FCC TEST REPORT

FCC ID : WK8GX218D

Applicant : DONG GUAN TE LIANG GUANG DIAN KE JI YOU XIAN GONG SI

Address : Cai Wu Industrial Park,Wusha,Chang An,Dongguan,PRC

Equipment Under Test (EUT) :

Product description : Self ballasted lamp

Model No. : GX218D/GX213D GP218D/GP213D

Standards : FCC Part18

Date of Test : Aug. 8, 2008

Test Engineer : **Olic huang**

Reviewed By : Phillo zhong

PERPARED BY:
Waltek Services (Shenzhen) Co., Ltd.
1/F, Fukangtai Building,West Baima Rd.,Songgang Street, Baoan District, Shenzhen 518105,China
Tel: 86-755-27553488
Fax: 86-755-27553868

Contents

2 Test Summary

Test	Test Requirement	Test Method	Class / Severity	Result
Radiated Emission (30MHz to 1GHz)	FCC PART 18: 2003	ANSI C63.4:2003	N/A	N/A
Conducted Emission (150KHz to 30MHz)	FCC PART 18: 2003	ANSI C63.4:2003	N/A	PASS

3 General Information

3.1 Client Information

Applicant:	DONG GUAN TE LIANG GUANG DIAN KE JI YOU XIAN GONG SI
Address of Applicant:	Cai Wu Industrial Park,Wusha,Chang An,Dongguan,PRC

3.2 General Description of E.U.T.

Product description:	Self ballasted lamp
Model No.:	GX218D/GX213D GP218D/GP213D

3.3 Details of E.U.T.

Power Supply: 120VAC / 60Hz

The appearance of every two models are the same except that the output power is different.. GX218D/GX213D GP218D/GP213D**:** GX218D/ GP218D denotes output power 18W,and GX213D/ GP213D denotes output power 13W .

3.4 Description of Support Units

The EUT has been tested as an independent unit.

3.5 Standards Applicable for Testing

The customer requested FCC tests for a Self ballasted lamp. The standards used were FCC Part18.

3.6 Test Methodology

All measurements contained in this report are conducted with FCC Measurement Procedure MP-5, technical requirements for Methods of Measurement of Radio-Noise Emission from ISM Equipment.

3.7 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC – Registration No.: 880581**

  Waltek Services(Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 880581,June 24， 2008.

- **IC – Registration No.: 7760**

  Waltek Services(Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files. Registration IC7760,July 24， 2008.

3.8 Test Location

All Emissions testswere performed at:-
1/F, Fukangtai Building,West Baima Rd.,Songgang Street,
Baoan District, Shenzhen 518105, Guangdong,China.

4 Equipment Used during Test

Equipment	Brand Name	Model	Related standards	Cal.Intal Months	Last Cal. Date	Serial No
3m Anechoic chamber						
EMC Analyzer	Agilent	E7405A	ISO9001:2000	12	Jan-08	MY45114943
Trilog Broadband Antenne	SCHWARZBECK MESS-ELEKTROM	VULB9163	EN/ISO/IEC 17025 DIN EN ISO9001	12	Jan-08	336
Broad-band Horn Antenna	SCHWARZBECK MESS-ELEKTROM	BBHA 9120 D	EN/ISO/IEC 17025 DIN EN ISO9001	12	Jan-08	667
Broadband Preamplifier	SCHWARZBECK MESS-ELEKTROM	BBV 9718	EN/ISO/IEC 17025 DIN EN ISO9001	12	Jan-08	9718-148
10m Coaxial Cable with N-male Connectors	SCHWARZBECK MESS-ELEKTROM	AK 9515 H	EN/ISO/IEC 17025 DIN EN ISO9001	12	Jan-08	-
10m 50 Ohm Coaxial Cable with N-plug,individual length,usable up to 3(5)GHz, Connectors	SCHWARZBECK MESS-ELEKTROM	AK 9513	EN/ISO/IEC 17025 DIN EN ISO9001	12	Jan-08	-
Positioning Controller	C&C LAB	CC-C-IF	ISO9001	12	Jan-08	MF7802108
Color Monitor	SUNSPO	SP-14C	ISO9001	12	Jan-08	-
EMI Shielded Room						
Test Receiver	ROHDE&SCHWARZ	ESPI	ISO9001	12	Jan-08	101155
Two-Line V-Network	ROHDE&SCHWARZ	ENV216	ISO9001 EN/ISO/IEC 17025	12	Jan-08	100115
Absorbing Clamp	ROHDE&SCHWARZ	MDS-21	ISO9001 EN/ISO/IEC 17025	12	Jan-08	100205

10m 50 Ohm Coaxial Cable with N-plug,individual length,usable up to 3(5)GHz, Connectors	SCHWARZBECK MESS-ELEKTROM	AK 9514	EN/ISO/IEC 17025 DIN EN ISO9001	12	Jan-08	-

5 Conducted Emission Test

Product Name:	Self ballasted lamp
Test Requirement:	FCC Part 18
Test Method:	Based on FCC Part 18
Test Date:	Aug. 7, 2008
Frequency Range:	150kHz to 30MHz
Class:	Class B
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth) Quasi-Peak & Average if maximised peak within 6dB of Average Limit

5.1 Test Equipment

Please refer to Section 5 this report.

5.2 Test Procedure

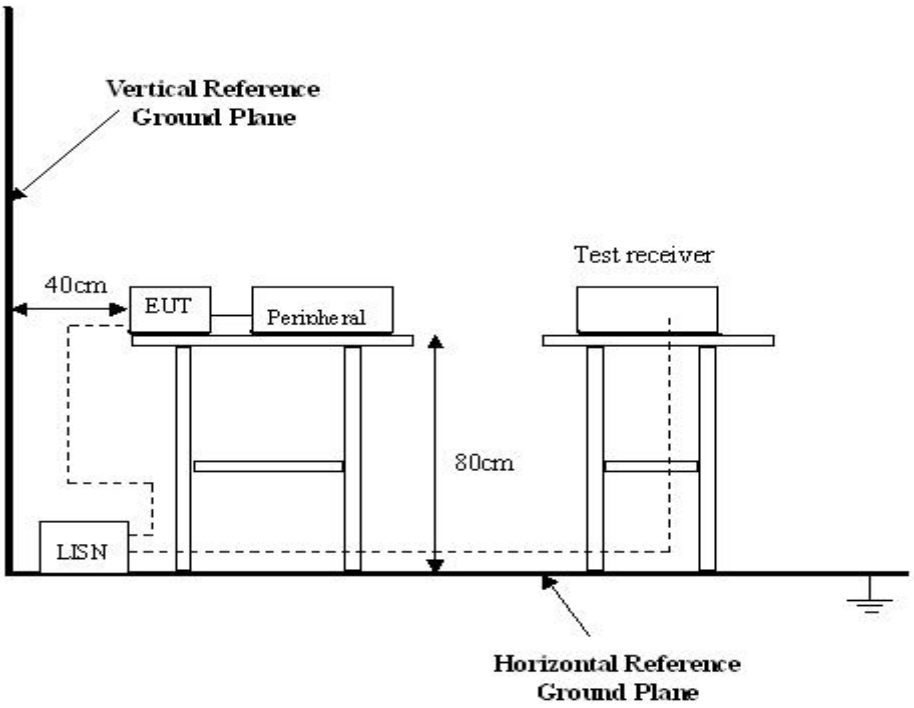
1. During the conducted emission test, the power cord of the EUT is connected to the auxiliary outlet of the LISN.
2. The EUT was tested according to FCC MP-5. The frequency spectrum from 150kHz to 30MHz was investigated.
3. The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

5.3 Conducted Test Setup

The conducted emission tests were performed using the setup accordance with the FCC MP-5 measurement procedure.

The EUT is tested independently.

The power supply used by the EUT is connected to a 120VAC / 60Hz power source.



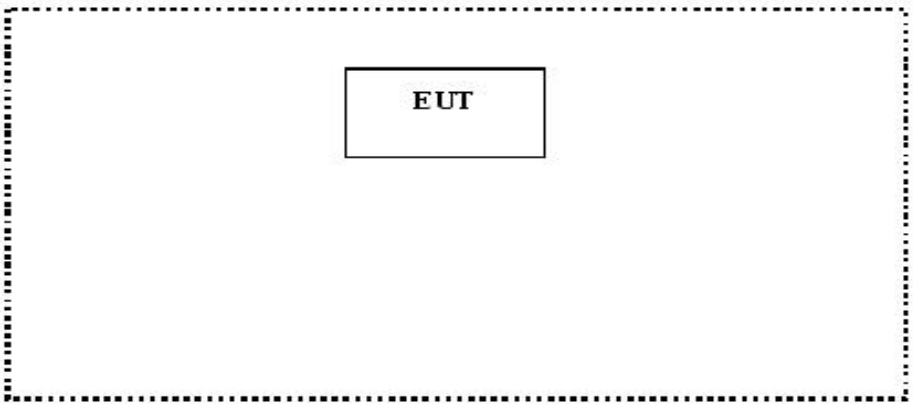
5.4 EUT Operating Condition

Operating condition is according to FCC MP-5.

A. Setup the EUT and simulators as shown on follow.

B. Enable RF signal and confirm EUT active.

C. Modulate output capacity of EUT up to specification.



5.5 Conducted Emission Limits

Frequency of Emission (MHz)	Conducted Limit (dBuV)- Quasi-peak
0.15— 0.5	66-56
0.5 — 5.0	56
5.0 — 30	60

Note: In the above limits, the tighter limit applies at the band edges.

5.6 Spectrum Analyzer

The spectrum analyzer is configured during the conduction test is as follows:

Start Frequency ····· 150 kHz
Stop Frequency ····· 30 MHz
Sweep Speed ····· Auto
IF Bandwidth ····· 9 kHz
Video Bandwidth ····· 100 kHz
Quasi-Peak Adaptor Bandwidth ····· 9 kHz
Quasi-Peak Adaptor Mode ····· Normal

5.7 Conducted Emission Test Result

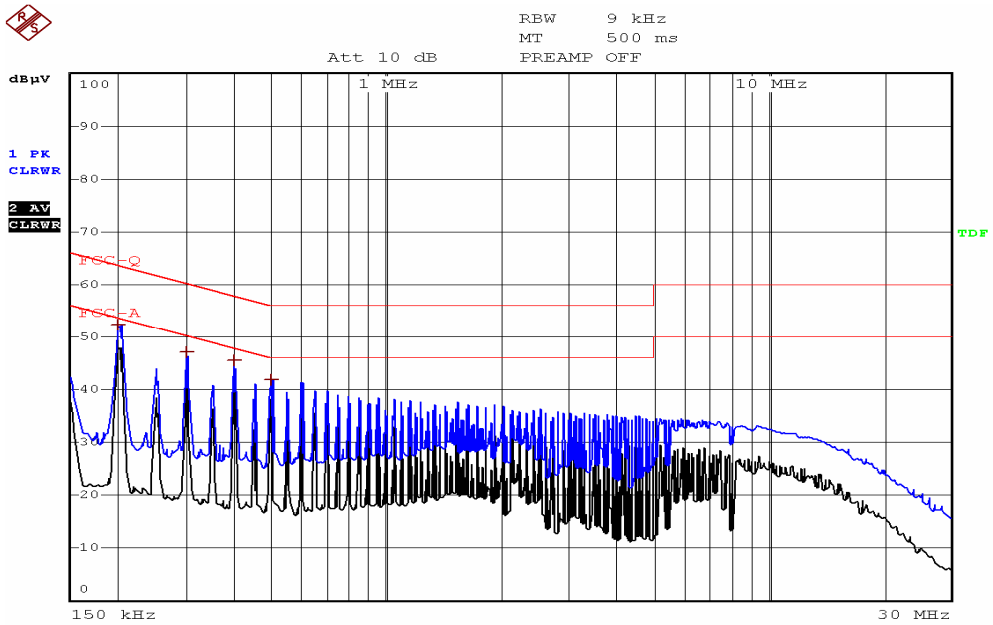
Test Item:	Conducted Emission Test
Test Voltage:	120VAC / 60Hz
Test Mode:	Normal
Temperature:	24 °C
Humidity:	52%RH
Test Result:	PASS

5.7.1 Measurement Data

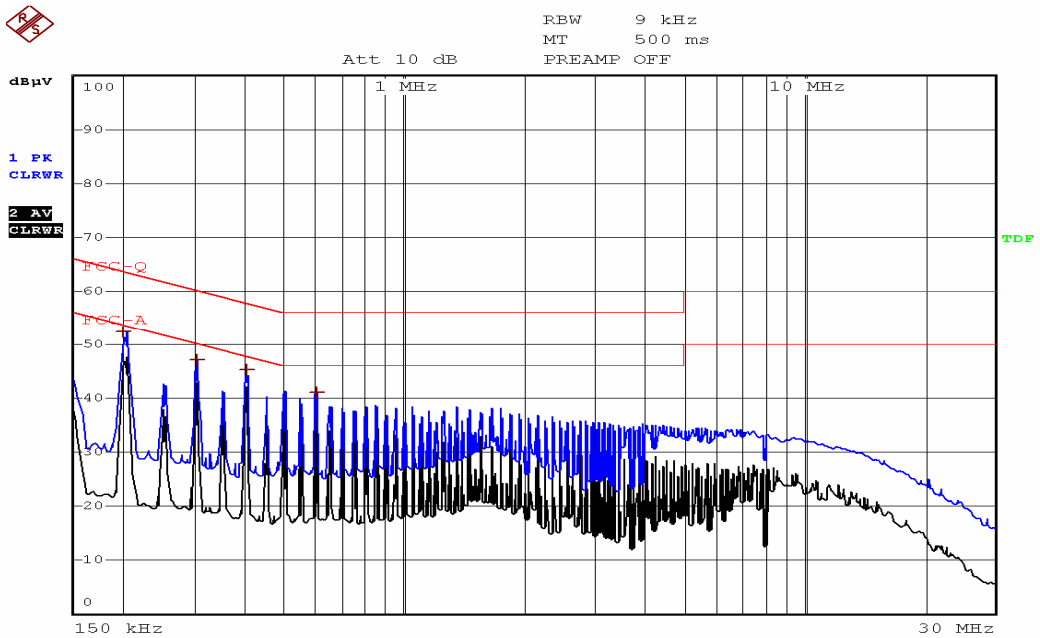
An initial pre-scan was performed on the live and neutral lines.
No futher quasi-peak or average measurements were performed since no peak emissions were detected within 10dB line below the average limit.
Please refer to the following peak scan graph for reference.

Model : GX218D

LIVE LINE



NEUTRAL LINE

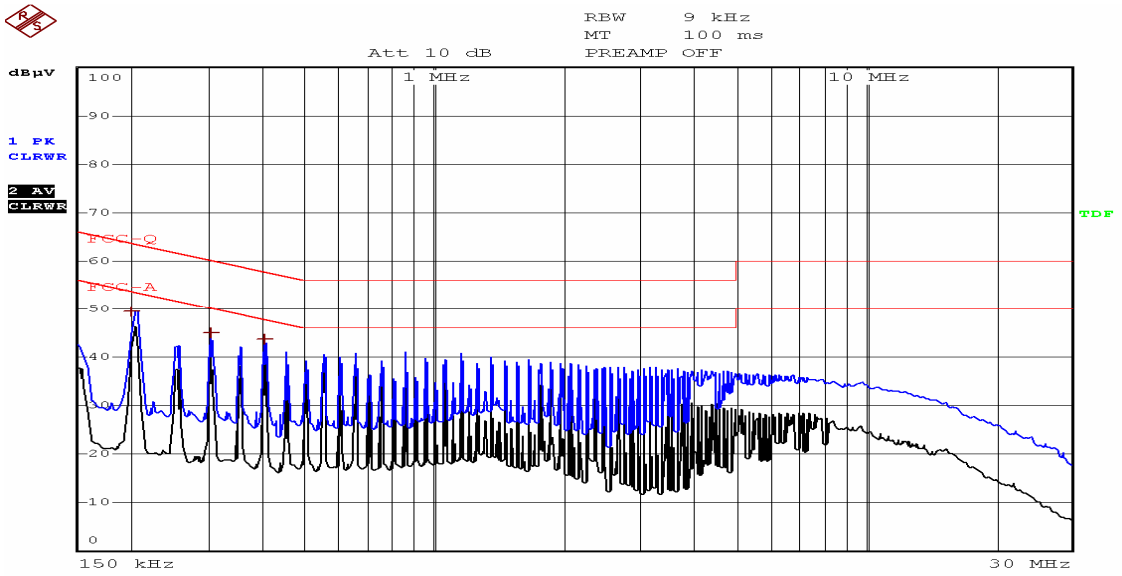


5.7.2 Conducted Emissions Test Data Model GX218D

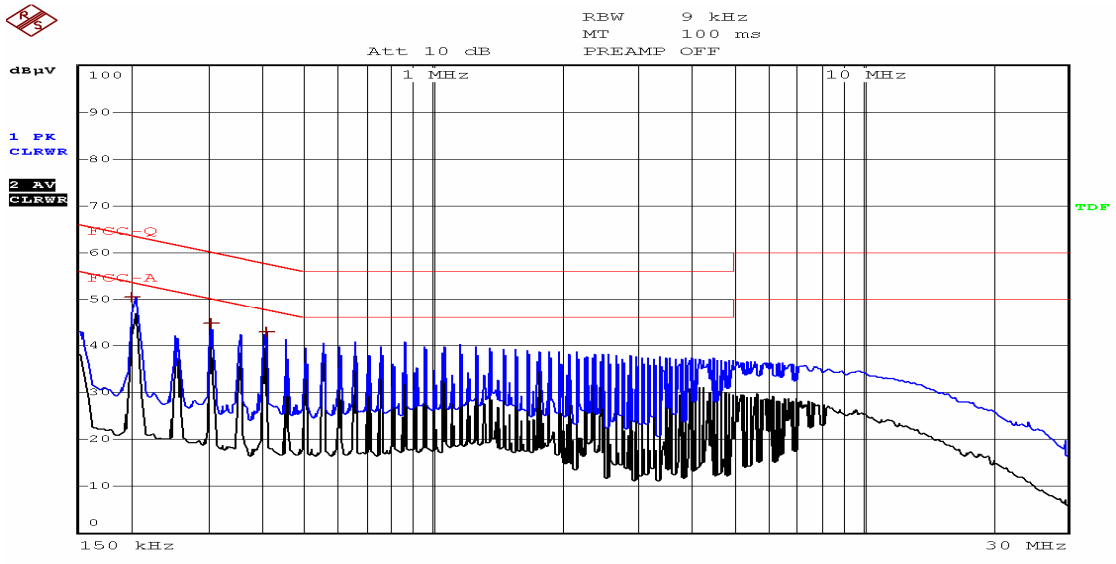
Freq. MHz	Line	QP Reading dBuV	Limit dBuV	Margin dB	AV Reading dBuV	Limit dBuV	Margin dB
0.198	Live	51.52	64.62	13.1	48.15	54.62	6.47
0.298	Live	46.27	61.82	15.55	43.34	51.82	8.48
0.398	Live	43.95	58.91	14.96	41.63	49.91	8.28
0.594	Live	39.93	56	16.07	37.92	46	8.08
0.198	Neutral	49.79	64.62	14.83	46.95	54.62	7.67
0.298	Neutral	45.03	61.82	16.79	42.53	51.82	9.29
0.398	Neutral	43.26	58.91	15.65	41.35	48.91	7.56
0.598	Neutral	39.82	56	16.18	37.62	46	8.38

Model : GP213D

LIVE LINE



NEUTRAL LINE



5.7.3 Conducted Emissions Test Data Model GP213D

Freq. MHz	Line	QP Reading dBuV	Limit dBuV	Margin dB	AV Reading dBuV	Limit dBuV	Margin dB
0.194	Live	49.55	64.51	14.96	44.85	54.74	9.89
0.294	Live	44.66	61.99	17.33	41.37	51.99	10.62
0.39	Live	38.65	59.14	20.49	33.29	36.94	3.65
0.194	Neutral	50.16	64.74	14.58	45.03	54.74	9.71
0.294	Neutral	44.68	61.99	17.31	41.66	51.99	10.33
0.39	Neutral	37.57	59.14	21.57	33.29	36.94	3.65

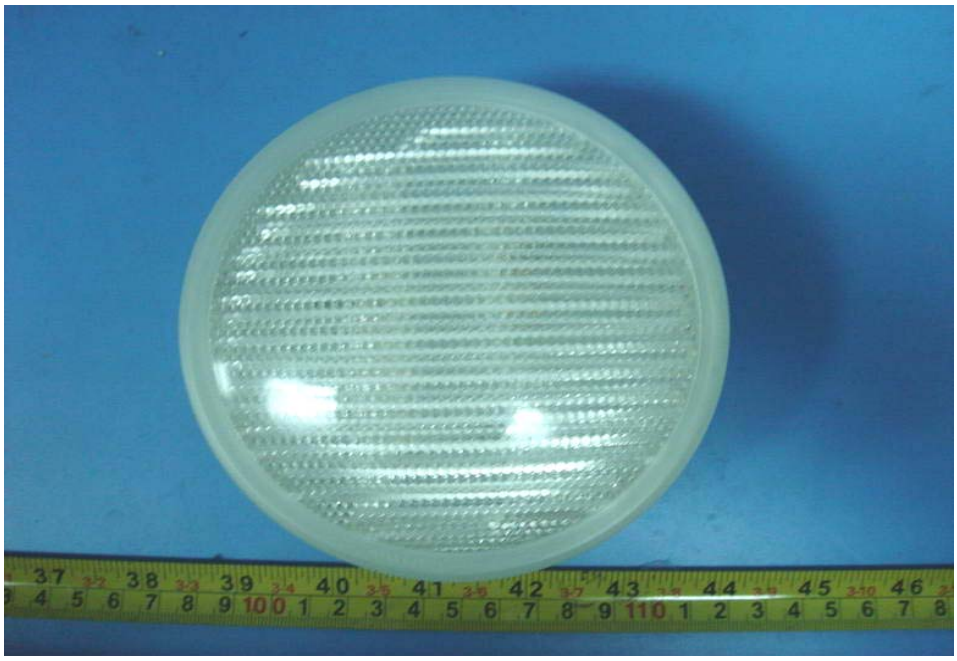
6 Photographs of Testing

6.1 Conducted Emission Test View (Model : GX218D)

6.2 Conducted Emission Test View (Model : GP213D)

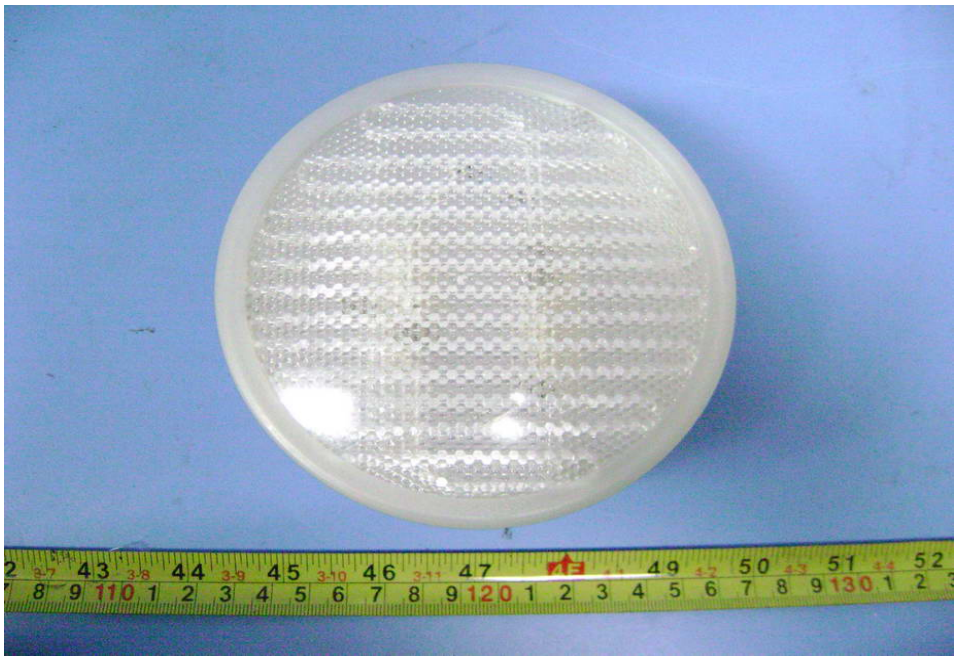
7 Photographs - Constructional Details

7.1 EUT1 - Front View（Model：GX218D）



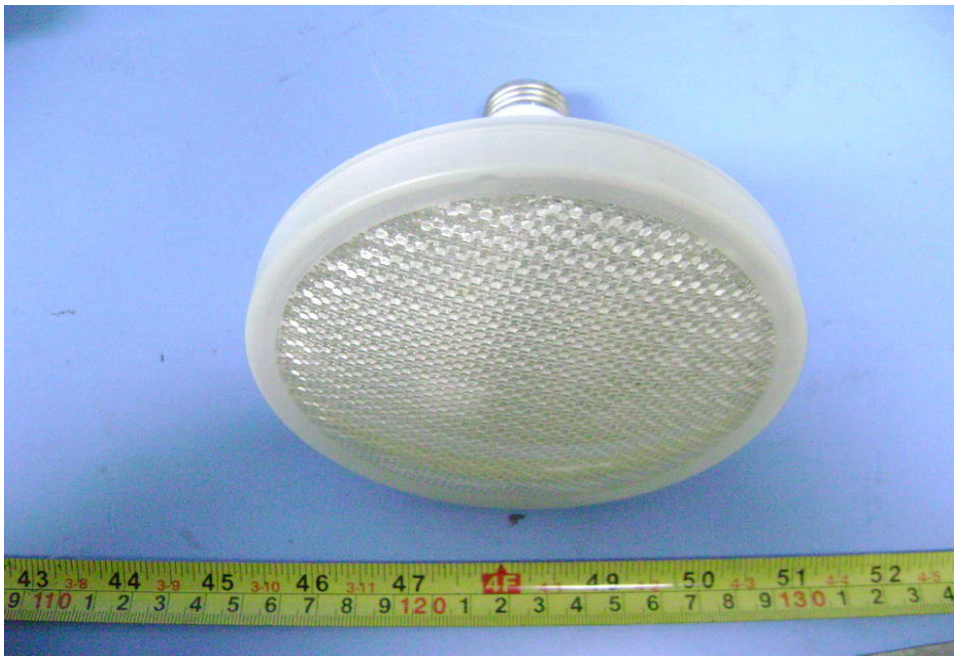
7.2 EUT1 - Back View（Model：GX218D）

7.3 EUT2 - Front View（Model：GX213D）



7.4 EUT2 - Back View（Model：GX213D）

7.5 EUT3 - Front View（Model：GP218D）



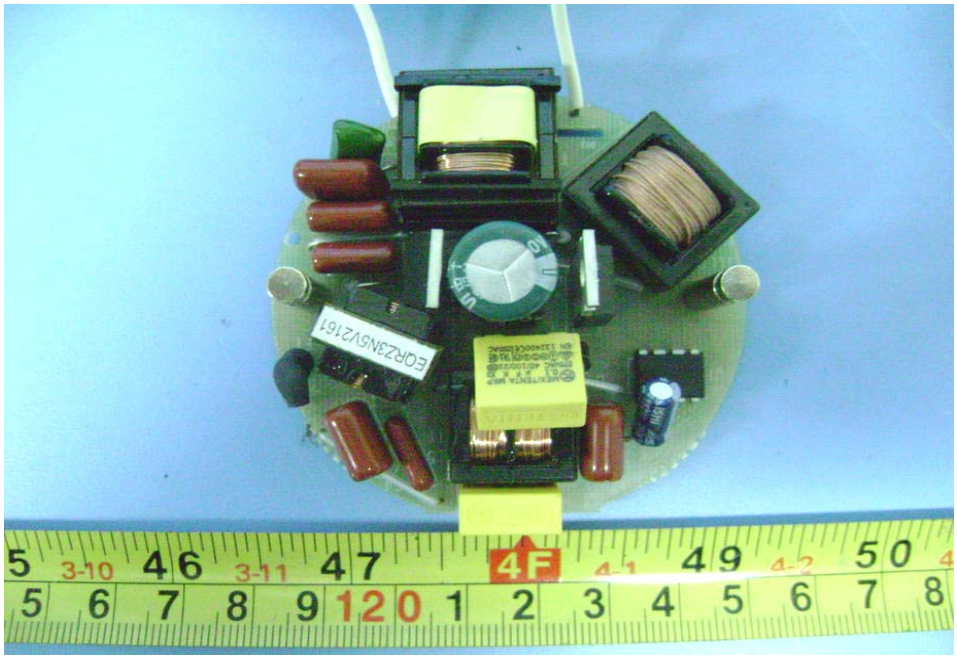
7.6 EUT3 - Back View（Model：GP218D）

7.7 EUT4 - Front View（Model：GP213D）

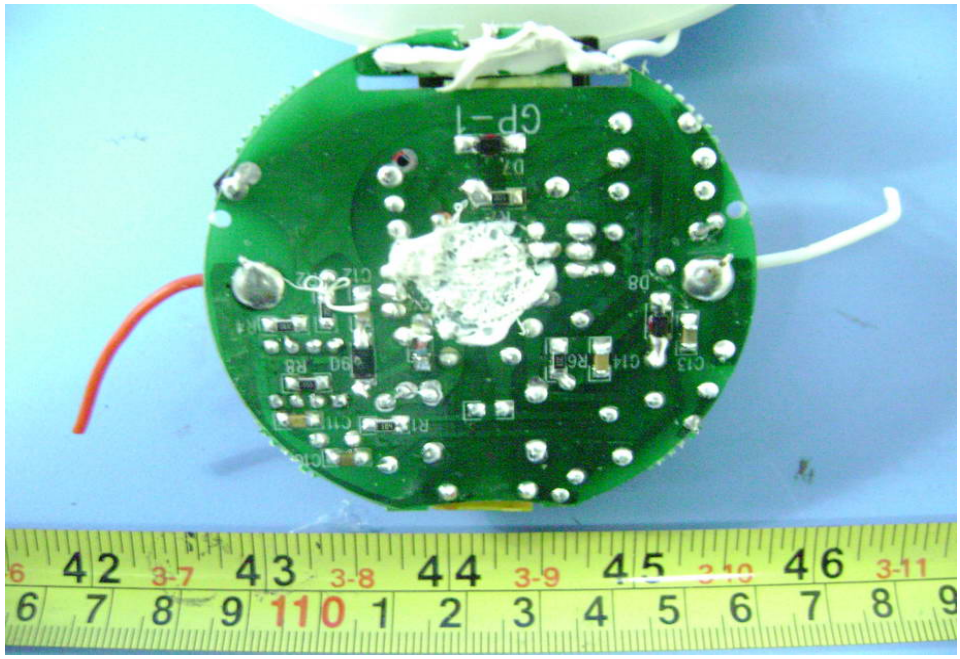
7.8 EUT4- Back View （Model： GP213D）

7.9 PCB 2- Front View（Model： GX218D， GP218D）

The PCB of the two models are the same

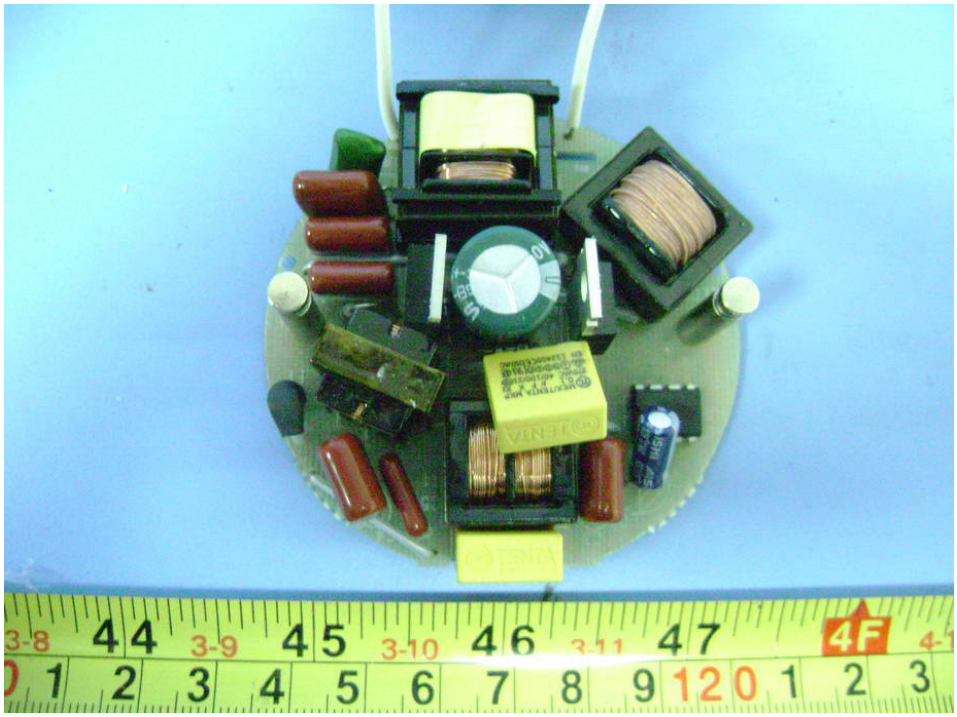


7.10 PCB 2- Back View （Model： GX218D, GP218D）

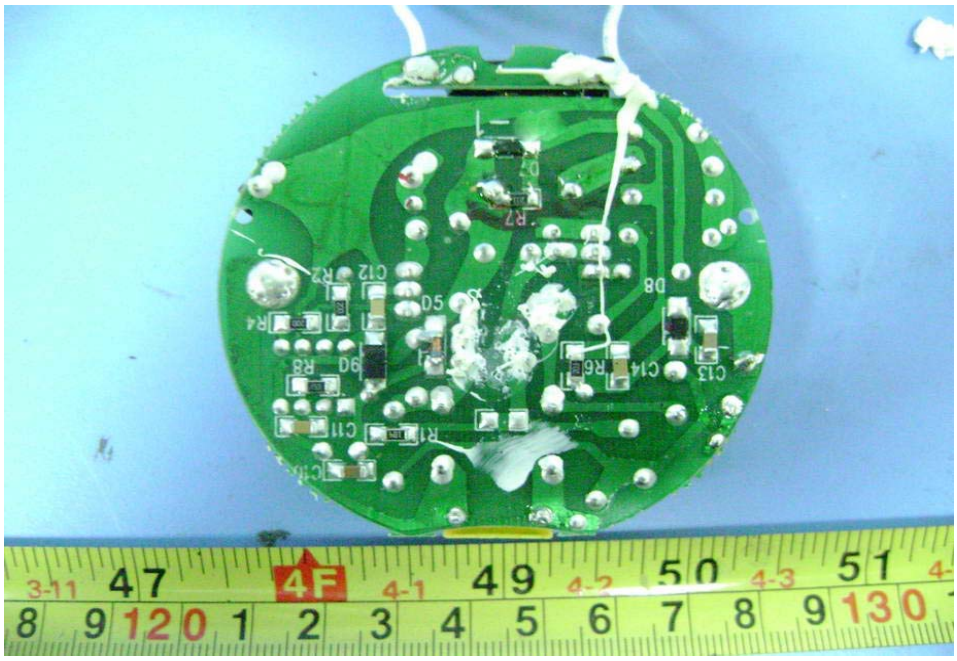


7.11 PCB 1- Front View（Model：GX213D,GP213D）

The PCB of the two models are the same .



7.12 PCB 1- Back View （Model：GX213D,GP213D）



8 FCC ID Label

This device complies with Part 18 of the FCC Rules.

The Label must not be a stick-on paper. The Label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Proposed Label Location on EUT

EUT Top View/ proposed FCC Label Location