uF 275V P15	CAPACITOR, FILM	PILKOR CHENG TUNG EUROPTRONIC
8	M	1	EA	C601	PCMP 372 0.82uF 500V J P15 MPHB 0.82uF 500V J P15 CTH 0.82uF 500V J P15	CAPACITOR,FILM	PILKOR EUROPTRONIC CHENG TUNG
9	M	1	EA	C114	PCMP 384 0.033uF 800V J P15 MPLB 0.033uF 1000V J P15	CAPACITOR,FILM	PILKOR EUROPTRONIC
10	M	2	EA	D601,D602	1N5408G 1KV 3A P20	DIODE	TSC
11	M	1	EA	D603	STTH10LCD06 600V 10A TO-220F BYV29FX-600 600V 9A TO-220F	DIODE	STM NXP
12	M	1	EA	D251	MBRF10100CT 100V 10A ITO-220AB MBRF10U100CT 100V 10A TO-220IS MBRF10100CT 100V 10A ITO-220AB	DIODE	SENSITRON KEC TSC
13	M	3	EA	D201,D255,D256	SB560 60V 5A P20 SB560 60V 5A P20	DIODE	DACHANG LITEON
14	M	1	EA	F100	T6.3A H 250V 215 BROWN(1-LINE) T6.3A H 250V 50CT BROWN(1-LINE)	FUSE, TIME LAG	LITTELFUSE Dainfuse
15	M	1	EA	F101	F3.15A H 250V 216 VIOLET(2-LINE) F3.15A H 250V 50CF VIOLET(2-LINE)	FUSE, FAST ACTING	LITTELFUSE Dainfuse
16	M	3	EA	IC102,IC502,IC503	EL817MB(DT) LTV817M-BN	IC, PHOTO COUPLER	EVERLIGHT LITEON
17	M	1	EA	IC501	ICE3BR4765JZ DIP-8	IC	INFINEON
18	M	1	EA	PG101	YF-002-00131 SPCC 0.4T GND PIN JS-12-75-04 SPCC 0.4T GND PIN	GND REINFORCE	YAOFENG DIHUA
19	M	2	EA	TH101,TH102	MF72-5D15 5 $\Omega$ 7A $\phi$ 15 OUT FORMING WTR15D5 5 $\Omega$ 8A $\phi$ 15 OUT FORMING	THERMISTOR	NSE Xiamen Wanning
20	M	1	EA	L601	LP-002(EER3019)	TRANSFORMER	FEELUX SOOJUNG ZHONGTAI
21	M	2	EA	L801,L802	13S-DD05(90uH)	CHOKE	FEELUX ZHONGTAI
22	M	1	EA	LF101	LLF-124, 28mH	LINE FILTER	FEELUX ZHONGTAI
23	M	1	EA	LF102	LLF-100, 7.7mH SQ2424	LINE FILTER	FEELUX ZHONGTAI
24	M	1	EA	T101	13S-LM05, 440uH (SRV3820)	TRANSFORMER	FEELUX ZHONGTAI
25	M	1	EA	T501	12S-LS01 (EE1918 1.1mH)	TRANSFORMER	FEELUX ZHONGTAI





**LGP4750-13PL2 LCD TV Power specification**

26	MI	1	EA	VA101	INR14D621K-CAP 620V Φ14 TUBE WMR14D621K 620V Φ14 TUBE SVC621D-14ATW7 620V Φ14 TUBE NFC14D621K0037WC 620V Φ14 TUBE	VARISTOR	AMOTECH Xiamen Wanming SAMWHA NFC
27	MI	1	EA	SK100	DAC-18C3M1 c	AC SOCKET	DONG IL TECH
28	MI	1	EA	P201	SMAW200-H18S2 18PIN	WAFER	YEONHO
29	MI	1	EA	P801	SMAW200A-H07AA2 4PIN	WAFER	YEONHO
	SMT				LGP4750-13PL2 SMD COMPONENT	SMT ASS'Y	
30	SMT	2	EA	C804,C808	330pF 50V J 1608 COG	CAPACITOR, CHIP	YAGEO HEC
31	SMT	2	EA	C809,C811	470pF 50V J 1608 COG	CAPACITOR, CHIP	YAGEO HEC
32	SMT	1	EA	C104	680pF 50V J 1608 COG	CAPACITOR, CHIP	YAGEO HEC
33	SMT	12	EA	C107,C116,C253,C504,C607, C608,C816,C817,C818,C820, C824,C825	1000pF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
34	SMT	1	EA	C254	0.01uF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
35	SMT	2	EA	C111,C605	0.022uF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
37	SMT	1	EA	C606	0.047uF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
38	SMT	2	EA	C821,C822	0.068uF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
39	SMT	10	EA	C103,C106,C110,C205,C501, C502,C509,C604,C813,C828	0.1uF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
40	SMT	1	EA	C101	0.33uF 16V K 1608 X7R / 0.33uF 25V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
41	SMT	8	EA	C204,C207,C506,C513,C814, C815,C819,C823	0.47uF 16V K 1608 X7R / 0.47uF 25V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
42	SMT	1	EA	C108	0.47uF 25V K 2012 X7R	CAPACITOR, CHIP	YAGEO HEC
43	SMT	14	EA	D103,D121,D504,D604,D605, D802,D803,D805,D806, D809,D810,D811,D812,D813	1N4148W 100V 150mA SOD-123 1N4148W 100V 150mA SOD-123	DIODE	TSC DIODES
44	SMT	1	EA	ZD602	MMSZ5227B 3.6V SOD-123 BZT52C3V6 3.6V SOD-123 SDZ3V6G 3.6V SOD-123 MMSZ3V6T1G 3.6V SOD-123	DIODE, ZENER	Rectron DIODES AUK ONSEMI
45	SMT	1	EA	ZD601	BZT52C6V8S 6.8V SOD-323 BZT52C6V8S 6.8V SOD-323	DIODE, ZENER	DIODES TSC
46	SMT	4	EA	Q101,Q102,Q601,Q602	STD13NM60N 600V 11A D-PAK FCD380N60E 600V 10.2A D-PAK TK10P60W 600V 9.8A D-PAK	FET	STM FAIRCHILD TOSHIBA
47	SMT	2	EA	Q801,Q804	MDD7N25 250V 6.2A D-PAK KF9N25D 250V 7.5A D-PAK TK8P25DA 250V 7.5A D-PAK	FET	MAGNACHIP KEC TOSHIBA
48	SMT	2	EA	Q803,Q806	FDT86106LZ 100V 3.2A SOT-223 PF610BL 100V 0.9A SOT-223 STN4NF20L 200V 1A SOT-223 MDHT4N20Y 200V 0.85A SOT-223	FET	FAIRCHILD NIKO-SEM STM MAGNACHIP
49	SMT	1	EA	Q501	BCW66GLT SOT-23 NPN 2SC5865 SOT-23 NPN	TRANSISTOR	ONSEMI ROHM
50	SMT	2	EA	Q201,Q502	MMBT2222A 40V 600mA SOT-23 NPN KTN2222AS 40V 600mA SOT-23 NPN SBT2222A 40V 600mA SOT-23 NPN	TRANSISTOR	ONSEMI KEC AUK
51	SMT	4	EA	Q603,Q604,Q802,Q805	MMBT2907A -60V -600mA SOT-23 PNP KTN2907AS -60V -600mA SOT-23 PNP SBT2907A -60V -600mA SOT-23 PNP	TRANSISTOR	ONSEMI KEC AUK
52	SMT	1	EA	IC601	R2A20133D, SOIC-8	IC	RENESAS
53	SMT	1	EA	IC101	SSC9527S, SOIC-18	IC	SANKEN

**LGP4750-13PL2 LCD TV Power specification**

54	SMT	1	EA	IC801	BD9483F, SOP-24	IC	ROHM
55	SMT	1	EA	IC202	SJ432BS 1.24V ±0.5% SOT-23 AZ431LANTR-E1 1.24V±0.5% SOT-23	IC	AUK BCD
56	SMT	1	EA	IC251	SNF431BS 2.5V ±0.5% SOT-23 AS431ANTR-E1 2.5V ±0.5% SOT-23 KIA431BM 2.5V ±0.5% SOT-23	IC	AUK BCD KEC
57	SMT	2	EA	R207,R257	0Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
58	SMT	1	EA	R841	10Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
59	SMT	2	EA	R102,R612	33Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
60	SMT	1	EA	R117	47Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
61	SMT	1	EA	R605	100Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
62	SMT	3	EA	R210,R608,R609	270Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
63	SMT	2	EA	R115,R201	330Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
64	SMT	4	EA	R108,R208,R209,R227	470Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
65	SMT	1	EA	R113	680Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
66	SMT	14	EA	R202,R504,R508,R805,R806, R808,R810,R823,R824,R826, R828,R837,R839,R840	1KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
67	SMT	1	EA	R254	2.2KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
68	SMT	1	EA	R255	3.9KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
69	SMT	2	EA	R807,R825	5.1KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
70	SMT	10	EA	R120,R123,R211,R220,R256, R507,R603,R606,R803,R821	10KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
71	SMT	3	EA	R128,R842,R845	47KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
72	SMT	1	EA	R506	75KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
73	SMT	4	EA	R509,R604,R809,R827	100KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
74	SMT	4	EA	R843,R844,R858,R859	750KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
75	SMT	1	EA	R838	200KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
76	SMT	1	EA	R204	100Ω F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
77	SMT	1	EA	R112	120Ω F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
78	SMT	1	EA	R206	1.5KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN

**LGP4750-13PL2 LCD TV Power specification**

79	SMT	1	EA	R261	2KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
80	SMT	1	EA	R258	2.4KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
81	SMT	1	EA	R205	2.7KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
82	SMT	1	EA	R114	3.9KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
83	SMT	1	EA	R857	4.7KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
84	SMT	1	EA	R855	5.1KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
85	SMT	1	EA	R259	6.2KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
86	SMT	2	EA	R846,R847	6.8KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
87	SMT	2	EA	R111,R260	10KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
88	SMT	1	EA	R618	24KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
89	SMT	2	EA	R617,R848	30KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
90	SMT	1	EA	R262	47KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
91	SMT	2	EA	R854,R863	62KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
92	SMT	1	EA	R849	75KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
93	SMT	3	EA	R850,R851,R856	150KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
94	SMT	1	EA	R619	270KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
95	SMT	1	EA	R116	240KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
96	SMT	8	EA	R812,R814,R816,R818,R830, R832,R834,R836	3.9Ω F 2012	RESISTOR, CHIP	YAGEO TZAIYUAN
97	SMT	8	EA	R811,R813,R815,R817,R829, R831,R833,R835	4.3Ω F 2012	RESISTOR, CHIP	YAGEO TZAIYUAN
98	SMT	2	EA	J29,J46	0Ω J 3216	RESISTOR, CHIP	YAGEO TZAIYUAN
99	SMT	2	EA	R802,R820	7.5Ω J 3216	RESISTOR, CHIP	YAGEO TZAIYUAN
100	SMT	2	EA	R119,R122	10Ω J 3216	RESISTOR, CHIP	YAGEO TZAIYUAN
101	SMT	2	EA	R610,R611	18Ω J 3216	RESISTOR, CHIP	YAGEO TZAIYUAN
102	SMT	2	EA	R801,R819	47Ω J 3216	RESISTOR, CHIP	YAGEO TZAIYUAN
103	SMT	2	EA	R118,R121	120Ω J 3216	RESISTOR, CHIP	YAGEO TZAIYUAN
104	SMT	2	EA	R852,R862	150KΩ F 3216	RESISTOR, CHIP	YAGEO TZAIYUAN
105	SMT	10	EA	R103,R104,R105,R106,R127, R613,R614,R615,R616,R623	750KΩ F 3216	RESISTOR, CHIP	YAGEO TZAIYUAN



LGP4750-13PL2 LCD TV Power specification

106	SMT	0.5	GR		NE8800T	BOND	FUJI
	AI				LGP4750-13PL2 AI COMPONENTS	AI ASS'Y	
107	AI	2	EA	CY101,CY102	CD 100pF 250V K P10, Y1 CT81 100pF 250V K P10, Y1	CAPACITOR, CERAMIC	TDK YINANDON
108	AI	2	EA	CY103,CY104	CD 220pF 250V K P10, Y1 CT81 220pF 250V K P10, Y1	CAPACITOR, CERAMIC	TDK YINANDON
109	AI	2	EA	CY105,CY110	CD 470pF 250V K P10, Y1 CT81 470pF 250V K P10, Y1	CAPACITOR, CERAMIC	TDK YINANDON
110	AI	1	EA	C115	NXB 2.2uF 50V M P5 Φ5X11 SG 2.2uF 50V M P5 Φ5X11	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
111	AI	2	EA	C508,C512	NXB 10uF 50V M P5 Φ5X11 SG 10uF 50V M P5 Φ5X11	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
112	AI	2	EA	C505,C511	NXB 47uF 50V M P5 Φ6.3X11 SG 47uF 50V M P5 Φ6.3X11	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
113	AI	1	EA	C201	NXB 1500uF 10V M P5 Φ10X20 SG 1500uF 10V M P5 Φ10X20	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
114	AI	1	EA	C202	NXB 470uF 10V M P5 Φ8X11.5 SG 470uF 10V M P5 Φ8X12	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
115	AI	2	EA	C251,C252	NXH 330uF 35V M P5 Φ10X12.5 MG 330uF 35V M P5 Φ10X13	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
116	AI	2	EA	C255,C256	NXH 470uF 25V M P5 Φ10X12.5 MG 470uF 25V M P5 Φ10X13	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
117	AI	2	EA	C257,C258	NFK 47uF 160V M P5 Φ 12.5X20 SE 47uF/160V M P5 Φ 12.5*20	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
118	AI	4	EA	C801,C802,C805,C806	NFK 33uF 200V M P5 Φ 10X20 SE 33uF 200V M P5 Φ 10x20	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
119	AI	5	EA	C118,C803,C807,C826,C827	CK45 100pF 1KV K P5 125°C CT81 100pF 1KV K P5 125°C CT81 100pF 1KV K P5 125°C	CAPACITOR, CERAMIC	TDK YINANDON Kunshan Wansheng
120	AI	2	EA	C113,C614	CK45 220pF 1KV K P5 125°C CT81 220pF 1KV K P5 125°C CT81 220pF 1KV K P5 125°C	CAPACITOR, CERAMIC	TDK YINANDON Kunshan Wansheng
121	AI	2	EA	C503,C510	CK45 1000pF 1KV K P5 125°C CT81 1000pF 1KV K P5 125°C CT81 1000pF 1KV K P5 125°C	CAPACITOR, CERAMIC	TDK YINANDON Kunshan Wansheng
122	AI	5	EA	D101,D105,D501,D502,D503	UF4007 1KV 1A DO-41 UF4007 1KV 1A DO-41	DIODE	TSC DACHANG
123	AI	4	EA	D801,D804,D807,D808	HER204G 300V 2A DO-41 HER204G 300V 2A DO-41	DIODE	TSC DACHANG
124	AI	1	EA	ZD504	1N5235B 6.8V DO-35	DIODE, ZENER	TSC
125	AI	1	EA	ZD102	1N5239B 9.1V DO-35	DIODE, ZENER	TSC
126	AI	1	EA	ZD502	1N5245B 15V DO-35	DIODE, ZENER	TSC
127	AI	1	EA	ZD503	1N5250B 20V DO-35	DIODE, ZENER	TSC
128	AI	38	EA	EL3,EL4,EL5,EL6,EL7, EL8,EL13,EL14,EL21,EL22, EL27,EL28,EL29,EL30,EL31, EL32,EL33,EL34,EL39,EL40, EL41,EL42,EL43,EL44,EL45, EL46,EL47,EL48,EL51,EL57, EL58,EL63,EL64,EL65,EL66, EL67,EL68,EL98	1.6X3.0	EYELET	YAOFENG DELIKANG
129	AI	29	EA	EL1,EL2,EL9,EL10,EL11, EL12,EL15,EL16,EL17,EL18, EL19,EL20,EL23,EL24,EL25, EL26,EL35,EL36,EL37,EL38, EL49,EL50,EL56,EL59,EL60, EL69,EL70,EL71,EL72	2.0X3.0	EYELET	YAOFENG DELIKANG
130	AI	8	EA	P601,P602,P603,P604,P605, P606,P607,P608	SSJS236-6-3 (6mm Under)	GT PIN	YAOFENG DELIKANG
131	AI	1	EA	LB601	BFS3550A0L SINGLE AXIAL	INDUCTOR, BEAD FILTER LEAD	SAMWHA
132	AI	5	EA	LB105,LB106,LB201,LB801, LB802	BFS3550R2F SINGLE RADIAL	INDUCTOR, BEAD FILTER LEAD	SAMWHA
133	AI	35	EA	J2,J3,J5,J6,J10, J11,J12,J13,J14,J18, J19,J20,J21,J23,J24, J25,J27,J30,J32,J33, J34,J35,J36,J38,J39, J41,J42,J43,J44,J45, J47,J48,J49,J50,J52	Φ0.6	JUMPER WIRE	TZAI YUAN HUIHUA
134	AI	1	EA	R505	CF 1Ω 1/4W J SMALL	RESISTOR, CARBON FILM	TZAI YUAN
135	AI	1	EA	R503	CF 20Ω 1/4W J SMALL	RESISTOR, CARBON FILM	TZAI YUAN
136	AI	1	EA	R502	CF 100Ω 1/4W J SMALL	RESISTOR, CARBON FILM	TZAI YUAN



**LGP4750-13PL2 LCD TV Power specification**

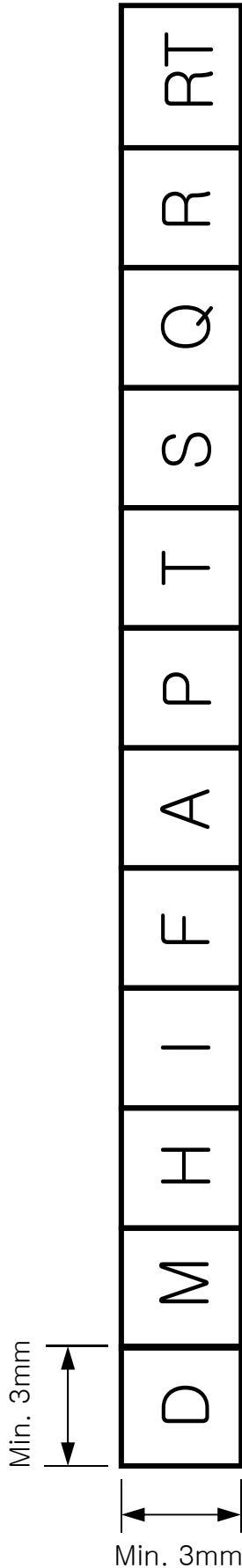
137	AI	1	EA	R501	MOF 62KΩ 1W J SMALL	RESISTOR, METAL OXIDE FILM	TZAI YUAN
138	AI	1	EA	R253	MOF 1.5KΩ 2W J SMALL	RESISTOR, METAL OXIDE FILM	TZAI YUAN
139	AI	2	EA	R251,R252	MOF 2.2KΩ 2W J SMALL	RESISTOR, METAL OXIDE FILM	TZAI YUAN
140	AI	2	EA	R263,R264	MOF 30KΩ 2W J SMALL	RESISTOR, METAL OXIDE FILM	TZAI YUAN
141	AI	1	EA	R124	MSR37 1MΩ 1/2W J SURGE	RESISTOR, FIXED CARBON COMPOSITION	PILKOR
142	AI	1	EA	R100	MSR37 1.2MΩ 1/2W J SURGE	RESISTOR, FIXED CARBON COMPOSITION	PILKOR
143	AI	2	EA	R510,R511	WNPS 0.82Ω 1W J SMALL	RESISTOR, WIRE WOUND	ABCO
144	AI	2	EA	R804,R822	WNPS 0.12Ω 2W J SMALL	RESISTOR, WIRE WOUND	ABCO
145	AI	2	EA	R601,R602	WNPS 0.16Ω 2W J SMALL	RESISTOR, WIRE WOUND	ABCO
146	AI	1	EA	PCB	LGP4750-13PL2(159X240X1.6T) FR-1 KB,DS,L, 1oz CTI-600	PCB	SHANGHAI WANZHENG NEW TRIUNION WYT
	ETC				LGP4750-13PL2 SUBSIDIARY MATERIALS		
147	ETC	1	EA		40X8 NY WHITE 93CODE 19DIGIT	BAR CODE	QIUJING
148	ETC	15.00	GR		ES2044H & ES2482W SD-5 UB-5601	BOND (RTV)	CANADA SANCHEN U-BOND
149	ETC	0.05	EA		630 x 425 x 205 x t8	BOX CARTON	WUJIANG ZHENLONG SUZHOU JIADELONG
150	ETC	0.10	EA		615 x 410 x t8	BOX PAD	WUJIANG ZHENLONG SUZHOU JIADELONG
151	ETC	0.55	EA		620 x 165 x t8	BOX PARTITION	WUJIANG ZHENLONG SUZHOU JIADELONG
152	ETC	0.20	EA		415 x 165 x t8	BOX PARTITION	WUJIANG ZHENLONG SUZHOU JIADELONG
153	ETC	0.20	EA		145 x 250 x t25	BOX PARTITION	WUJIANG ZHENLONG SUZHOU JIADELONG
154	ETC	1.00	EA		260 x 440	BUBBLE SHEET	LIYUAN WINWORLD
155	ETC	25	GR		ILF-710(kg)	FLUX	ION ELEC
156	ETC	15	GR		SAC0307 A+ SN:99%, AG:0.3%, CU:0.7%	SOLDER BAR	DYFENCO
157	ETC	5	GR		SAC0307 A+ SN:99%, AG:0.3%, CU:0.7%	SOLDER WIRE	DYFENCO
158	ETC	3.00	GR		OKE-1257 1-2577LV / 1-2577 LCD2577D	BOND (RTV) Apply to PFC IC601 (Apply Bottom of PCB)	OKONG DOW CORNING DOW CORNING



# Process Marking



## 공정표시 MARK (PCB SILK)



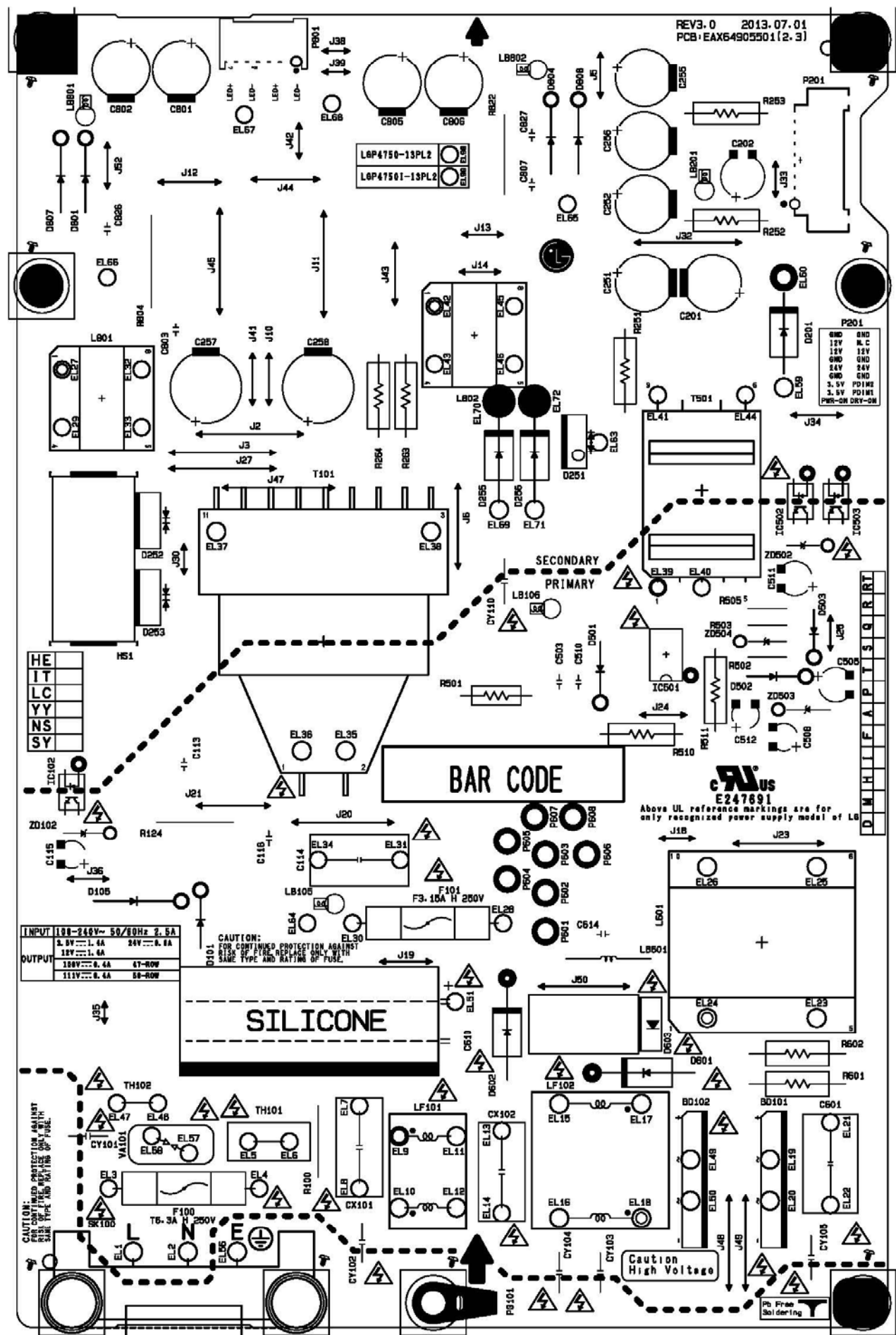
- D : 자삽
- M : SMD
- H : 수삽 최종
- I : ICT
- F : 1차 성능
- A : AGING
- P : HI-POT
- T : 최종 검사 (ATE)
- S : SET 검사
- Q : QC 검사
- R : 불량 수리
- RT : 양산 보증 시험

# PCB Layout



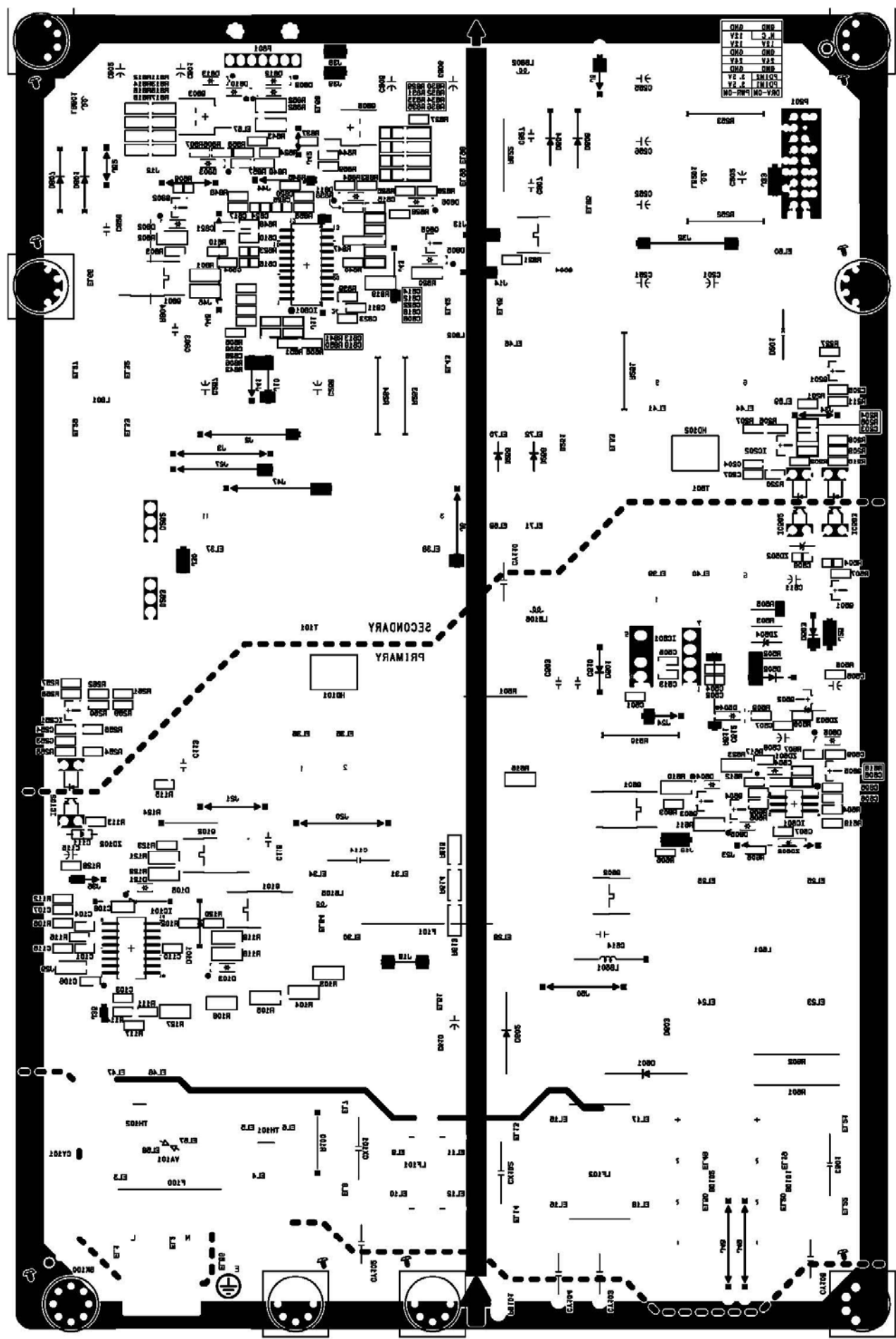
LGP4750-13PL2 LCD TV Power specification

Top Silk



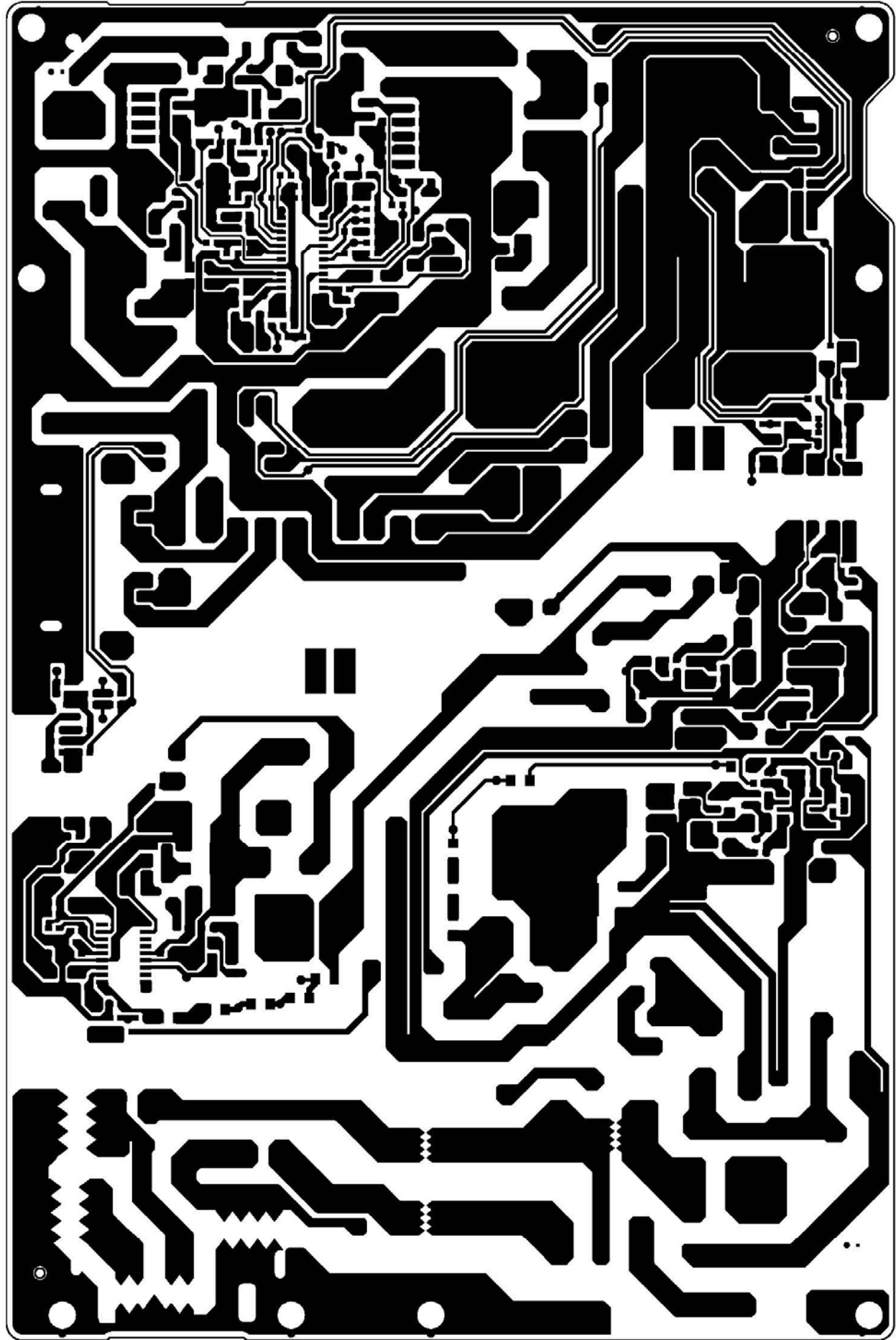
LGP4750-13PL2 LCD TV Power specification

Bottom Silk :



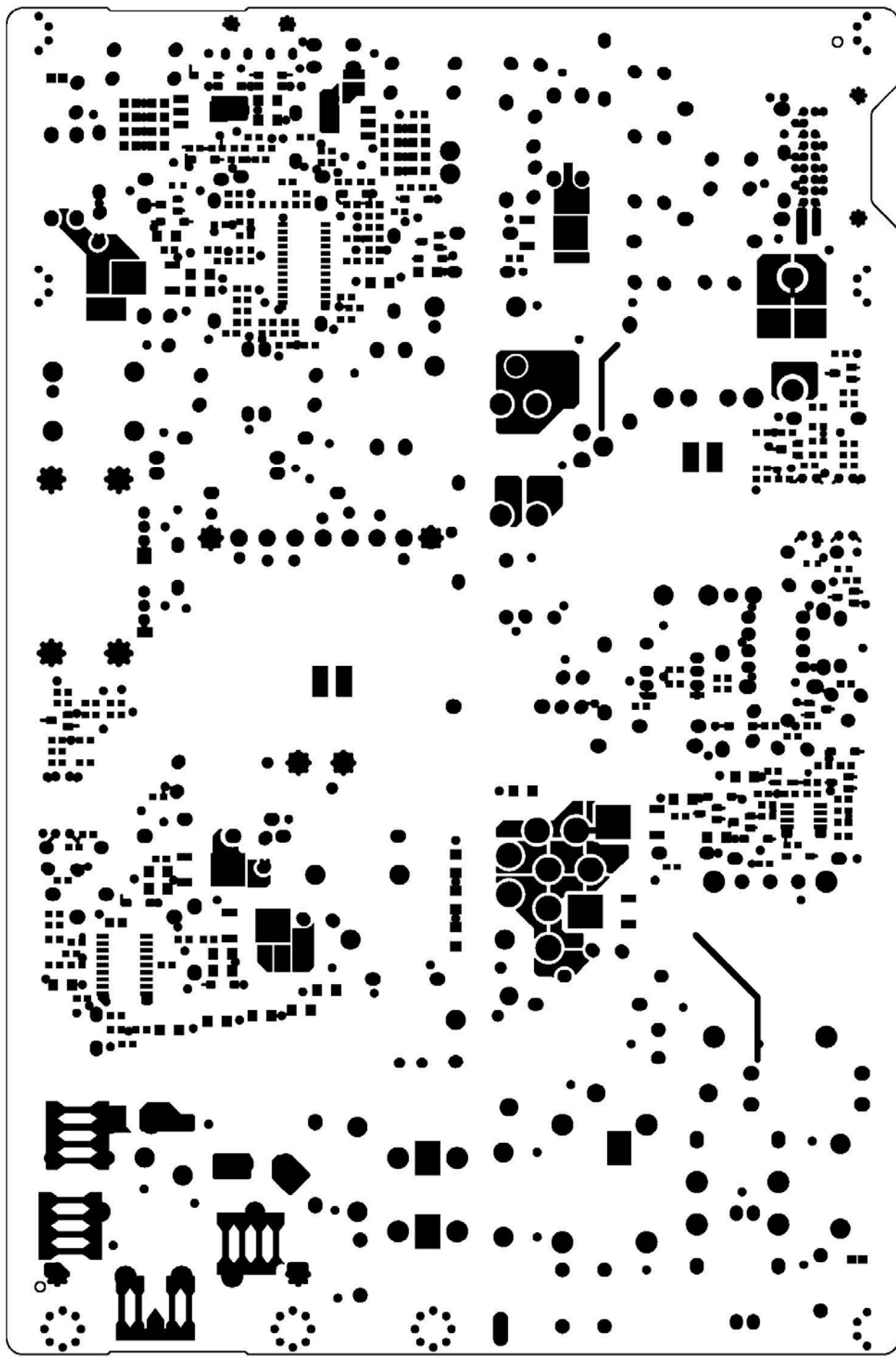


**Bottom Pattern :**





**Bottom Solder mask :**





# Safety Parts

LGP4750-13PL2 LCD TV Power specification

Object/part No.	Manufacturer / Trademark	Type / Model	Value / Rating	Parts Marking (實物)	standard	mark(s) of conformity
AC input connector, (SK100)	Dongil Tech	DAC-18C3M1	250V / 2.5A	DAC-18C3M1	IEC 60320-1	
Fuse, (F100)	Littelfuse Inc.	215 Series	T6.3A H / 250V	LF.T6.3AH250VP	IEC 60127-2	
	WALTER FUSE	TSC		TSC6.3A250V(P)	IEC 60127	
	BUSSMANN	SS05		T6.3AH250V	IEC 60127-2	
	Dainfuse	50CT		T6.3AH 250V	IEC 60127	
	CONQUIRE	UDA-A		UDA-A T6.3A H 250V	IEC 60127-3-5	
Fuse, (F101)	Littelfuse Inc.	216.XXXX	F3.15A H / 250V	LF.F3.15AH250VP	IEC 60127-2	
	WALTER FUSE	FSC		FSC3.15A250V(P)	IEC 60127	
	Dainfuse	50CF		F3.15AH250V	IEC 60127	
	CONQUIRE	UBM-A		UBM-A 3.15A 250V	IEC 60127-2-1	
Line Filter, (LF101)	TNC	CV620280SH(HF)	Rated 130°C	G20280 S3	IEC 60065	Test in appliance
	Dangil Tech	LSD020280		G20280		
	FEELUX					
	ZHONGTAI					
	JIANGSU CHANNELON ELECTRONIC GROUP	LLF-124		LLF-124		
	SOOJUNG					
Base material of Linefilter (LF101)	MOEMTIVE SPECIALTY CHEMICALS GMBH	PF 2736	Y-0, 150°C		UL, E61040	UL
Alt	Chang Chun Plastics Co., Ltd	T375HF, T375J	Y-0, 150°C		UL, E59481	UL
Alt	LG CHEMICAL LTD	LUPOX GP-2306F	Y-0, 140°C		UL, E67171	UL
Alt	NAN YA PLASTICS CORP PLASTICS 4TH DIV	1403G3, 1403G6	Y-0, 130°C		UL, E130155	UL
Alt	SAMYANG CORPORATION	1500GN-30	Y-0 130°C		UL, E121254	UL
Alt	Rhodia Engineering plastics	A 50H1	Y-0, 130°C		UL, E44716	UL
Alt	Sabic Innovative Plastics Japan LLC	429SE0	Y-0, 130°C		UL, E45587	UL
Alt	TORAY INDUSTRIES INC	A604 E604	Y-0, 130°C		UL, E41797	UL
Alt	POLY PLASTICS CO., LTD	1140A66	Y-0, 130°C		UL, E109088	UL
Alt	SK CHEMICALS CO., LTD	Ecotran 1040G	Y-0, 130°C		UL, E215991	UL
Line Filter, (LF102)	FEELUX		Rated 130°C	LLF-100	IEC 60065	Test in appliance
	JIANGSU CHANNELON ELECTRONIC GROUP	LLF-100				
	SOOJUNG					
	JIANGSU TAICHANG ELECTRONICS Co., LTD.					
	ZHONGTAI					
	DONG YANG TELECOM CO., LTD					
Base material of Linefilter (LF102)	MOEMTIVE SPECIALTY CHEMICALS GMBH	PF 2736	Y-0, 150°C		UL, E61040	UL
Alt	Chang Chun Plastics Co., Ltd	T375HF, T375J	Y-0, 150°C		UL, E59481	UL
Alt	LG CHEMICAL LTD	LUPOX GP-2306F	Y-0, 140°C		UL, E67171	UL
Alt	NAN YA PLASTICS CORP PLASTICS 4TH DIV	1403G3, 1403G6	Y-0, 130°C		UL, E130155	UL
Alt	SAMYANG CORPORATION	1500GN-30	Y-0 130°C		UL, E121254	UL
Alt	Toray Industrial INC	A604 E604	Y-0 200°C		UL, E41797	UL
Varistor, (VA101)	Samwha	SVC621D-14A	Climatic category: 40/085/21 Maximum continuous voltage: 385V.a.c. Current pulse rating: 6 kV/3 kA	SVC 621-14	CECC 42000 CECC 42200 IEC 60065 Clause 14.12 and IEC 60950-1 Annex Q	
	Amotech Co., Ltd.	INR 14D621K	Climatic category: 40/085/56 Maximum continuous voltage: 385V.a.c. Current pulse rating: 6 kV/3 Ka	INR 14D621	CECC42000/A1 CECC42200/A1 CECC 42201-001 IEC 61051-1 IEC 61051-2 IEC 61051-2-2 IEC 60065 Clause 14.12 and IEC 60950-1 Annex Q	
	Xiamen Wanning Electronics Co.,Ltd	WMR14D621K	Climatic category: 40/85/56 Maximum continuous voltage: 750V.a.c. Current pulse rating: 6 kV/3 kA	WMR 14D621K	IEC 61051-1 IEC 61051-2 IEC 61051-2-2 IEC 60950-1 Annex Q	
	Guangxi New Future Information Industry Co.,Ltd	NFC 14D621K	Climatic category: 40/085/21 Maximum continuous voltage: 385V.a.c. Current pulse rating: 6 kV/3 kA	NFC 14D621K	IEC 61051-1 IEC 61051-2 IEC 61051-2-2 IEC 60950-1 Annex Q	
Bridge Diode, (BD101, BD102)	Lite-on	KBJ1006G	Min 600V / 10A	EBJ1006G	IEC 60384-14 UL1414	Test in appliance
	DACHANG	D10XB60		D10XB60		
	TSC	TS10K60		TS10K60		
	GULF	G10XB60		G10XB60		
	RECTRON	RS1007M		RS1007M		
	SHINDENGEN	D10XB60		D10XB60		
X-cap, (CX101, CX102)	Pilkor	PCX2 337	Min 275V~ / (CX101= Max 0.33uF, CX102= Max 0.33uF)	PCX2 337 MRP	IEC 60384-14 UL1414	
	Okaya	LE		LE	IEC 60384-14 UL1414	
	EUROPTRONIC	MPX		MPX	E199061/ E311052 IEC 60384-14-3'nd edition	
	CHENG TUNG	CTX		CTX	IEC 60384-14 UL1414	
Thermistor, (TH101, TH102)	DSC	DSC 2.5D-15	2.5ohm at 25°C	DSC 2.5D-15	IEC 60065	
	Xiamen Wanning Electronics Co.,Ltd	WTR15D2R5		WTR15D2R5		
	JIANGSU XINGSHIN ELECTRONICS CO., LTD	2.5D2-15		2.5D2-15		
	Smart	ICL-5W		ICL-05 2.5K00MSMT		
Elec.Cap. (C610)	SAMYOUNG	KMF	450V / Max 100uF / 105°C	KMF450V100uF	IEC 60950-1	Test in appliance
	SUSCON	SK	500V / Max 100uF / 105°C	SK450V100uF	IEC 60950-1	Test in appliance
	SAMYOUNG	NZE	500V / Max 100uF / 105°C	NZE500V100uF	IEC 60950-1	Test in appliance
Switching TR, (Q601, Q602, Q101, Q102)	STMICRO	STD130N60	Min. 600V / Min 8A	JAN60N	IEC 60950-1	Test in appliance
	FAIRCHILD	FCD880N60		FCD880N60		
	TOSHIBA	TK10A60W		E10A60W		
	INFINEON	IPD60R450E6		6R450E6		
Flyback IC, (IC501)	INFINEON	ICE3BR4765JZ	Min. 650 V / Min 1.67A	3BR4765JZ	IEC 60950-1	Test in appliance

LGP4750-13PL2 LCD TV Power specification

Y Cap. (CY101,CY102)	Kunshan Wansheng	Y1 / CT7	Min 250V / (CY101= Max 100pF, CY102= Max 100pF)	CT7 101K	IEC 60384-14	
	Apex intec	Y1 / NK		NK101K		
	DONG IL	Y1 / DA		DA101K		
	YINANDON	Y1 / CT81		CT81 101K		
	SAMWHA	Y1 / SD		SD101K		
	JYA-NAY	Y1 / JN		JN101K		
	GUANGDONG SOUTH HONGMING	Y1 / F		F101K		
TDK	Y1 / CD	CD101K				
Y Cap. (CY103,CY104)	Kunshan Wansheng	Y1 / CT7	Min 250V / (CY103= Max 220pF, CY104= Max 220pF)	CT7 221K	IEC 60384-14	
	Apex intec	Y1 / NK		NK221K		
	DONG IL	Y1 / DA		DA221K		
	YINANDON	Y1 / CT81		CT81 221K		
	SAMWHA	Y1 / SD		SD221K		
	JYA-NAY	Y1 / JN		JN221K		
	GUANGDONG SOUTH HONGMING	Y1 / F		F221K		
TDK	Y1 / CD	CD221K				
Bridging Cap.(CY105, CY110)	Kunshan Wansheng	Y1 / CT7	Min 250V / (CY105= Max 470pF, CY110= Max 470pF)	CT7 471K	IEC 60384-14	
	Apex intec	Y1 / NK		NK471K		
	DONG IL	Y1 / DA		DA471K		
	YINANDON	Y1 / CT81		CT81 471K		
	SAMWHA	Y1 / SD		SD471K		
	JYA-NAY	Y1 / JN		JN471K		
	GUANGDONG SOUTH HONGMING	Y1 / F		F471K		
TDK	Y1 / CD	CD471K				
PFC Coil.(L601)	FEELUX	LP-002	Class B, 130°C	LP-002	IEC 60950-1	Test in appliance
	JIANGSU CHANNELON ELECTRONIC GROUP					
	SOOJUNG					
	ZHONGTAL					
	JIANGSU TAICHANG ELECTRONICS Co., LTD.					
	NAMYANG					
	DONG YANG TELECOM CO., LTD					
Bobbin material of transformer (L601)	SUMITOMO BAKELITE CO LTD	PM-9820	V-0, 150°C		UL, E41429	UL
	MOMENTIVE SPECIALTY CHEMICALS GMBH	PF 2736	V-0, 150°C		UL, E61040	UL
	Chang Chun Plastics Co., Ltd	T375HF, T375J	V-0, 150°C		UL, E59481	UL
Switching Transformer. (T101)	FEELUX	1SS-LM05	Class B, 130°C	1SS-LM05	IEC 60950-1	Test in appliance
	JIANGSU CHANNELON ELECTRONIC GROUP					
	SOOJUNG					
	TDK					
	LG Innotek					
	ZHONGTAL					
	NAMYANG					
Bobbin material of transformer (T101)	SUMITOMO BAKELITE CO LTD	PM-9820, PM-9630	V-0, 150°C		UL, E41429	UL
	EI DUPONT DE NEUMOURS & CO INC	FR530	V-0, 155°C		UL, E41938	UL
Switching Transformer. (T501)	FEELUX	12S-LS01	Class B, 130°C	12S-LS01	IEC 60065	Test in appliance
	JIANGSU CHANNELON ELECTRONIC GROUP					
	SOOJUNG					
	TDK					
	ZHONGTAL					
	JIANGSU TAICHANG ELECTRONICS Co., LTD.					
	HBE CO LTD					
Clover hi-tech Co., Ltd.						
NAMYANG						
DONG YANG TELECOM CO., LTD						
Bobbin material of transformer (T501)	SUMITOMO BAKELITE CO LTD	PM-9820/PM-9630	V-0, 150°C		UL, E41429	UL
	Insulating Tape of transformer (T501)	DTS-204	130°C		UL, E105147	UL
	METAL LINE CO LTD	890(e)	130°C		UL, E162848	UL
AH	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE FTY	CT, PZ	130°C		UL, E165111	UL
AH	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	MF310, JY25-A	130°C		UL, E246950	UL
AH	CHANG SHU LIANG YI TAPE INDUSTRY CO LTD	LY-XX	130°C		UL, E246820	UL
AH	SM Company	No.1318 series, No.1350 series	130°C		UL, E17385	UL
Reinforced insulation wire of transformer (T501)	COSMOLINK CO LTD	T1W-M	Class B, 130°C		UL, E213764	UL
	YOUNG CHANG SILICONE CO.,LTD.	STW-B	Class B, 130°C		UL, E242198	UL
	GREAT LEOPON INDUSTRIAL CO.,LTD	TRW(B)	Class B, 130°C		UL, E211989	UL
AH	FURUKAWA ELECTRIC CO., LTD	TEX-E, TEX-BS	Class B, 130°C		UL, E206440	UL
Opto-coupler. (IC102,IC502,IC503)	Everlight	EL817	External cr: 7.7 mm. Internal cr: 6.0 mm DTI: 0.5 mm / 6000 Vrms	EL817	IEC 60065 UL 1577	
	Lite-on	LTV817...	External cr: 7.8 mm. Internal cr: 5.2 mm DTI: 0.8 mm / 6000 Vrms	817BN		
Discharge Resistor. (R100)	Smart	PRC			IEC 60065	
	UNIROYAL ELECTRONICS INDUSTRY CO., LTD	MGR0W2J****A10	1/2W, 1.2Mohm, 5%		IEC 60065	
Capacitor. (C601)	Pilkor	SR37,MSR37			IEC 60065	
	Pilkor	PCMP 372 (box)	0.82uF / 500V	820nJ 500V 372 MKP	IEC60384-1	
LUMEN	MP (Film)	0.82uF / 500V	M 8241 MP 500V			
Capacitor. (C114)	EUROPTRONIC	MPLB (Box)	0.82uF / 500V	MPLB 824 J 500	IEC60384-1	
	CHENG TUNG	CTL (Box)	0.82uF / 500V	CTL 824 J 500V		
	Pilkor	PCMP 384(box)	0.033uF / 800V	33nJ 800V 384 MKP		
	LUMEN	NP (Film)	0.033uF / 800V	N 333J NP 800V		
EUROPTRONIC	MPLB (Box)	0.033uF / 1000V	MPLB 333 J 1000			
PCB. FR-1	DONGYUNG CIR.	DMS-V-0	94V-0		IEC 60384-14	
	SHANGHAI WANZHENG	SWZ-2	94V-0			
	WYT (Wan Yuan Tong)	SWZ-2	94V-0			
	SHANGHAI AREX	02V0	94V-0			
	NEW TRIUNION	TU-3	94V-0			
	CHIN POON	E5 E01	94V-0			
	TIANJIN DAEDUCK	DC-1 DC-2	94V-0			
	HUIHO	4B-5 4B-1, 4B-2, 4D	94V-0			
	HSIANG KIO	07V0	94V-0			
	SAMBHAN	SH7	94V-0			
	HT CIRCUIT(QINGDAO)	1794V0	94V-0			
	WONKYUNG	WK-1	94V-0			
	TIAN FENG	TU-1	94V-0			
	Duck sung	DS8-V-0	94V-0			
	TIS KOREA	TIS-3	94V-0			
	kyosha	2294V-0	94V-0			
	kyosha	S4594V-0	94V-0			
	WeiIbest	MIVO-01	94V-0			
	Cosmotech	GS2-V-0-1 CJ2-V-0-1 CJ2-V-0-2	94V-0			
	CHANGZHOU HATHONG	CCE-V0	94V-0			

1) An asterisk indicates a mark which assures the agreed level of surveillance

Remarks: \*) Large volume capacitors exceeding volume 1750mm<sup>3</sup>

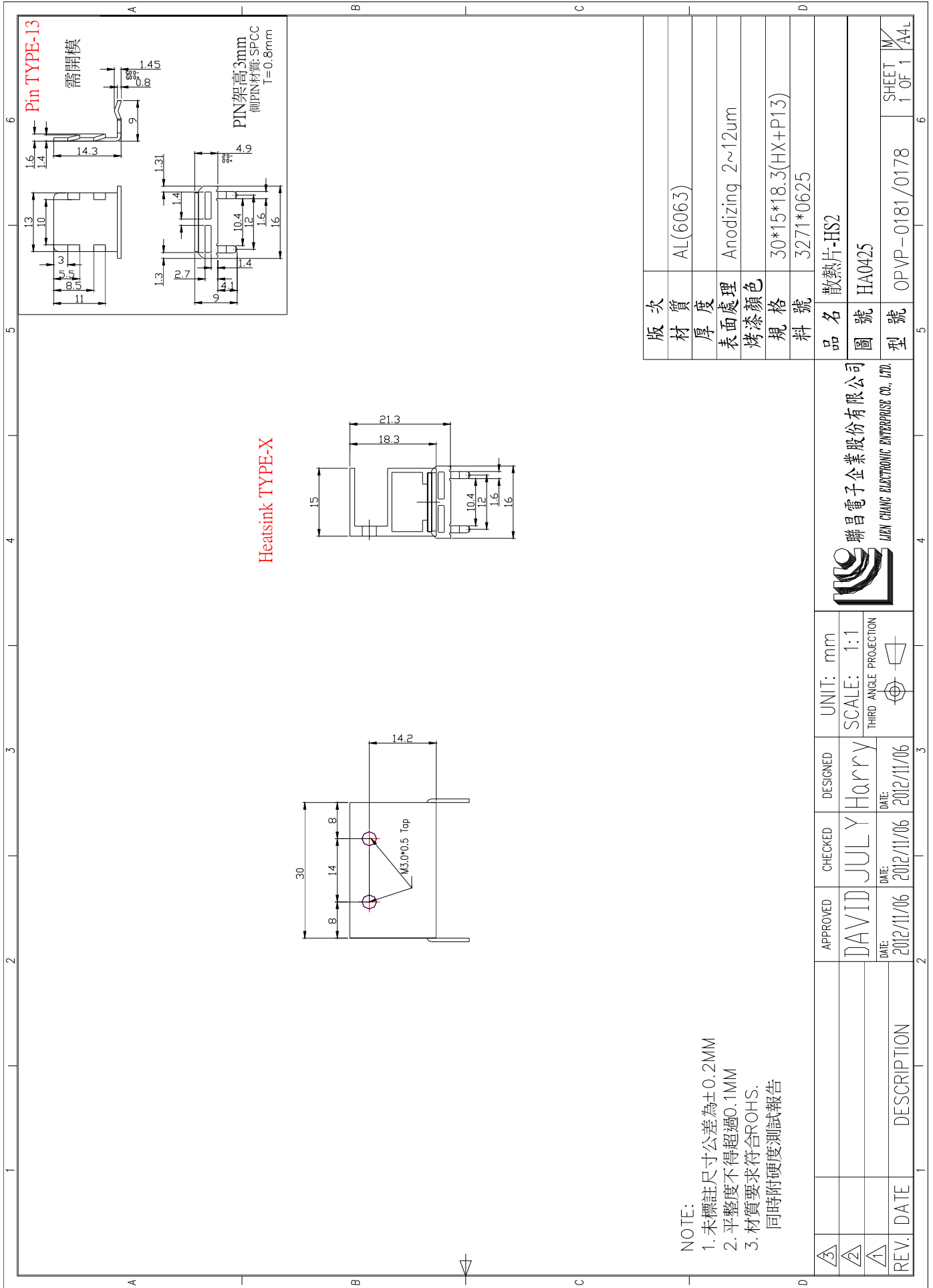


# Mechanical Drawing





LGP4750-13PL2 LCD TV Power specification





# Packing Drawing



LGP4750-13PL2 LCD TV Power specification

NO.	DESCRIPTION	QTY	MATERIAL	Remark
1	CORTON BOX	1 / 20	630x425x205xt8	
2	PAD	2 / 20	615x410xt8	
3	PARTITION A	11 / 20	620x165xt8	
4	PARTITION B	3 / 20	415x165xt8	
5	PARTITION C	4 / 20	145x250xt25	
6	BUBBLE SHEET	20 / 20	260x440mm	
7	POWER BOARD	20 / 20	245x159x18.9mm	

QTY: 36 BOX \* 20 SET = 720 SETS  
MAX 9 Tire

GUIDE 50\*50(1400~2000)  
PALLET: 1070\*1100\*150mm

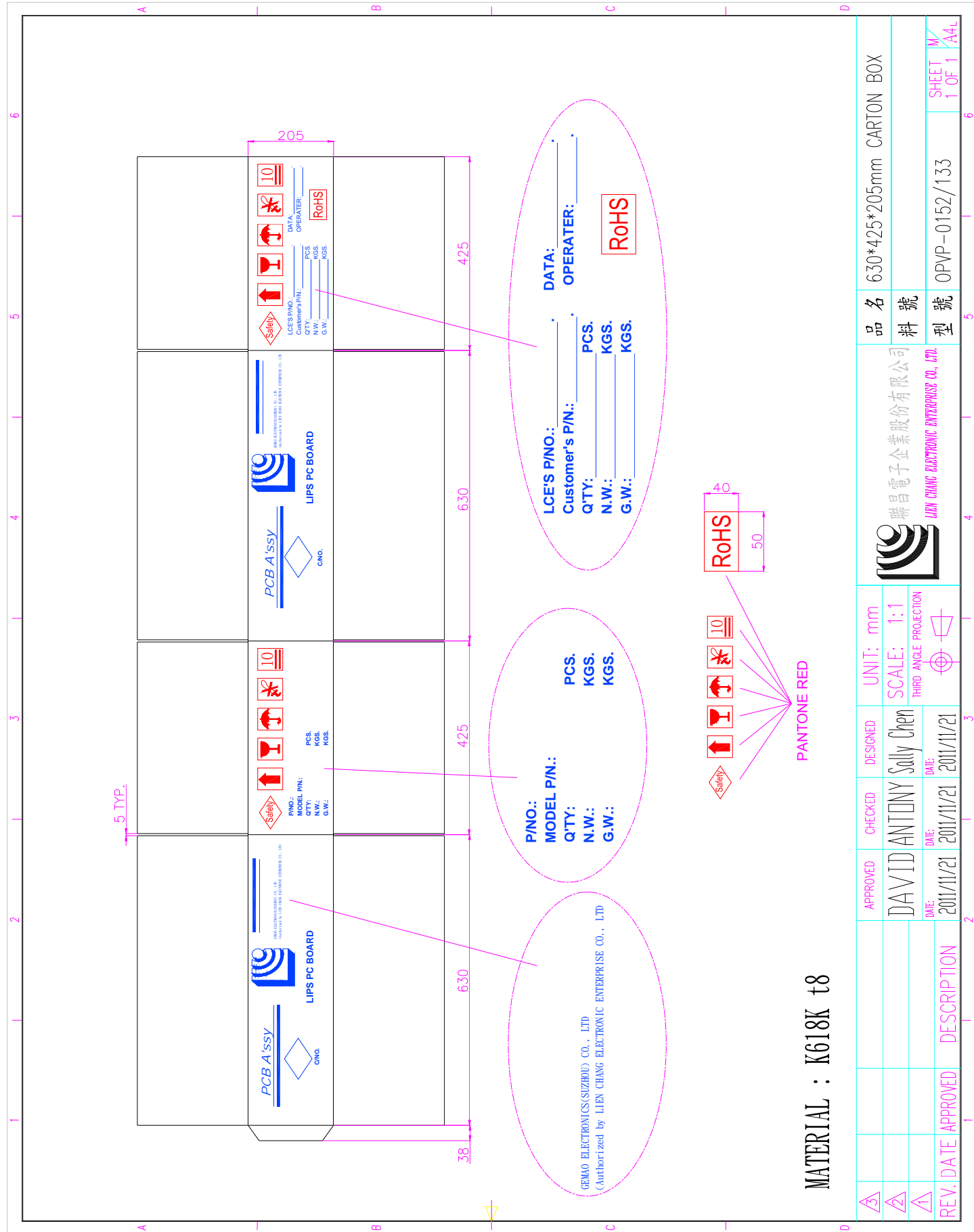
品名	PACKING DWG 630x425x205mm
料號	
型號	OPVP-0152/133
圖號	SHEET 1 OF 1
圖號	A4L

UNIT: mm	DESIGNED	DAVID ANTONY	DATE: 2011/11/21
SCALE: 1:1	CHECKED	Sally Chen	DATE: 2011/11/21
THIRD ANGLE PROJECTION	APPROVED	DAVID ANTONY	DATE: 2011/11/21
	REV. DATE	APPROVED	DESCRIPTION



LGP4750-13PL2 LCD TV Power specification



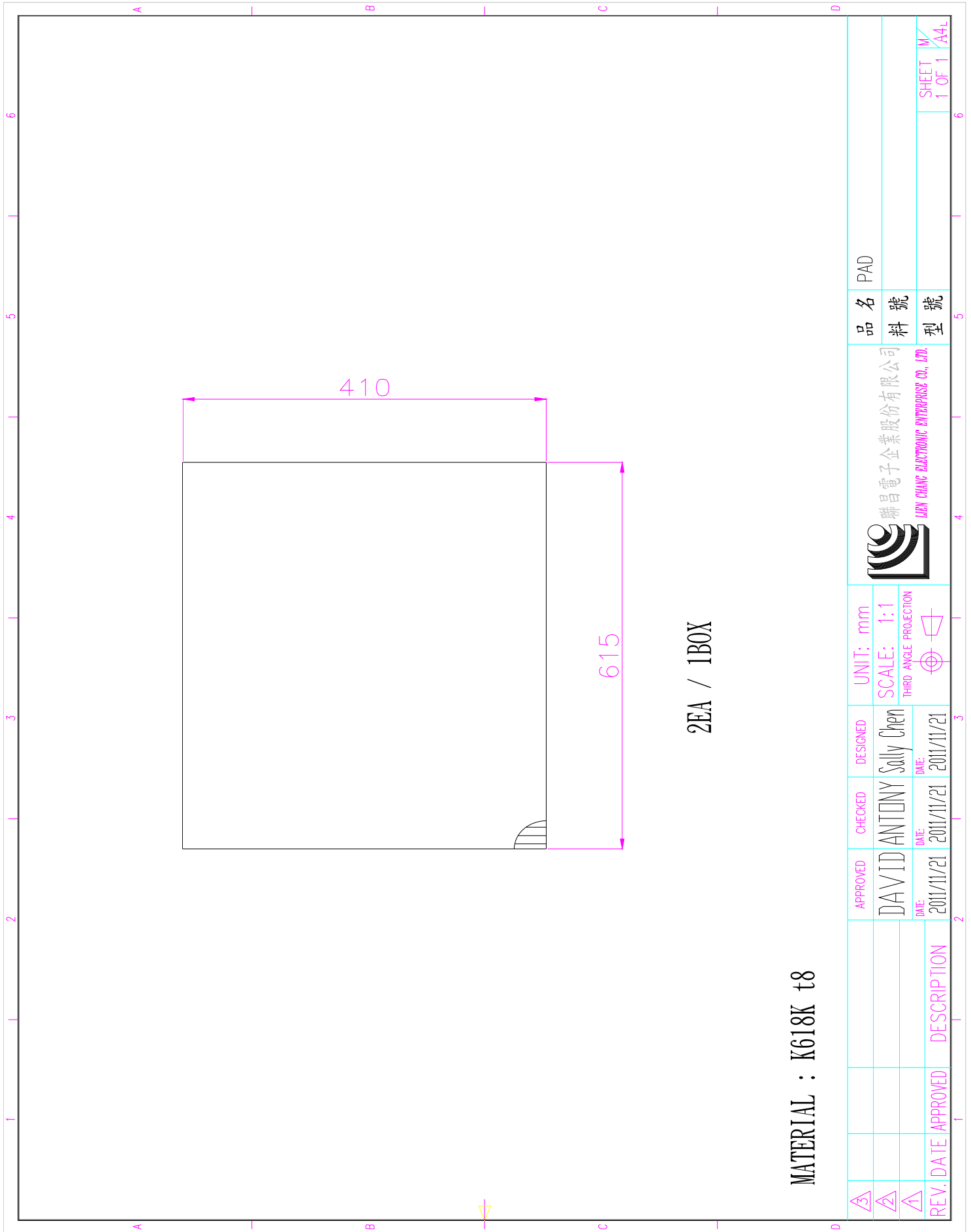
MATERIAL : K618K t8

REV. DATE	APPROVED	DESCRIPTION	APPROVED	CHECKED	DESIGNED	UNIT: mm	品名	630*425*205mm	CARTON BOX
DATE: 2011/11/21	DATE: 2011/11/21	DATE: 2011/11/21	DAVID ANTONY	Sally Chen	SCALE: 1:1	THIRD ANGLE PROJECTION	料號		
REV. DATE	APPROVED	DESCRIPTION	APPROVED	CHECKED	DESIGNED	UNIT: mm	型號	OPVP-0152/133	SHEET 1 OF 1
DATE: 2011/11/21	DATE: 2011/11/21	DATE: 2011/11/21	DAVID ANTONY	Sally Chen	SCALE: 1:1	THIRD ANGLE PROJECTION			A4L





LGP4750-13PL2 LCD TV Power specification



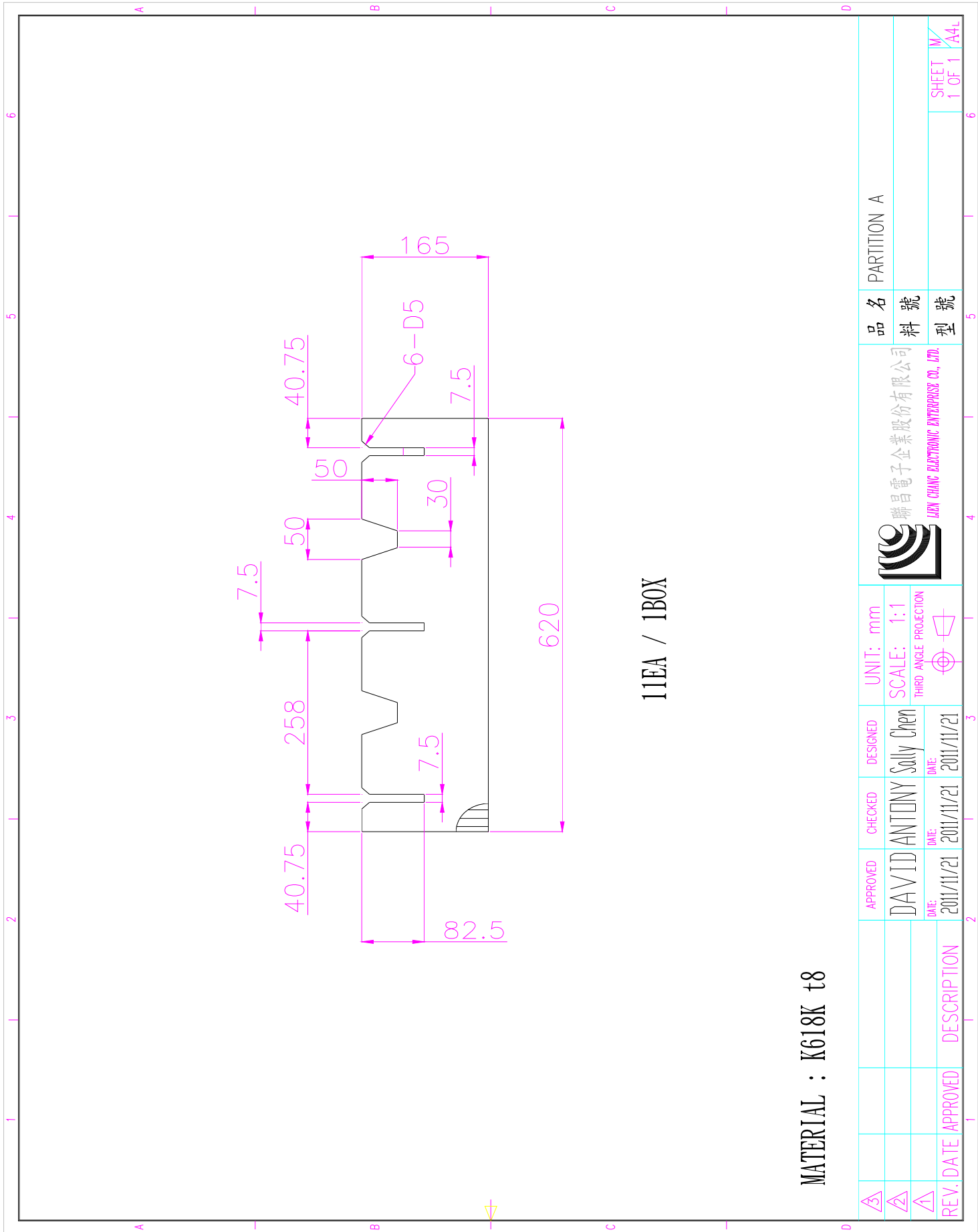
2EA / 1BOX

MATERIAL : K618K t8

△3	REV. DATE	APPROVED	CHECKED	DESIGNED	UNIT: mm	 聯昌電子企業股份有限公司 LIEN CHANG ELECTRONIC ENTERPRISE CO., LTD.	品名	PAD	SHEET 1 OF 1 A4L
△2		DAVID ANTONY	Sally Chen	SCALE: 1:1	料號				
△1		DATE: 2011/11/21	DATE: 2011/11/21	THIRD ANGLE PROJECTION	型號				

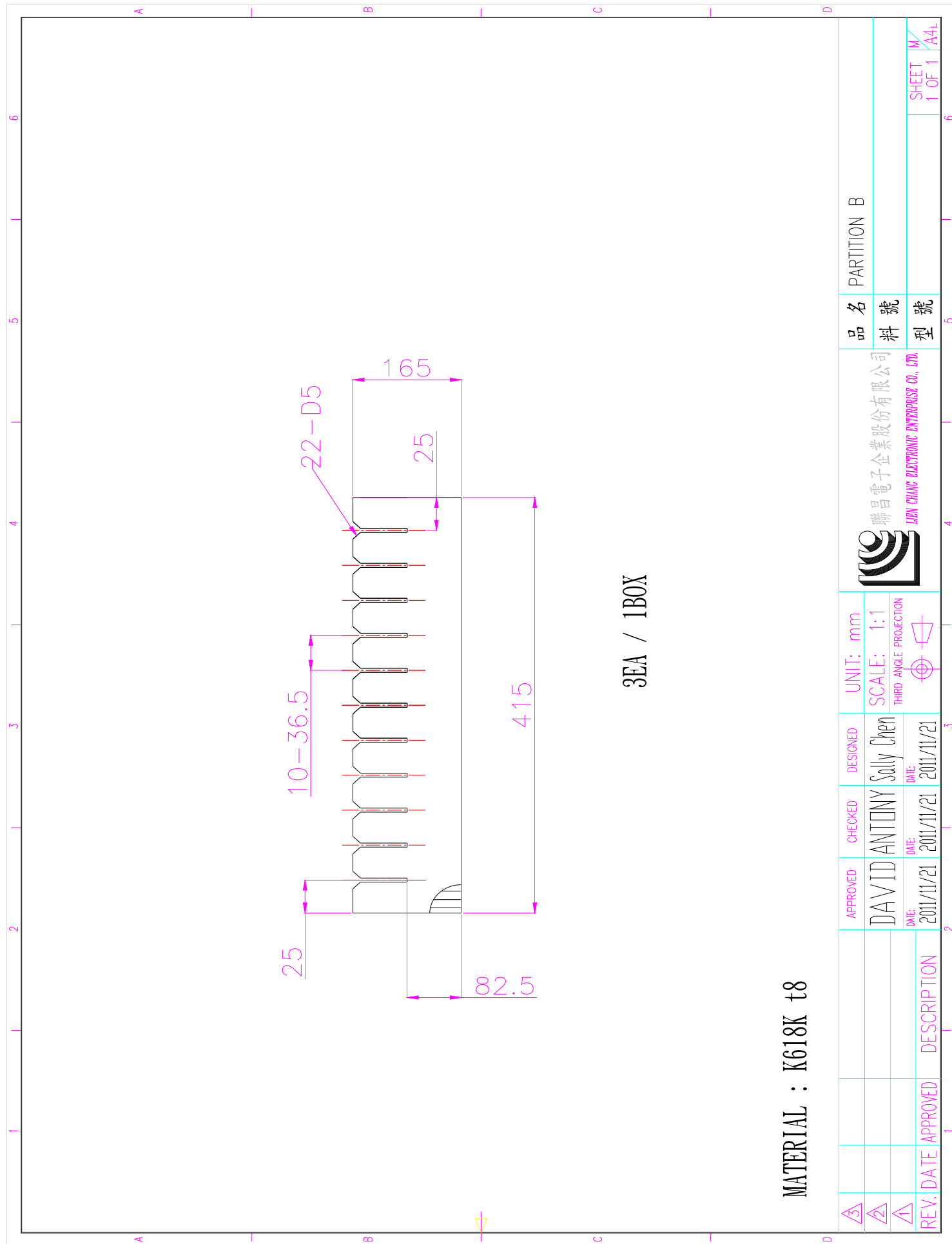


**LGP4750-13PL2 LCD TV Power specification**





LGP4750-13PL2 LCD TV Power specification



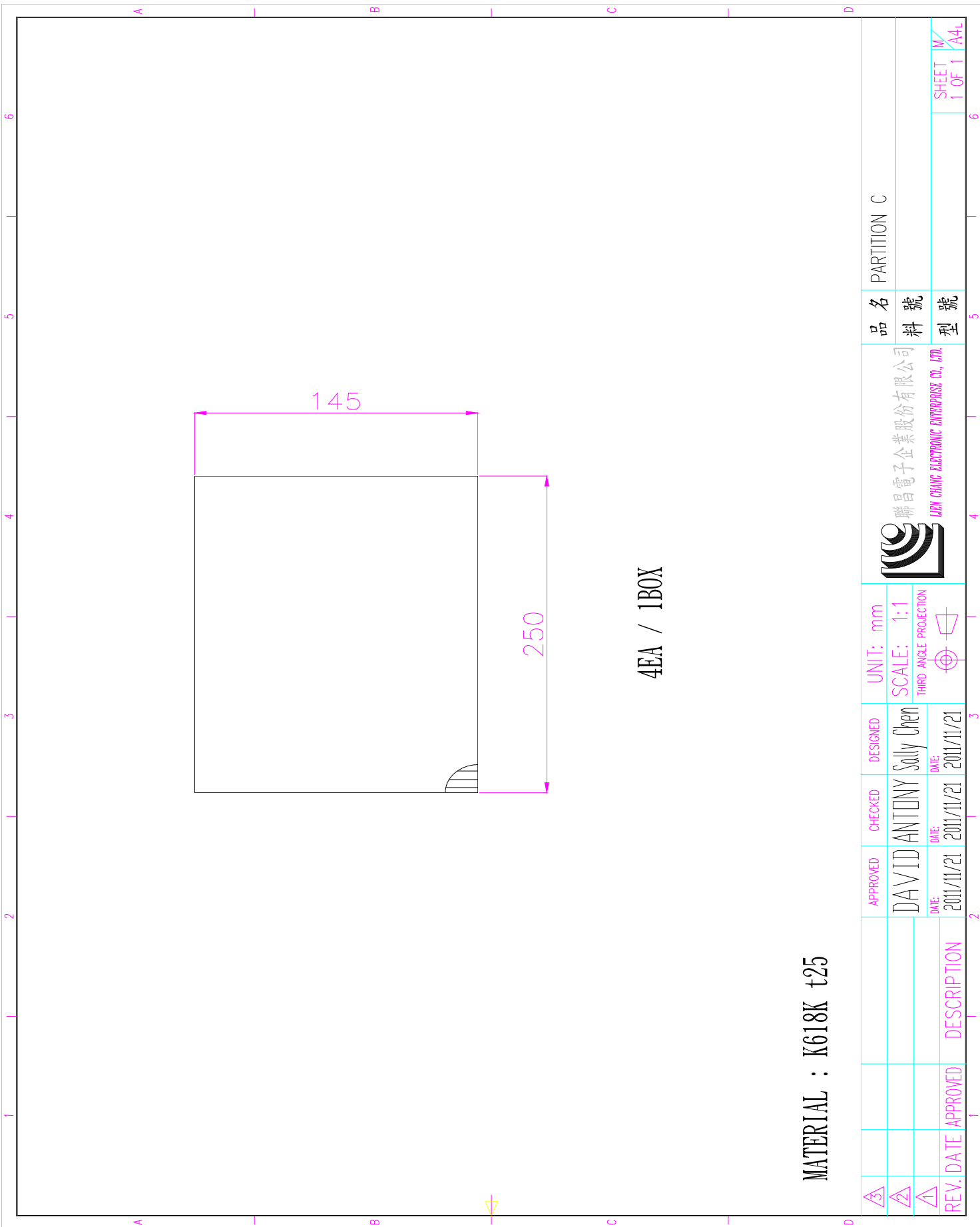
MATERIAL : K618K t8

PARTITION B

REV.	DATE	APPROVED	CHECKED	DESIGNED	UNIT: mm	SCALE: 1:1	THIRD ANGLE PROJECTION	品名	料號	型號	SHEET 1 OF 1	A4L
								聯昌電子企業股份有限公司				
								聯昌電子企業股份有限公司				
								LIEN CHANG ELECTRONIC ENTERPRISE CO., LTD.				
3												
2												
1												
		DAVID	ANTONY	Sally Chen								
		DATE	DATE	DATE								
		2011/11/21	2011/11/21	2011/11/21								



# LGP4750-13PL2 LCD TV Power specification



4EA / 1BOX

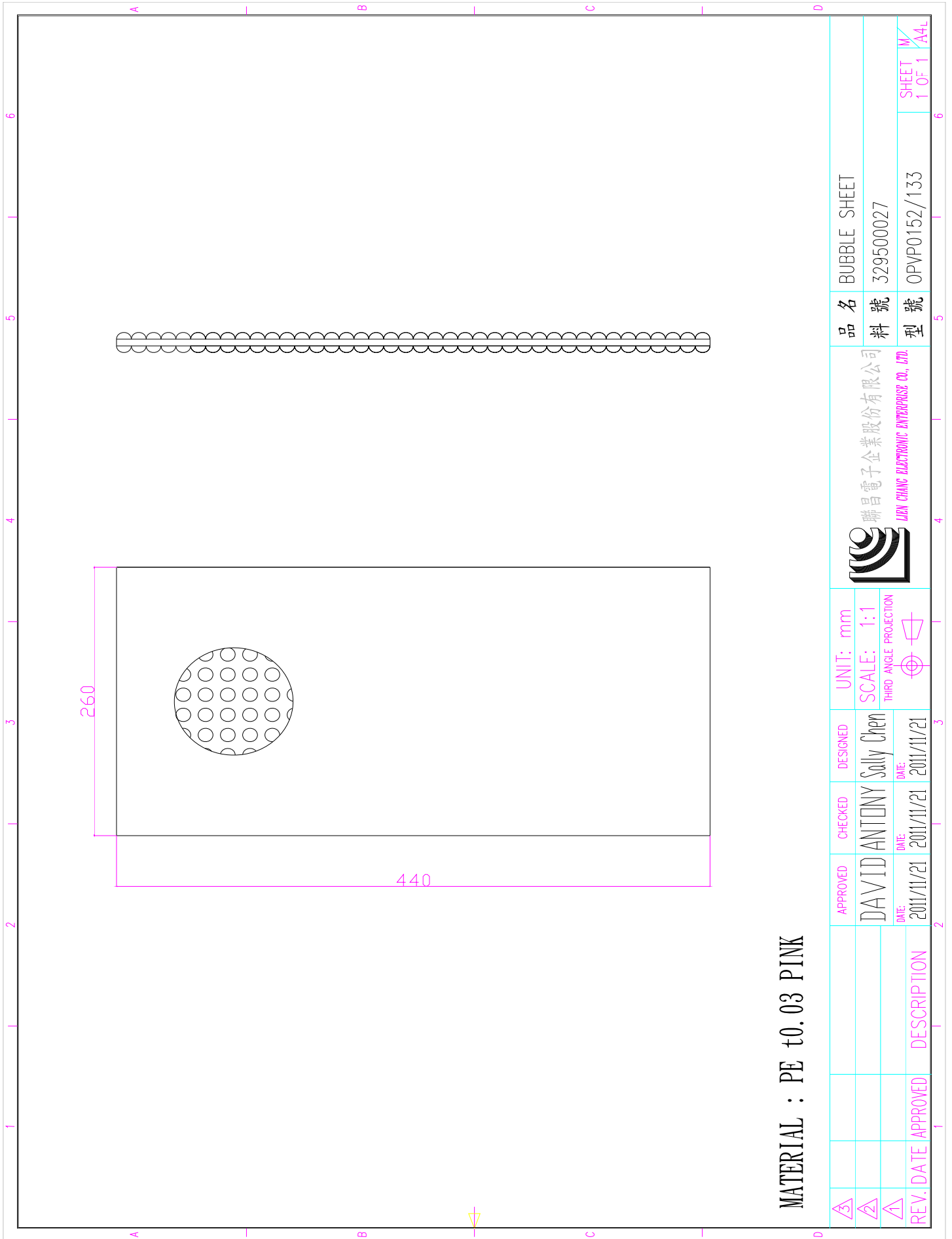
MATERIAL : K618K t25

△																		
△	REV.	DATE	APPROVED	CHECKED	DESIGNED	UNIT: mm	SCALED: 1:1 THIRD ANGLE PROJECTION			Lien Chang Electronic Enterprise Co., Ltd. Lien Chang Electronic Enterprise Co., Ltd.			品名	PARTITION C				
△			DAVID ANTONY	ANTONY	Sally Chen	SCALE: 1:1				Lien Chang Electronic Enterprise Co., Ltd. Lien Chang Electronic Enterprise Co., Ltd.			料號					
	REV. DATE	APPROVED											型號					
														SHEET 1 OF 1				
														A4/L				





LGP4750-13PL2 LCD TV Power specification



MATERIAL : PE t0.03 PINK

△3	APPROVED	CHECKED	DESIGNED	UNIT: mm	品名	BUBBLE SHEET
△2	DAVID	ANTONY	Sally Chen	SCALE: 1:1	料號	329500027
△1	DATE: 2011/11/21	DATE: 2011/11/21	DATE: 2011/11/21	THIRD ANGLE PROJECTION	型號	OPVP0152/133
REV. DATE	APPROVED	DESCRIPTION				SHEET 1 OF 1 / A4L

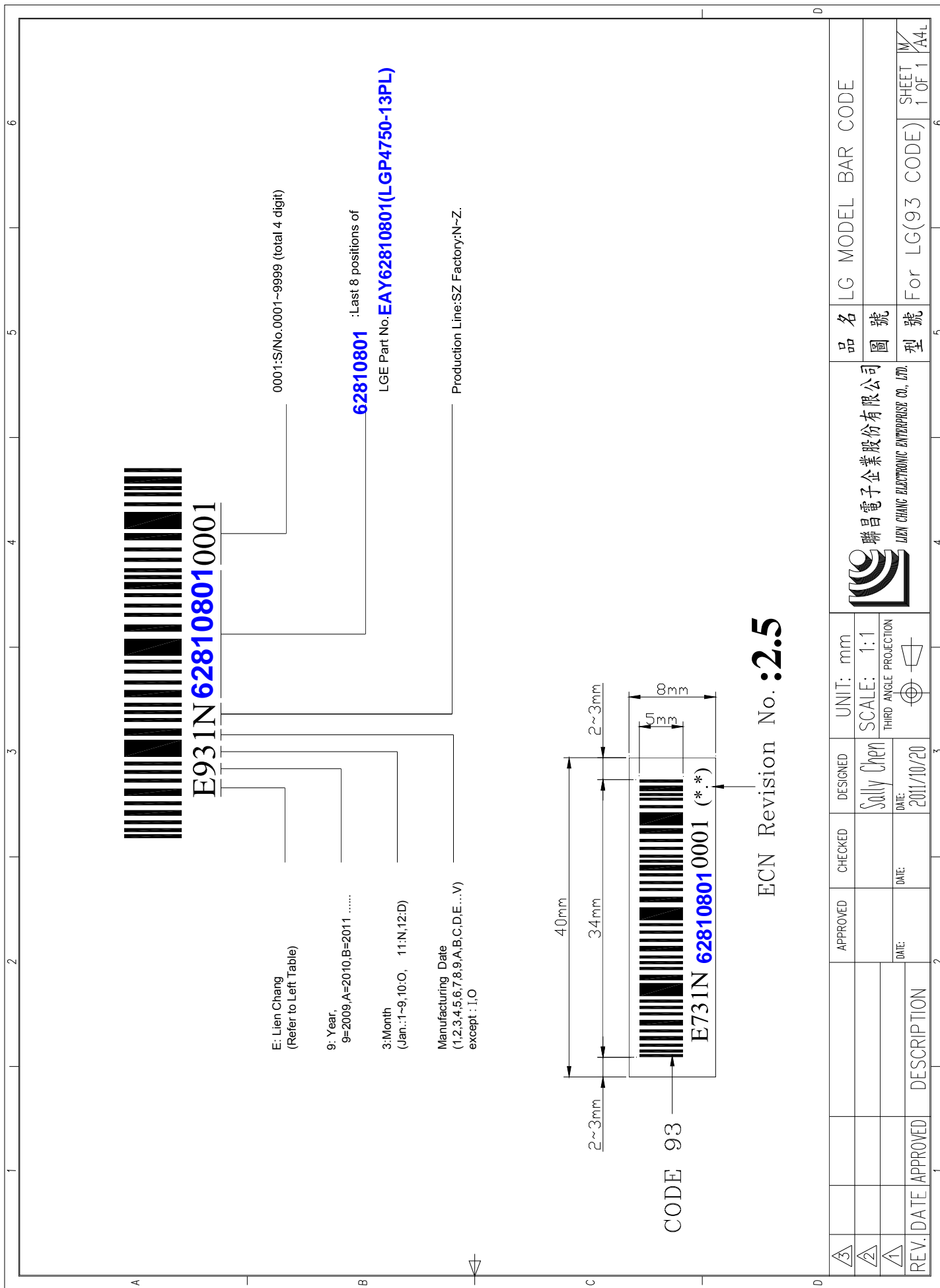




# Bar-Code Label Drawing



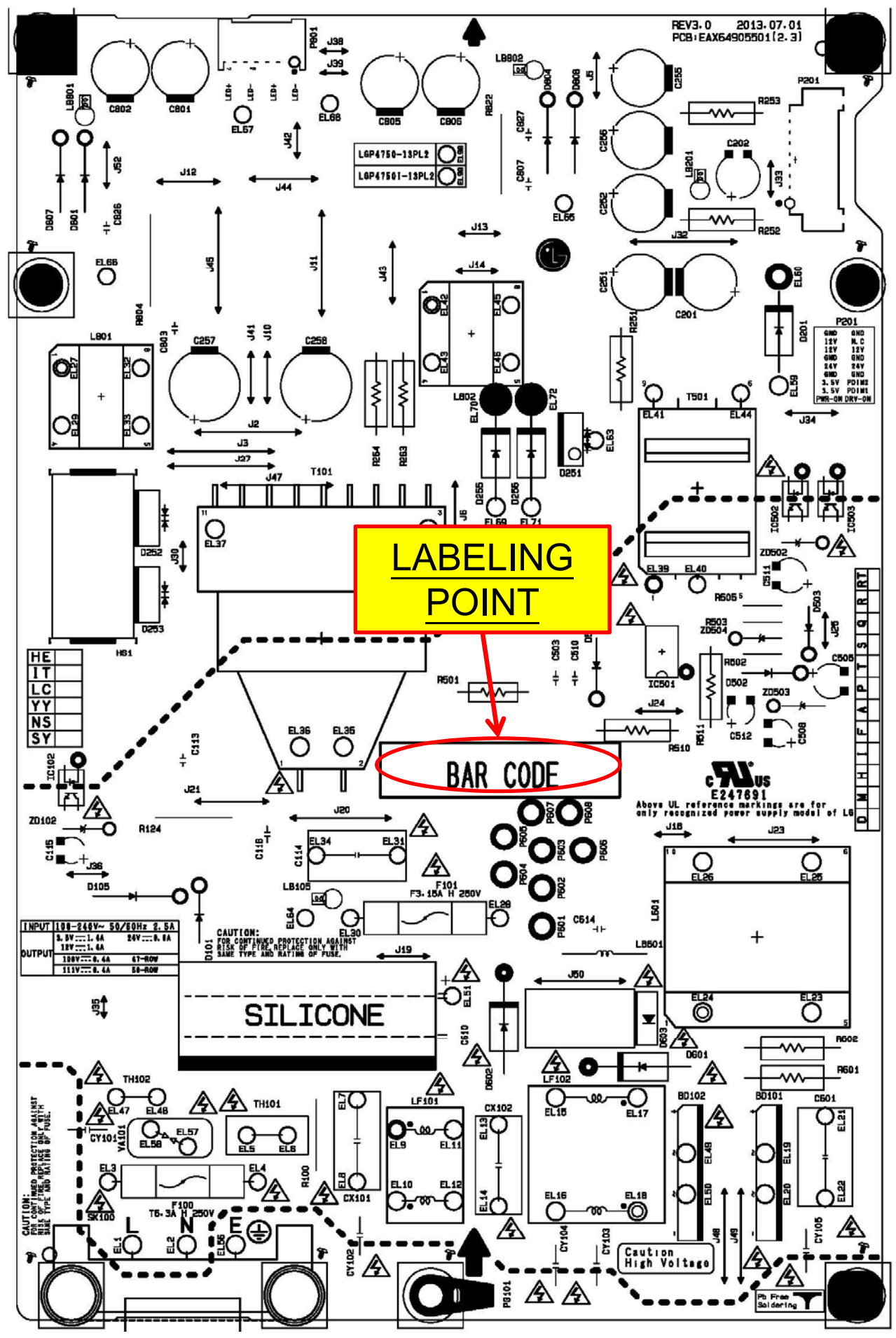
LGP4750-13PL2 LCD TV Power specification



# Labeling Point

LGP4750-13PL2 LCD TV Power specification

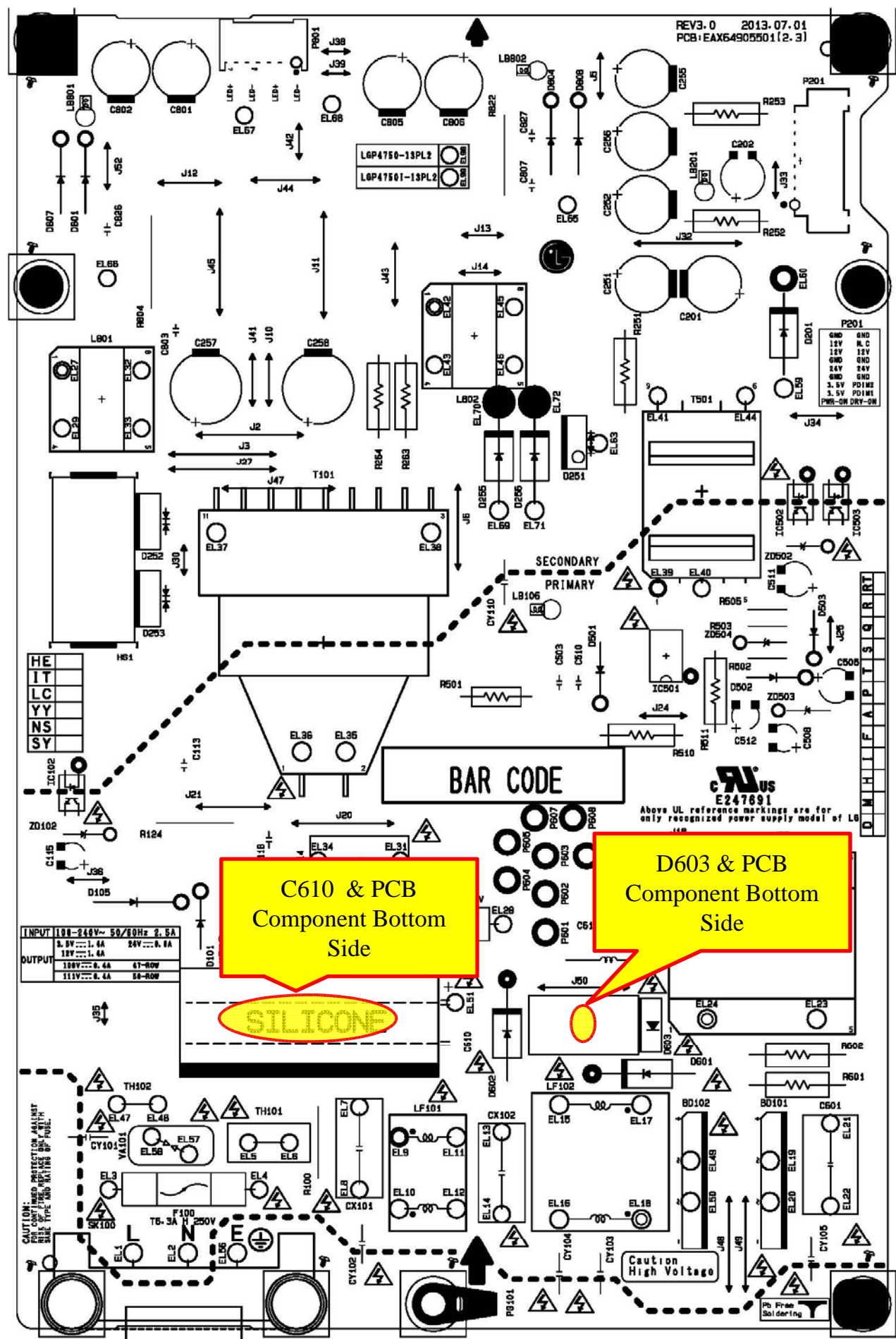
**LABELING POINT**



# Workmanship Point

LGP4750-13PL2 LCD TV Power specification

Silicone Bonding Point ( ● )

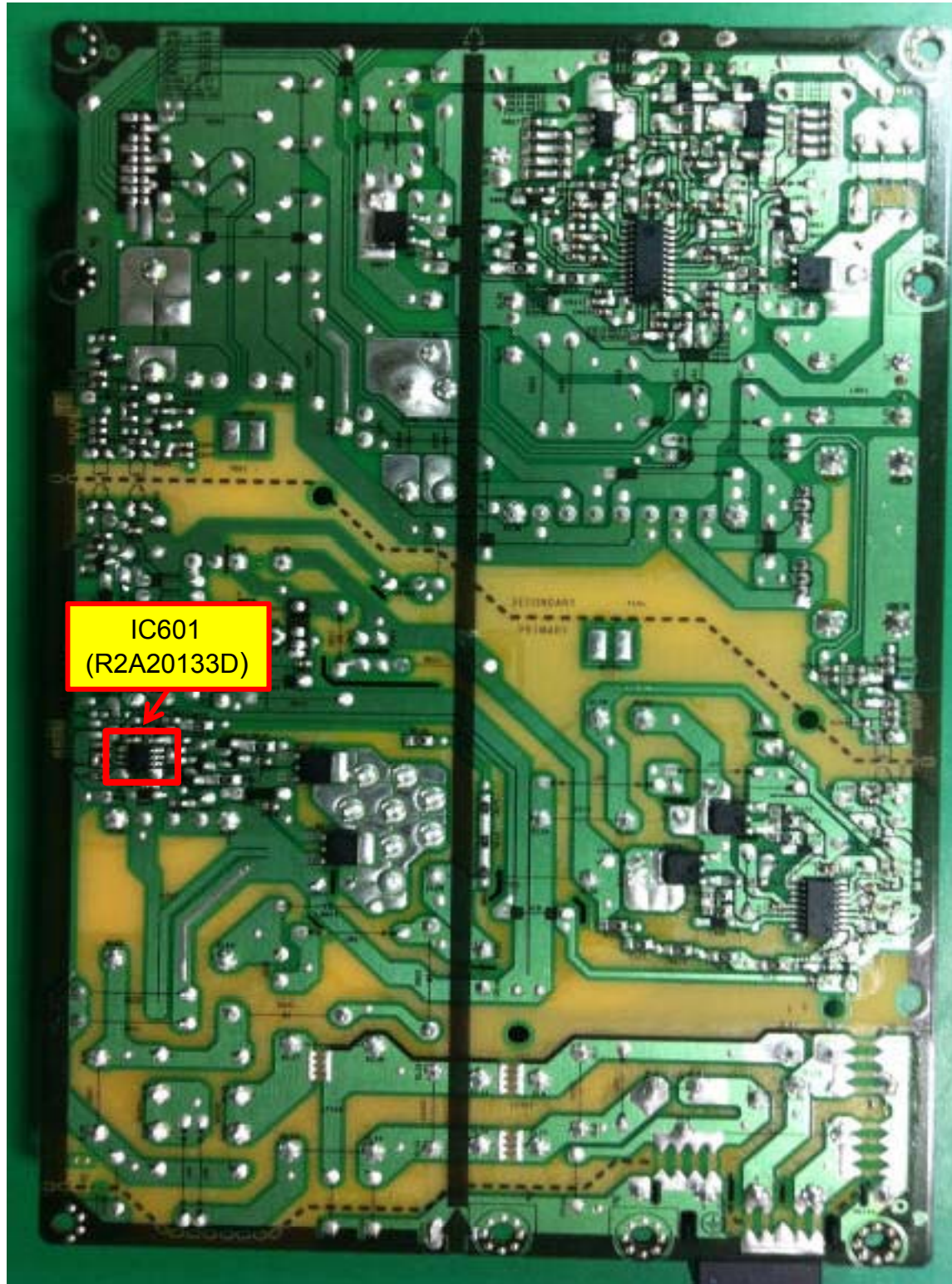


INPUT	110-240V~ 50/60Hz 2.5A
OUTPUT	5.0V --- 1.4A 24V --- 0.8A
	180V --- 0.4A 6T-ROW
	111V --- 0.4A 6B-ROW

CAUTION: FOR CONTAINER PROTECTION AGAINST FIRE, TYPE AND RATING OF PANEL SIZE TYPE AND RATING OF PANEL



Bottom Side (Desiccant)






















BOND	Subsidiary materials	Bonding Method
H-727C (OKONG) OKE-1257 (OKONG) 1-2577(LV) (DOW CRNING) LCD2577D (DOW CRNING)	1. Brush oiler 1. Art brush	■ Cover a desiccant at designated point : Fully covered part's leads



# Manufacturing Process

## 4M QC Flow Chart

Process no.	QC Flow	Process name	Work content	Mag. Frequency	4M				
					Man(사람)	Machine(장비)	Material(재료)	Method(방법)	
1		Purchasing	Raw material purchase	Every P/O	Ping Lang	PC/ FAX/TEL	/	1. Part/No. Part Name, Spec., Q'ty, Delivery. 2. Suppliers' Magt..	Production management procedure BOM
2		Warehouse	Receive material	Every accept datasheet	Jincheng Guo	Balance Couter	/	1. Check the material box's layer. 2. Check P/No., Spec., Part name, Q'ty, Validity-period.	Incoming receiving procedure Products protection procedure
3		IQC	Incoming material inspection	MIL-STD-105E(II) AQL=0.25	David Zhang	Diode tester LCR meter Hi-pot equipment solder oven	Raw material	1. Check the Brand,P/NO, Spec.Q'ty,Validity-period, Lot No. 2. Check the appearance.	Incoming inspcetion procedure
4		Eyelet	PCBA eyelet	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	Eyelet M/C	Eyelet	1. Check the program of M/C 2. Check parts of BOM 3. Check lead angle:20° ~40°	1.AI first article inspection records 2.Part date code check (SEB3R24)
5		Jump Wire	PCBA Jump wire insertion	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	Jump Wire M/C	Jump Wire	1.Check the program of M/C 2.Check parts of BOM 3.Check lead angle:15° ~30° 4.Check lead lenth:1.2~1.8mm	1.AI first article inspection records 2.Part date code check (SEB3R24)
6		Axial	Axial parts auto insertion	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	Axial M/C	Axial parts	1.Check the program of M/C 2.Check parts of BOM 3.Check lead angle:15° ~30° 4.Check lead lenth:1.2~1.8mm	1.AI first article inspection records 2.Part date code check (SEB3R24)
7		Radial	Radial parts auto insertion	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	Radial M/C barcode scanner	Radial parts	1.Check the program of M/C 2.Check parts of BOM 3.Check lead angle:15° ~45° 4.Check lead lenth:1.2~1.8mm	1.AI first article inspection records 2.Part date code check(SEB3R24) 3.MES system
8		QA inspection	Sampling check	transfer shift change model ECN one time/2 hrs	Caselin Sun	magnifier LCR meter	/	1. check parts 2. Checking the PCBA 3. Checking the Quality of SMD-process	1. QA inspection form in SMT area (SEB1R34) 2. SMD capacitor measure in SMT area (SEP5R02) 3. Push-pull force data for SMT part (SEP5R01)
9		Apply red glue	Apply red glue on pcb	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	Apply gule machine	red glue	1. Progarm Editing 2. Checking the Progarm File 3. "Red-glue" store-condition: 5~10℃ /6months.	1.Store temp. of Tin paste / red gule (SEB8R02) 2.Take out/off records of Tin paste and red gule (SDM5P04) 4. process check form in SMT area (SEB3R28)
10		SMT mounting	SMD mounted on PCB	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	Yamaha Mounting machine	SMD parts	1. Progarm Editing 2. Checking the Progarm File 3. Material's checking	1.Part station in SMT area 2.Bom list
11		Visual inspection	check parts	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	nipper magnifier	/	1. "FAI"-checking & "Sample"-checking 2. Check the Part (Missing; inverse-insertion; damaged...)	1.Inspection form in SMT area (SEB3R28) 2. QA first samples check in SMT area (SEB1R33)

12		Reflow	PCBA reflow	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	profile measure requisition reflow	/	Control the temperature of "Reflow"-M/C.	1. Profile of reflow 2. Temp. control records of SMT (SEM9R04)
13		SMT inspection	check appearance	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	nipper magnifier barcode scanner	/	1. Checking the PCB with magnify 2. Checing the Quality of SMD-process	1. Self-inspection in SMT area ( SEB1R36) 2. Check form in SMT 3.MES system
14		QA inspection	Sampling check	transfer shift change model ECN one time/2 hrs	Caselin Sun	magnifier LCR meter Push-pull meter	/	1. Every 2hrs, testing the capacity of "SMD-Capacitor" 2. Every 2hrs, testing the "bonding"- strength 3. Checking the PCB with magnify 4. Checking the Quality of SMD-process	1. QA inspection form in SMT area (SEB1R34) 2. SMD capacitor measure in SMT area (SEP5R02) 3. Push-pull force data for SMT part (SEP5R01)
15		component prepare	processing material	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	processing jig	prepared material	Sample Checking	1.Self-inspection 2.check datasheet for component prepare
16		MI	Manual insert material	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	NG box tray fixture barcode scanner	common parts	1. Checking the brand、P/N0、Spec.、 Name、Q'ty、Lot No.、 2. Checking the quality of MI	1.Self-inspection 2. Check form of part date code 2. check form of PCBA in process
17		 Double wave solder	soldering	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	DIP TEST equipment auto wave-solder	solder bar flux	1.Pre-heat: 350℃+/-20℃。 2.Soldering-M/C : 255℃~260℃。 3.Flux : 0.80+/-0.02g/cm3, Soldering Speed : 1.20 ~ 1.60m/Min.	1. Monthly maintain form of wave solder (SDR1R23) 2.Daily/weekly maintain form of wave solder (SDR1R22)
18		PCBA inspection	check appearance	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	magnifier	/	1. Materials' checking 2. Soldering-"Q" Checking 3. Checking the quality of Soldering surface	1.Daily report of AI/INVERTER QC (SEB3R21) 2. Inspection form of PCBA in process (SEB3R19)
19		AOI inspection	automatic optical inspection	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	AOI M/C	/	1. Checking the Test-program 2.Checking the quality of Soldering surface	1. AOI daily test report (SEB3R27) 2.Inspection form of PCBA in process (SEB3R19)
20		Touch up	manual soldering	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	IRon-soder	solder wire	Repair the "Poor-soldering" point (including cold-soldering, warp-soldering, solder-short)	1.Self-inspection 2. Inspection form of PCBA in process (SEB3R19)
21		ICT	ICT test	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	ICT test M/C	/	1. Checking the Test-program 2. Checking the Part's Spec.	1. ICT daily test report (SEB3R27) 2.Inspection form of PCBA in process (SEB3R19)
22		 HI-POT	safety test	100% transfer shift change model ECN one time/2 hrs	Xian Xu	HI-POT test M/C barcode Scanner	/	1.check HI-POT test condition meet the SPEC 2. .For ok products, scan and flow to the next station. If It is NG, stick NG label and put into NG box	1. Inspection form (SEB3R23) 2. Equipment adjust before production (SDS1R03) 3.Inspection form of finished products (SEB3R19) 4.MES system

23		Initial test	first function test	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	DC load AC power source test jig FLUKE-45 barcode Scanner	/	1.check test condition meet the SPEC 2.For ok products, scan and flow to the next station. If It is NG, stick NG label and put into NG box	1. Check data form (SEB3R23) 2.equipment adjust (SDS S1R03) 3.MES system
24		apply glue	Apply RTV bond	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	apply glue M/C	RTV bond	1. Check the P/N and Spec of silicone 2.Check the glue quantity which locates on the right place 3. Check if there is miss of applying glue	1.Self-inspection 2. Inspection form of products in process
25		PCBA sampling check	sampling check appearance	100% transfer shift change model ECN one time/2 hrs	Caselin Sun	magnifier	/	1. Material's checking 2. Checking the soldering-quality 3. Checking the quality of PCB-print	1.PCBA inspection form (SEB1R26) 2.PCBA rejection form (SEB1R30)
26		CTP Aging	burn in	100% transfer shift change model ECN one time/2 hrs	Xian Xu	Power source aging tools aging load	/	1.Aging Load:meet the SPEC. 2.aging time : 2hrs. Temp : 45℃+/-5℃。	1.records of AI/INVERTER aging(SDR9R19) 2.Aging input check form (SDR9D20)
27		CTP Final test (ATE)	Final function test	100% transfer shift change model ECN one time/2 hrs	Xian Xu	ATE barcode Scanner	/	1.check ATE test condition meet the SPEC 2. For ok products, scan and flow to the next station. If It is NG, stick NG label and put into NG box	1.Daily visual form(SEB3R21) 2. Inspection form of PCBA in process (SEB3R19) 3. Adjust equipment before production(SDS1R03) 4.MES system
28		Visual inspection	check appearance	100% transfer shift change model ECN one time/2 hrs	Xian Xu	magnifier	/	1. Check if the part was damaged and the other fails 2. Check if there was miss of applying gule 3. Do marking on the good products and flow out 4. Stick the NG label on the NG product and put into the box, at the same time, record the related information	1. Daily visual inspection form (SEB3R21) 2.Inspection form of PCBA in process(SEB3R19) LIPS/INVERTER Final test records of finished products in process(SEB3R31)
29		100% inspection	check appearance	100% transfer shift change model ECN one time/2 hrs	Xian Xu	barcode Scanner	/	1.Carefully check the solder status, for example: empty solder, wrap solder, cold solder, PCB 2. Check the PIN is damaged in connector	1. Visual daily form(SEB3R21) 2. LIPS/INVERTER inspection form(SEB3R31) 3.MES system
30		Package	pack PCBA into box	100% transfer shift change model one time/2 hrs	Xian Xu	Tape M/C Pen	box bubble sheet	1. Check the P/N, Model name, date, label, carton 2. Put the products in the right place and stick label	1.Records of products traking s/n (SEB3R22) 2. Records of tracing the Inverter S/N Inspection finished products form (SEB3R19)
31		OQC	Sampling finished products	MIL-STD-105E(II) AQL=0.25	Caselin Sun	DC load AC/DC SOURCE FLUKE-45 barcode Scanner	/	1. Check the part, soldering status, part damage, and so on 2. Measure the dimension of the product 3. Test the electrical parameter 4. Stick the NG label on the NG product and put into the NG box, at the same open the reject note 5. NG product must be rework	1.Finished products inspection procedure 2.Adjust equipment before production (SDS1R03) 3.outgoing inspection data of finished products (SEB1R28) 4.MES system
32		Warehouse	Store product	Every store datasheet	Jincheng Guo	Trailer barcode Scanner	/	1. Check P/N, Model, Quantity 2. Check the heigh of stock and carton 3. cCheck the QA pass seal	1.Finished product store procedure 2.Store datasheet 3.MES system

incoming   operate   inspect   store



## # Appendix List

<b>No.</b>	<b>Contents</b>	<b>Total Page number</b>
<b>1</b>	<b>Power Check list</b>	<b>11 Page</b>
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# **# Appendix 1.**

## **POWER CHECK LIST**



**LGP4750-13PL2 LCD TV Power specification**

Revision History		Rev	DATE	REMARK
1	Format changed PCB Check Sheet Ver1.9 to Power Check Sheet Ver1.0	1.0	2011.06.02	
2	1. Essentiality Marking items – Add No. 14 Input Standard Mark for 2 pin in Bare PCB 2. Compoment –Add No. 13 If you use choke coil lying, You can use after appoint test item for poor prevention.	1.1	2012.05.23	
3	PCB Pattern Space – Add No. 9 Add 8.5mm (thickness of GND Pattern) or Insert of Jump Wire For use Together (IT and TV)	1.2	2012.10.30	



**LGP4750-13PL2 LCD TV Power specification**

Details Check Item		RESULT		REMARK
		OK	NG	
<b>▶ Components LOCATION NO.</b>				
1	Power Primary section circuit Location No. : 100 series (Including Multi primary)	OK		
2	Power Secondary section circuit Location No. : 200 series (Including Stand by & Multi Secondary)	OK		
3	Inverter Primary section circuit Location No. : 300 series	-		
4	Inverter Secondary section (Including F/B,OVP circuit) circuit Location No. : 400 series	-		
5	Stand by Primary section circuit Location No. : 500 series	OK		
6	PFC section circuit Location No. : 600 series	OK		
7	MICOM section circuit Location No. : 700 series	-		
8	LCD : LED Driver section circuit Location No. : 800 series	OK		This content only applies to LCD
9	PDP : Stand by Primary and Secondary section circuit Location No. : 300 series	-		This content only applies to PDP
10	PDP : Va Secondary section circuit Location No. : 500 series	-		This content only applies to PDP
11	PDP : Vs Secondary section circuit Location No. : 900 series	-		This content only applies to PDP
12	PDP : Vs,Va Primary section circuit Location No. : 800 series	-		This content only applies to PDP
13	CTV : Power Block section circuit Location No. : 800 series	-		This content only applies to CTV






**LGP4750-13PL2 LCD TV Power specification**

Details Check Item		RESULT		REMARK
		OK	NG	
▶ Components LOCATION NO.		OK	NG	
14	Resistor circuit Location No. : From beginning to R***.	OK		
15	Capacitor circuit Location No. : From beginning to C***.	OK		
16	Diode circuit Location No. : From beginning to D***.	OK		
17	Zener Diode circuit Location No. : From beginning to ZD***.	OK		
18	Coil circuit Location No. : From beginning to L***.(Including PFC section)	OK		
19	Transformer circuit Location No. : From beginning to T***.(Including Drive Trans)	OK		
20	Bead circuit Location No. : From beginning to LB***.	OK		
21	Fuse circuit Location No. : From beginning to F***.	OK		
22	TR/FET/Thyristor circuit Location No. : From beginning to Q***.	OK		
23	Varistor circuit Location No. : From beginning to VA***.	OK		
24	Volume Resistor circuit Location No. : From beginning to VR***.	-		Variable Resistance
25	Jumper circuit Location No. : From beginning to J***.	OK		
26	H/S circuit Location No. : From beginning to HS***.	OK		
27	IC circuit Location No. : From beginning to IC***.	OK		2007.04.16 DDC Standard
28	Connector wafer / Ass'y(Board in type) circuit Location No.: From beginning to P***.	OK		
29	Eyelet circuit Location No. : From beginning to EL***.	OK		
30	Gripper circuit Location No. : From beginning to G***.	-		
31	Holder circuit Location No. : From beginning to HD***.	-		
32	Thermistor circuit Location No. : From beginning to TH***.	OK		

**LGP4750-13PL2 LCD TV Power specification**

Details Check Item		RESULT		REMARK
▶ Components LOCATION NO.		OK	NG	
33	<b>Metal Ground circuit</b> Location No. : From beginning to <b>PG***</b> .	OK		
34	<b>Line Filter circuit</b> Location No. : From beginning to <b>L***</b> .	OK		
35	<b>AC Socket(Inlet) circuit</b> Location No. : From beginning to <b>SK***</b> . (Including AC Power supply wafer for Docking)	OK		2007.04.16 DDC Standard
36	<b>Photo Coupler circuit</b> Location No. : From beginning to <b>IC***</b> .	OK		2007.04.16 DDC Standard
37	<b>Relay circuit</b> Location No. : From beginning to <b>RL***</b> .	-		
38	<b>Y-Capacitor circuit</b> Location No. : From beginning to <b>CY***</b> .	OK		
39	<b>X-Capacitor circuit</b> Location No. : From beginning to <b>CX***</b> .	OK		
40	<b>Fuseble Resistor</b> Location No. : From beginning to <b>R***</b> .	-		
▶ PCB Pattern Space ( Keep a Safety distance)		OK	NG	
1	Primary ⇔ Secondary(GND,Y-Cap,Photo Coupler) : A space(Gap) of at least <b>6.5mm</b> . ( But, Working Voltage is more than 350V, Comply with the space of the safety request.)	OK		Refer to the Attached File  NOTE 0  Creepage
2	Primary(L,N) ⇔ Safety GND : A space of at least <b>3mm</b> . (But, In the case of Two Pin, A space of at least 6mm)	OK		
3	Live ⇔ Neutral : A space of at least <b>3mm</b> .	OK		
4	Primary⇔Secondary components (Clearance) : A space of at least <b>6mm</b> . (if space is below 6mm, it must add insulation sheet)	OK		
5	(Power Primary section) Main Current loop is made more than 3mm on Pattern thickness(width). (B/Diode ⇔ Primary Main cap : Very important )	OK		
6	Don't pass small signal line under PFC Coil. DC is no problem.	OK		
7	When It Connects Main GND (AC smooth Capacitor Cap. GND) to IC GND, separate pattern after consideration for pattern impedance.	OK		
8	In the case of Stand by IC of the Dip type, secure safety distance between pin of the high voltage and pin of the low voltage. (Only, use N.A or Bare Pin near Drain pin)	-		



**LGP4750-13PL2 LCD TV Power specification**

Details Check Item		RESULT		REMARK
▶ PCB Pattern Space ( Keep a Safety distance)		OK	NG	
9	Satisfy Continuity TEST of the grounding about FG GND (40A / 2Minute) → Add 8.5mm (thickness of GND Pattern) or Insert of Jump Wire For use Together (IT and TV) (But, If EMI Issue occur, we don't apply.)	OK		



**LGP4750-13PL2 LCD TV Power specification**

Details Check Item		RESULT		REMARK
		OK	NG	
▶ Component				
1	When surge test, Between Primary and Secondary space have to gap of at least <b>6mm</b> . { Distinguish between safety GND and secondary GND (Use Y-cap with insulation) , need Space, need Insulation Sheet }	OK		※ 3 Pin : A space of at least 3mm 2 Pin : A space of at least 6mm
2	Beside Primary smooth cap. component is separated a heating component over 3mm. ( <b>clearance</b> )	OK		
3	Primary smooth cap. component is separate as below - Upper area : over 1mm - Bottom area : over 5mm ( Only, Vertical type Capacitor ) (Note 1)	OK		
4	Don't pass the pattern under 3mm area on primary smooth cap. ( Only top side pattern of Epoxy )	OK		
5	If use short-height core, you must use insulation tape. ( To add the space distance with PCB )	OK		This content only applies to Insulation Trans of first, secondary
6	In case of trans, use Barrier of at least 7mm(6.4 + 3.2) by 300V (Standard). (Wire's Tube can be use for reduce Barrier tape height) <b>Safety Gr. is sure to check the item. (Note 0)</b>	OK		
7	In case of AC Inlet, Screw of Yellow-Green wire is use more than 3.5Φ. * if it don't use Y/G wire. When only PCB pattern use, it must have pass the 200A test. * Safety GND is role of independence GND. UL Test Request <b>If it use only Pattern, Safety is certainly check.</b>	OK		
8	The component is pushed by force, The Clearance is need to at least 6mm between Primary and Secondary components. Don't touch the core by another parts.	OK		
9	When use Box type Capacitor, apply to Forming type with RTV Bond. (Including X-capacitor) <b>(Only Sony PDP Model)</b>	-		

NOTE 0



Creepage

NOTE 1



CAPACITOR



**LGP4750-13PL2 LCD TV Power specification**

Details Check Item		RESULT		REMARK
		OK	NG	
▶ Component				
10	All of parts should be separated more than 2mm around CORE (Including all Trans type). •In case of <b>Inducted Voltage 1kV (peak to peak)</b> should be separated more than 4mm. (based on 1000:1 Probe)	OK		
11	Between Inverter Trans and Metal Frame(shield) is separated more than 4mm. ( if it is difficult, surely add Insulation sheet)	-		
12	Output wafer of the secondary use add type of a fixed pin. (But, except for the wafer of LPB using for Micom Debugging)	OK		
13	If you use choke coil lying, You can use after appoint test item for poor prevention (Note 2)	OK		




NOTE 2



Choke coil




**LGP4750-13PL2 LCD TV Power specification**

Details Check Item		RESULT		REMARK
▶ Essentiality Marking items		OK	NG	
1	AC Socket, AC inlet Wafer must be marked "L"/"N". Also docking Type is marked.(QA Request), : Top & Bottom side (Note 3-2)	OK		※ Fuse is located on Live
2	When Safety GND is separated from Chassis, Worker should be located by confirmation. (Note 2) • PCB top & bottom side is all marking, Please Check the attached file in detail Content. And, Certainly receive the final confirm by safety Gr.	OK		※ But, except for 2 pin
3	Fuse rating(Voltage,T, Current,H), caution(Safety title), UL Mark should be input. Ex) T5A H 250V * Caution: Don't change the words based on UL's sentence. (For ~ , Replace ~ )	OK		
4	Fuse must locate very ease finding scope. (Fuse Marking is the same)	OK		
5	High Voltage warning mark have to be input. - Inverter Output : Only LIPS. - Primary section Metal.(H/Sink), High Voltage opened location. (Fuse) : All Model	OK		
6	To mark the Input/Output Voltage &, Current Spec. (Note 3)	OK		
7	Classify Primary and Secondary section have to be marked for separation of Area. (Top side/Bottom side) - Power side Primary & Secondary - to mark the Only the Inverter output.	OK		
8	Each component circuit No. have to be shown	OK		
9	Don't overlap the Bottom circuit No. in solder pattern/ Components shape etc.	OK		
10	Draw PCB marking, Considering Dead Space of Tool structure. Add Metal area mark for PCB fixing.	OK		
11	Check CTI spec in PCB specification Check Marking in Bare PCB - Marking : CTI 600 (More than 600V)	OK		
12	Input Caution Mark in a Circuit diagram (CCL standards) 	OK		
13	Input Screw Mark in Bare PCB 	OK		
14	Input Standard Mark for 2 pin in Bare PCB 	-		※ Only, apply to 2 pin

NOTE 2   
Safety GND 규정

NOTE 3   
Input/Output

NOTE 3-2   
B/D-in socket



**LGP4750-13PL2 LCD TV Power specification**

Details Check Item		RESULT		REMARK
<b>▶ EMI</b>		<b>OK</b>	<b>NG</b>	
1	When Lightning Surge is L/N Test, Varistor must use more than 14Φ 620V.	OK		
2	Lightning Surge to L/G & G/N : 3KV over Y-Cap. (Use Y1 Class)	OK		
3	In case of lightning surge, only Fuse Dead is OK, only. (Countermeasure : Protect to arcing. Varistor is closely located Fuse.)	OK		
4	GND Arcing pattern Slit size is 1.2mm. Both ends distance of the Arcing Pattern is 3.0mm by safety role. (Between L and N)	OK		
5	Conducted Emission Test Condition : 110Vac/220Vac & 50Hz/60Hz TV Model : GND Connect / No connect VIVID/STANDARD, HDMI/ANTENNA	OK		
<b>▶ INVERTER (only LIPS)</b>		<b>OK</b>	<b>NG</b>	
1	Do use Ballaster capacitor.			
2	When small signal AC pattern pass around to 4mm from Inverter Trans, it is no problem after confirmed OVP/OLP and etc Worst condition. ( Including Feed Back Line) [ For the reduce of inverter noise from AC Input, Power FET's Heat sink's form can change for using shield between AC input and Inverter Trans. (CE restriction item) – Consider design]	-		
3	The Lead of high voltage ceramic CAP applied at inverter output part must keep insulation distance or be applied RTV bonding, even though the article force is applied.	-		
4	Check size around Gripper or Eyelet of Inverter Trans. -Size of the copper around Gripper or Eyelet : More than 5.5mm -Pattern Size around Gripper or Eyelet : More than 6mm (But, only apply LIPS of more than 32Inch)	-		
5	Inverter wafer use horizontality type.	-		

**LGP4750-13PL2 LCD TV Power specification**

Details Check Item		RESULT		REMARK
		OK	NG	
▶ ETC				
1	Don't use CAN Type Fuse.	OK		
2	Housing`s Maker of Connector what Main Board /Power Board (LIPS) have to be same with Wafer Maker. If they are differ, You have to check the spec./Drawing or request the component test to IQC(in case Board in type connector, Also Terminal type must be checked	OK		
3	Don't use Litz Wire.	OK		USTC
4	Apply to PFC Bypass Diode. (Note 4)	-		See attached file(Bypass)
5	When use Relay, apply to Fusing Resistor. (Note 5) (But, when Fusing Resister don't apply, Check Relay Open Test – Check PL Condition)	-		See attached file(Relay)
6	Use of High Ripple & Low Impedance type's rectification CAP at primary control IC VCC.	OK		
7	Don't use RN Type (Metal Film Type) Resistor over 100kohm.	OK		In June 26 <sup>th</sup> 08, We have had problem about this at MP for LGEND.
8	When apply TO-220, TO-3P type FET, Diode, IC, Lead length is shorted because of cutting after forming. So, Lead length and pitch must have checked by Heat-sink, Approval sheet on PDM, Actual Component. (Take conference previously with LGEAZ, LGEND about this issue, LGEND wants forming type in all TO-220, TO-3P type's components)	OK		In March 08 for LGEAZ CKD PQ event , We have history responded to the emergency issues
9	Check the Lead length of PCB bottom side, when use H/sink, wafer and other component at special type model which manages Lead length.	OK		
10	In this case, Component in Critical Component List. Check Marking on component.	OK		
11	If discharge resistance is used model sold to the Japanese market, Use Resister of the Dip Type certified standard. (Only, Use model sold to the Japanese market)	OK		

NOTE 4



Bypass-Diode

NOTE 5




Relay





**LGP4750-13PL2 LCD TV Power specification**

Details Check Item		RESULT		REMARK
		OK	NG	
▶ Attachment				
1	 <p>PL check List</p> <p>PL Safety Check List Ver3.7</p>	OK		

# # Appendix 2



## Warranty letter

**LGP4750-13PL2 LCD TV Power specification**

Non-use certificate

Description	For approval / <b>For mass production</b>	Submitting date	2012 . 07 . 31
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**Cooperating suppliers**

Company name	Lien Chang Electronic	Approval	Person in charge	Head of department
Contact	Tel: (886-2) 22035100	Name	Alan Wang	Sales Dept.
e-Mail	<a href="mailto:alanwang@lienchang.com.tw">alanwang@lienchang.com.tw</a>	Signature		

LGE Part No.	EAY62810801	Part production date	filling the sheet in case of mass production
Maker Part No.	OPVP-0178	Production plant	filling the sheet in case of mass production
Part name	LGP4750-13PL2		

**This is to certify that materials used and contained in the products and components that we supply to your company, meet the standards of the checked items listed below.**

———— below ————

We meet the standards of LG Electronics for six major substances (Pb, Cd, Cr<sup>6+</sup>, Hg, PBBs, PBDEs) as designated by RoHS for control.

\* Records are requested if they are parts to be actually installed on the PCB (Printed Circuit Board)

Soldering Type:      Flow      Reflow (Requirement : 250°C / 10 sec)

1. Maximum heat-resisting temperature : 260 °C     2. Time within actual Peak time : 10 sec.

Pb-Free Soldering (all solder cream, Bar, Wires included) is available to apply.

**Note.**

1. All the contents written on these documents must be created on the basis of facts, and cooperating suppliers must submit the data immediately whenever LG Electronics requests.
2. In the case that these documents are used for approval purposes, cooperating suppliers must submit the sample on the request. For the purpose of mass production, it must be submitted at the time of delivering the first product.



**Control list of environment-related substances**

Description	Substances	Contained		Remark
		YES	NO	
<b>Level A- I</b>	Lead(Pb) and its compounds		✓	
	Cadmium(Cd) and its compounds		✓	
	Mercury(Hg) and its compounds		✓	
	Hexavalent chromium and its compounds		✓	
	Polybrominated biphenyls(PBB)		✓	
	Polybrominated diphenylethers(PBDE)		✓	
<b>Level A- II</b>	Polychlorinated biphenyls (PCB)		✓	
	Polychlorinated naphthalenes (PCN)		✓	
	Polychlorinated terphenyls (PCT)		✓	
	Short-chain Chlorinated paraffins (SCCP)		✓	
	Asbestos and its compounds		✓	
	Ozone Depleting Substances		✓	
	Azo compounds		✓	
	Nickel(Ni) and its compounds		✓	
	Specific Organic tin compounds		✓	
	Arsenic(As) and its compounds		✓	
Formaldehydes		✓		
<b>Level B</b>	Polyvinyl chloride (PVC)		✓	
	Phthalates		✓	
	Beryllium(Be) and its compounds		✓	
	Antimony(Sb) and its compounds		✓	
	Selenium(Se) and its compounds		✓	
	Palladium amd its compounds		✓	
	Bismuth and its compounds		✓	
	Other Chlorinated flame retardants		✓	
Other brominated flame retardants		✓		