Application for FCC Certificate
On Behalf of
Firefly Lighting Co., Ltd.

Energy Saving Lamp

Model No.: XEU38-15W XEU38-18W
XEU38-20W XEU38-24W
XEU38-15T XEU38-18T
XEU38-20T XEU38-24T

FCC ID : PGE-XEU38

Prepared For : Firefly Lighting Co., Ltd.
4th/FL, No.8 Industrial Building, Huli Industrial area,
Xiamen, P.R. China

Prepared By : AUDIX Technology (Shanghai) Co., Ltd.
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Report No. : ACI-F01005
Date of Test : Jan 15 ~ 18, 2001
Date of Report : Feb 02, 2001

TABLE OF CONTENTS

Page

TEST REPORT FOR FCC CERTIFICATE

Applicant	:	Firefly Lighting Co., Ltd.
Manufacturer	:	Firefly Lighting Co., Ltd.
EUT Description	:	Energy Saving Lamp (A) Model No.: XEU38-15W, XEU38-18W, XEU38-20W, XEU38-24W XEU38-15T, XEU38-18T, XEU38-20T, XEU38-24T (B) Serial No.: ES20010101 ~ ES20010108 (C) Power Supply: 120V/60Hz

Test Procedure Used:

FCC RULES AND REGULATIONS PART 18 CONSUMER DEVICES (1998) AND MP-5/1986

The device described above is tested by AUDIX Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 18 RF Lighting Device limits both radiated and conducted emissions.

The test results are contained in this test report and AUDIX Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliant with the FCC official limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX Technology (Shanghai) Co., Ltd.

This report must not be used by the applicant to claim product endorsement by NVLAP or any agency of the U.S. Government.

Date of Test : Jan 15, 2001

Prepared by : Stella Tang (STELLA TANG)

Test Engineer : Rain Liang (RAIN LIANG)

For and on behalf of AUDIX TECHNOLOGY (SHANGHAI) CO.,LTD.

Reviewer : Hall Wang (HALL WANG)

Approved Signatory: Jeremy Geng (JEREMY GENG)

Authorized Signature(s)

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test

Description : Energy Saving Lamp

Type of EUT : ☑ Production ☐ Pre-product ☐ Pro-type

Model Number : XEU38-15W, XEU38-18W, XEU38-20W, XEU38-24W
XEU38-15T, XEU38-18T, XEU38-20T, XEU38-24T

Applicant : Firefly Lighting Co., Ltd.

4th/FL, No.8 Industrial Building, Huli Industrial area, Xiamen, P.R. China

Manufacturer : Firefly Lighting Co., Ltd.

4th/FL, No.8 Industrial Building, Huli Industrial area, Xiamen, P.R. China

M/N	INPUT POWER (VA)	OUTPUT POWER (W)
XEU38-15W	28.1	14.8
XEU38-18W	30.4	16.2
XEU38-20W	34.8	17.2
XEU38-24W	37.9	19.6
XEU38-15T	26.3	13.1
XEU38-18T	28.5	15.1
XEU38-20T	26.7	18.9
XEU38-24T	39.5	20.6

1.2 Description of Test Facility

Site Description (Semi-Anechoic Chamber)	:	Sept. 17, 1998 file on Federal Communications Commission FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046, USA
Name of Firm	:	AUDIX Technology (Shanghai) Co., Ltd.
Site Location	:	3 F., 34 Bldg., 680 Guiping Rd., Caohejing Hi-Tech Park, Shanghai, China
NVLAP Lab Code	:	200371-0

1.3 Measurement Uncertainty

Conducted Emission Uncertainty	:	U = 2.66dB
Radiated Emission Uncertainty	:	U = 3.90dB

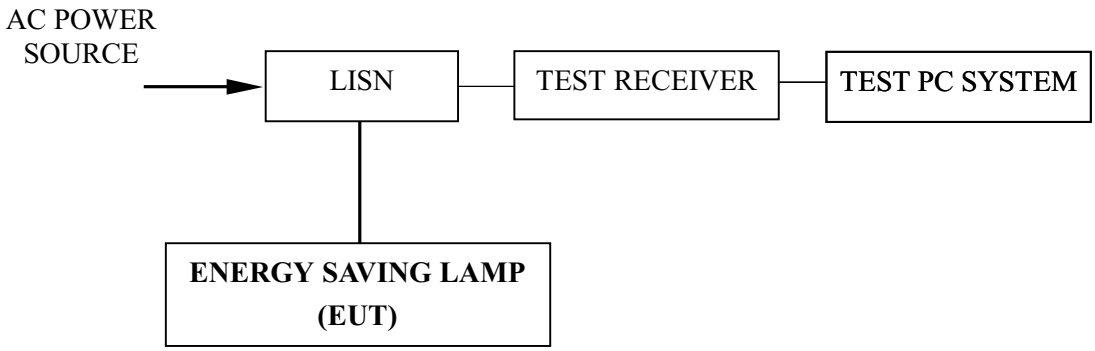
2 AC POWERLINE CONDUCTED EMISSION TEST

2.1 Test Equipment

The following test equipment are used during the powerline conducted emission test in a shielded room:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS10	844077/020	May 20, 2000	1 Year
2.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Jun. 02, 2000	1 Year

2.2 Block Diagram of Test Setup



2.3 Conducted Emission Limits

Frequency (MHz)	Maximum RF Line Voltage	
	(μV)	dB(μV)
0.45 ~ 2.51	250	48
2.51 ~ 3	3000	70
3 ~ 30	250	48
NOTE 1 – RF Line Voltage dB(μV) = 20 log RF Line Voltage (μV)		

2.4 Test Configuration

The EUT (listed in Sec. 1.1) was installed as shown on Sec. 2.2 to meet FCC requirement and operating in a manner which tends to maximize its emission level in a normal application.

2.5 Operating Condition of EUT

The EUT was connected to the power mains through a Line Impedance Stabilization Network (LISN). This provided a 50 ohm coupling impedance for the measuring equipment.

Both sides of AC line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed or manipulated according to MP-5/1986 during conducted emission test.

The bandwidth of Test Receiver ESHS10 was set at 10 kHz.

The frequency range from 450 kHz to 30 MHz was checked. The test mode (ON) was done on conducted test and the test results of the highest emissions are listed in Sec. 2.7.

2.6 Test Procedures

2.6.1 Setup the EUT as shown in Sec. 2.2.

2.6.2 Turn on the power of all equipment.

2.6.3 The EUT will be operated normally.

2.7 Test Results

< PASS >

The frequency and amplitude of the highest AC powerline conducted emissions relative to the limit is reported. All emissions not reported below are too low against the prescribed limits.

EUT	:	Energy Saving Lamp	Temperature :	21.8℃
Model No.	:	XEU38-15W	Humidity :	53%
Test Mode	:	ON	Date of Test :	Jan 18, 2001

Test Line	Frequency (MHz)	Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	**0.458**	**0.33**	**42.07**	**42.40**	**48.00**	**5.60**
	0.539	0.31	39.78	40.09	48.00	7.91
	0.627	0.30	36.90	37.20	48.00	10.80
	0.696	0.29	35.76	36.05	48.00	11.95
	0.954	0.27	28.76	29.03	48.00	18.97
	1.264	0.27	25.04	25.31	48.00	22.69
VB	0.463	0.32	40.91	41.23	48.00	6.77
	0.535	0.31	39.98	40.29	48.00	7.71
	0.614	0.30	37.44	37.74	48.00	10.26
	0.863	0.28	30.64	30.92	48.00	17.08
	1.069	0.27	27.92	28.19	48.00	19.81
	1.440	0.25	23.11	23.36	48.00	24.64

NOTE 1 – Emission Level = Meter Reading + Factor
NOTE 2 – Factor = Insertion Loss + Cable Loss
NOTE 3 – All reading are Quasi-Peak Values.
NOTE 4 – The worst emission is detected at 0.458 MHz with corrected signal level of 42.40 dB(μV) (limit is 48.00 dB(μV)), when the VA of the EUT is connected to LISN.

TEST ENGINEER: Rain Liang
(RAIN LIANG)

EUT	:	Energy Saving Lamp	Temperature :	21.8℃	
Model No.	:	XEU38-18W	Humidity	:	53%
Test Mode	:	ON	Date of Test	:	Jan 18, 2001

Test Line	Frequency (MHz)	Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.475	0.32	35.14	35.46	48.00	12.54
	0.548	0.30	34.45	34.75	48.00	13.25
	0.594	0.30	36.09	36.39	48.00	11.61
	0.691	0.29	35.07	35.36	48.00	12.64
	0.863	0.28	33.04	33.32	48.00	14.68
	1.207	0.27	29.48	29.75	48.00	18.25
VB	0.475	0.32	35.79	36.11	48.00	11.89
	0.548	0.30	35.02	35.31	48.00	12.69
	0.594	**0.30**	**37.05**	**37.35**	**48.00**	**10.65**
	0.720	0.29	35.16	35.45	48.00	12.55
	0.863	0.28	32.90	33.18	48.00	14.82
	1.207	0.26	29.84	30.10	48.00	17.90

NOTE 1 – Emission Level = Meter Reading + Factor
NOTE 2 – Factor = Insertion Loss + Cable Loss
NOTE 3 – All reading are Quasi-Peak Values.
NOTE 4 – The worst emission is detected at 0.594 MHz with corrected signal level of 37.35 dB(μV) (limit is 48.00 dB(μV)), when the VB of the EUT is connected to LISN.

TEST ENGINEER: Rain Liang
(RAIN LIANG)

EUT	:	Energy Saving Lamp	Temperature :	21.8℃
Model No.	:	XEU38-20W	Humidity :	53%
Test Mode	:	ON	Date of Test :	Jan 18, 2001

Test Line	Frequency (MHz)	Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	**0.487**	**0.32**	**42.85**	**43.17**	**48.00**	**4.83**
	0.553	0.30	40.06	40.36	48.00	7.64
	0.665	0.29	36.68	36.97	48.00	11.03
	0.834	0.28	31.72	32.00	48.00	16.00
	1.483	0.27	27.52	27.79	48.00	20.21
	3.185	0.27	22.93	23.20	48.00	24.80
VB	0.502	0.31	41.00	41.31	48.00	6.69
	0.544	0.31	40.36	40.67	48.00	7.33
	0.742	0.29	34.37	34.66	48.00	13.34
	0.919	0.27	31.60	31.87	48.00	16.13
	1.177	0.26	31.30	31.56	48.00	16.44
	3.016	0.25	24.25	24.50	48.00	23.50

NOTE 1 – Emission Level = Meter Reading + Factor
NOTE 2 – Factor = Insertion Loss + Cable Loss
NOTE 3 – All reading are Quasi-Peak Values.
NOTE 4 – The worst emission is detected at 0.487 MHz with corrected signal level of 43.17 dB(μV) (limit is 48.00 dB(μV)), when the VA of the EUT is connected to LISN.

TEST ENGINEER: Rain Liang
(RAIN LIANG)

EUT	:	Energy Saving Lamp	Temperature :	21.8℃
Model No.	:	XEU38-24W	Humidity :	53%
Test Mode	:	ON	Date of Test :	Jan 18, 2001

Test Line	Frequency (MHz)	Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.569	0.30	39.74	40.04	48.00	7.96
	0.659	**0.29**	**40.06**	**40.35**	**48.00**	**7.65**
	0.748	0.29	36.02	36.31	48.00	11.69
	1.096	0.27	34.41	34.68	48.00	13.32
	1.404	0.27	31.97	32.24	48.00	15.76
	3.508	0.27	28.62	28.89	48.00	19.11
VB	0.528	0.31	38.83	39.14	48.00	8.86
	0.659	0.29	39.77	40.06	48.00	7.94
	0.748	0.29	35.28	35.57	48.00	12.43
	1.096	0.27	34.12	34.39	48.00	13.61
	1.404	0.26	30.60	30.86	48.00	17.14
	3.508	0.26	28.35	28.61	48.00	19.39

NOTE 1 – Emission Level = Meter Reading + Factor
NOTE 2 – Factor = Insertion Loss + Cable Loss
NOTE 3 – All reading are Quasi-Peak Values.
NOTE 4 – The worst emission is detected at 0.659 MHz with corrected signal level of 40.35 dB(μV) (limit is 48.00 dB(μV)), when the VA of the EUT is connected to LISN.

TEST ENGINEER: Rain Liang
(RAIN LIANG)

EUT	:	Energy Saving Lamp	Temperature :	21.8℃
Model No.	:	XEU38-15T	Humidity :	53%
Test Mode	:	ON	Date of Test :	Jan 16, 2001

Test Line	Frequency (MHz)	Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.523	0.31	36.34	36.65	48.00	11.35
	0.594	0.30	35.95	36.25	48.00	11.75
	0.696	0.29	33.91	34.20	48.00	13.80
	0.803	0.28	31.45	31.73	48.00	16.27
	0.979	0.27	30.04	30.31	48.00	17.69
	1.347	0.27	29.20	29.47	48.00	18.53
VB	0.502	0.31	36.12	36.43	48.00	11.57
	0.532	**0.31**	**37.17**	**37.48**	**48.00**	**10.52**
	0.589	0.30	36.57	36.87	48.00	11.13
	0.696	0.29	35.58	35.87	48.00	12.13
	0.803	0.28	33.45	33.73	48.00	14.27
	1.393	0.26	31.00	31.26	48.00	16.74

NOTE 1 – Emission Level = Meter Reading + Factor
NOTE 2 – Factor = Insertion Loss + Cable Loss
NOTE 3 – All reading are Quasi-Peak Values.
NOTE 4 – The worst emission is detected at 0.532 MHz with corrected signal level of 37.48 dB(μV) (limit is 48.00 dB(μV)), when the VB of the EUT is connected to LISN.

TEST ENGINEER: Rain Liang
(RAIN LIANG)

EUT	:	Energy Saving Lamp	Temperature :	21.8℃
Model No.	:	XEU38-18T	Humidity :	53%
Test Mode	:	ON	Date of Test :	Jan 16, 2001

Test Line	Frequency (MHz)	Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.481	0.32	32.85	33.17	48.00	14.83
	0.594	0.30	36.67	36.97	48.00	11.03
	0.696	0.29	35.92	36.21	48.00	11.79
	0.848	0.28	31.25	31.53	48.00	16.47
	0.934	0.27	32.03	32.30	48.00	15.70
	1.105	0.27	29.60	29.87	48.00	18.13
VB	0.510	0.31	33.71	34.02	48.00	13.98
	0.599	**0.30**	**36.77**	**37.07**	**48.00**	**10.93**
	0.702	0.29	35.29	35.58	48.00	12.42
	0.810	0.28	31.75	32.03	48.00	15.97
	1.056	0.27	30.52	30.79	48.00	17.21
	1.319	0.26	27.98	28.24	48.00	19.76

NOTE 1 – Emission Level = Meter Reading + Factor
NOTE 2 – Factor = Insertion Loss + Cable Loss
NOTE 3 – All reading are Quasi-Peak Values.
NOTE 4 – The worst emission is detected at 0.599 MHz with corrected signal level of 37.07 dB(μV) (limit is 48.00 dB(μV)), when the VB of the EUT is connected to LISN.

TEST ENGINEER: Rain Liang
(RAIN LIANG)

EUT	:	Energy Saving Lamp	Temperature :	21.8℃
Model No.	:	XEU38-20T	Humidity :	53%
Test Mode	:	ON	Date of Test :	Jan 16, 2001

Test Line	Frequency (MHz)	Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.456	0.33	35.89	36.22	48.00	11.78
	0.502	0.31	35.21	35.52	48.00	12.48
	0.544	0.31	34.27	34.58	48.00	13.42
	0.723	0.29	31.68	31.97	48.00	16.03
	0.856	0.28	29.88	30.16	48.00	17.84
	1.004	0.27	27.76	28.03	48.00	19.97
VB	**0.456**	**0.33**	**36.47**	**36.80**	**48.00**	**11.20**
	0.502	0.31	32.97	33.28	48.00	14.72
	0.594	0.30	31.74	32.04	48.00	15.96
	0.767	0.28	31.06	31.34	48.00	16.66
	1.004	0.27	27.36	27.63	48.00	20.37
	1.143	0.26	25.03	25.29	48.00	22.71

NOTE 1 – Emission Level = Meter Reading + Factor
NOTE 2 – Factor = Insertion Loss + Cable Loss
NOTE 3 – All reading are Quasi-Peak Values.
NOTE 4 – The worst emission is detected at 0.456 MHz with corrected signal level of 36.80 dB(μV) (limit is 48.00 dB(μV)), when the VB of the EUT is connected to LISN.

TEST ENGINEER: Rain Liang
(RAIN LIANG)

EUT	:	Energy Saving Lamp	Temperature :	21.8℃
Model No.	:	XEU38-24T	Humidity :	53%
Test Mode	:	ON	Date of Test :	Jan 16, 2001

Test Line	Frequency (MHz)	Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.481	0.32	34.31	34.63	48.00	13.37
	0.673	0.29	34.09	34.38	48.00	13.62
	0.817	0.28	35.84	36.12	48.00	11.88
	1.004	0.27	35.61	35.88	48.00	12.12
	1.297	0.27	35.81	36.08	48.00	11.92
	1.725	0.27	31.18	31.45	48.00	16.55
VB	0.483	0.32	36.11	36.43	48.00	11.57
	0.708	0.29	37.21	37.50	48.00	10.50
	0.817	0.28	37.06	37.34	48.00	10.66
	0.942	0.27	36.98	37.25	48.00	10.75
	1.297	**0.26**	**37.59**	**37.85**	**48.00**	**10.15**
	1.725	0.25	31.18	31.43	48.00	16.57

NOTE 1 – Emission Level = Meter Reading + Factor
NOTE 2 – Factor = Insertion Loss + Cable Loss
NOTE 3 – All reading are Quasi-Peak Values.
NOTE 4 – The worst emission is detected at 1.297 MHz with corrected signal level of 37.85 dB(μV) (limit is 48.00 dB(μV)), when the VB of the EUT is connected to LISN.

TEST ENGINEER: Rain Liang
(RAIN LIANG)

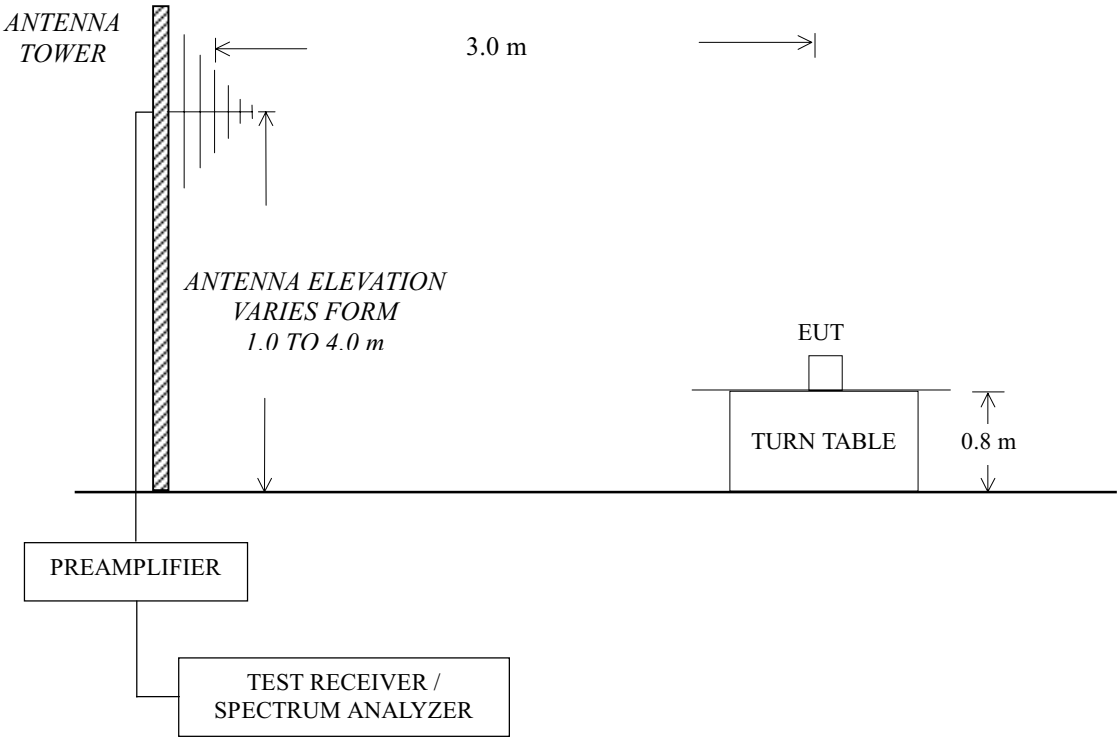
3 RADIATED EMISSION TEST

3.1 Test Equipment

The following test equipment are used during the radiated emission test in a semi-anechoic chamber:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	HP	8593EM	3628A00167	May 20, 2000	1 Year
2.	Preamplifier	HP	8447D	2944A06849	Dec 10, 2000	1/2 Year
3.	Bilog Antenna	Chase	CBL6111	1146	Dec 10, 2000	1/2 Year
4.	Test Receiver	Rohde & Schwarz	ESVS10	844594/001	May 20, 2000	1 Year

3.2 Block Diagram of Test Setup



3.3 Radiated Emission Limits

Frequency (MHz)	Distance (m)	Field strength limits (μV/m)	Converted Field Strengths Limits By 3 meters Measuring Distance	
			μV/m	dB(μV/m)
30 ~ 88	30	10	100	40.0
88 ~ 216	30	15	150	43.5
216 ~ 1000	30	20	200	46.0

NOTE 1 - Emission Level dB(μV/m) = 20 log Emission Level (μV/m)
NOTE 2 - The tighter limit applies at the band edges.
NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
NOTE 4 - The measurements are made at 3 meters distance, then the permissible field strength limits be adjusted using 1/d as an attenuation factor.

3.4 Test Configuration

The configuration of the EUT is same as those used in conducted emission test.

Please refer to Sec. 2.4.

3.5 Operating Condition of EUT

The EUT was placed on a turn table which is 0.8 meter above ground. The turn table rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (Calibrated Bilog Antenna) or dipole antenna were used as receiving antenna. Both horizontal and vertical polarization of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to MP-5/1986 requirements during radiated test.

The bandwidth setting on Test Receiver ESVS10 was 120 kHz.

The frequency range from 30 MHz to 1000 MHz was checked. The test mode (ON) was done on radiated emission test and the test results of the highest emissions are listed in Sec. 3.7.

3.6 Test Procedures

Same as conducted emission test which is listed in Sec. 2.6, except the test set up replaced by Sec. 3.2.

3.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emissions relative the limit is reported. All the emissions not reported below are too low against the FCC Part 18 limit.

EUT	:	Energy Saving Lamp	Temperature :	20.8℃
Model No.	:	XEU38-15W	Humidity :	53%
Test Mode	:	ON	Date of Test :	Jan 15, 2001

Polarization	Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV/m)	Limits dB(μV/m)	Margin (dB)
Horizontal	48.430	9.05	0.87	25.38	30.88	15.42	40.00	24.58
	110.510	11.95	1.30	25.10	28.09	16.24	43.50	27.26
	321.970	14.91	2.63	25.34	26.72	18.92	46.00	27.08
	530.520	20.03	3.60	26.70	28.50	25.43	46.00	20.57
	682.810	21.20	4.10	26.70	28.83	27.43	46.00	18.57
	919.490	**24.25**	**4.68**	**26.39**	**29.24**	**31.78**	**46.00**	**14.22**
Vertical	**49.400**	**8.68**	**0.88**	**25.37**	**45.39**	**29.85**	**40.00**	**10.42**
	87.230	7.55	1.12	25.15	37.41	20.93	40.00	19.07
	204.600	9.75	2.04	25.10	31.45	18.14	43.50	25.36
	327.790	15.05	2.66	25.39	31.83	24.15	46.00	21.85
	517.910	19.91	3.56	26.70	28.11	24.88	46.00	21.12
	824.430	23.20	4.47	26.52	28.42	29.57	46.00	16.43

NOTE 1 – Emission Level = Meter Reading + Antenna Factor + Cable Loss – Preamp Factor
NOTE 2 – All reading are Quasi-Peak values.
NOTE 3 – The worst emission at horizontal polarization was detected at 919.490 MHz with corrected signal level of 31.78 dB(μV/m) (limit is 46.00 dB(μV/m)), when the antenna was 1.50m height and the turn table was at 100°.
NOTE 4 – The worst emission at vertical polarization was detected at 49.400 MHz with corrected signal level of 29.85 dB(μV/m) (limit is 40.00 dB(μV/m)), when the antenna was 1.50 m height and the turn table was at 120°.
NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

TEST ENGINEER: Rain Liang
(RAIN LIANG)

EUT	:	Energy Saving Lamp	Temperature :	20.8℃
Model No.	:	XEU38-18W	Humidity :	53%
Test Mode	:	ON	Date of Test :	Jan 15, 2001

Polarization	Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV/m)	Limits dB(μV/m)	Margin (dB)
Horizontal	43.580	11.57	0.83	25.42	27.87	14.85	40.00	25.15
	112.450	12.23	1.32	25.10	27.64	16.09	43.50	27.41
	143.490	11.30	1.61	25.10	28.13	15.94	43.50	27.56
	329.730	15.11	2.68	25.41	27.00	19.38	46.00	26.62
	527.610	20.01	3.60	26.70	28.64	25.55	46.00	20.45
	891.360	**24.12**	**4.62**	**26.43**	**27.87**	**30.18**	**46.00**	**15.82**
Vertical	43.580	11.57	0.83	25.42	36.06	23.04	40.00	16.96
	121.180	12.85	1.41	25.51	29.64	18.80	43.50	24.70
	199.750	9.38	2.01	25.51	34.01	20.30	43.50	23.20
	356.890	15.72	2.83	25.65	31.19	24.09	46.00	21.91
	515.000	19.89	3.55	26.70	28.24	24.98	46.00	21.02
	860.320	**23.70**	**4.55**	**26.47**	**27.94**	**29.72**	**46.00**	**16.28**

NOTE 1 – Emission Level = Meter Reading + Antenna Factor + Cable Loss – Preamp Factor
NOTE 2 – All reading are Quasi-Peak values.
NOTE 3 – The worst emission at horizontal polarization was detected at 891.360 MHz with corrected signal level of 30.18dB(μV/m) (limit is 46.00 dB(μV/m)), when the antenna was 1.50m height and the turn table was at 100°.
NOTE 4 – The worst emission at vertical polarization was detected at 860.320 MHz with corrected signal level of 29.72 dB(μV/m) (limit is 46.00 dB(μV/m)), when the antenna was 1.80 m height and the turn table was at 120°.
NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

TEST ENGINEER: Rain Liang
(RAIN LIANG)

EUT	:	Energy Saving Lamp	Temperature :	20.8℃
Model No.	:	XEU38-20W	Humidity :	53%
Test Mode	:	ON	Date of Test :	Jan 15, 2001

Polarization	Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV/m)	Limits dB(μV/m)	Margin (dB)
Horizontal	36.790	15.29	0.76	25.49	28.26	18.82	40.00	21.18
	79.470	7.57	1.08	25.19	27.60	11.06	40.00	28.94
	121.180	12.85	1.41	25.10	28.03	17.19	43.50	26.31
	315.180	14.74	2.59	25.27	27.22	19.28	46.00	26.72
	515.000	19.89	3.55	26.70	28.48	25.22	46.00	20.78
	684.750	**21.22**	**4.10**	**26.70**	**27.75**	**26.37**	**46.00**	**19.63**
Vertical	33.880	16.50	0.72	25.52	30.29	21.99	40.00	18.01
	45.520	**10.36**	**0.85**	**25.41**	**42.28**	**28.08**	**40.00**	**11.92**
	57.160	6.28	0.94	25.32	42.72	24.62	40.00	15.38
	89.170	7.53	1.13	25.14	35.59	19.11	43.50	24.39
	111.480	12.07	1.31	25.10	31.18	19.46	43.50	24.04
	441.280	18.02	3.25	26.32	34.14	29.09	46.00	16.91

NOTE 1 – Emission Level = Meter Reading + Antenna Factor + Cable Loss – Preamp Factor
NOTE 2 – All reading are Quasi-Peak values.
NOTE 3 – The worst emission at horizontal polarization was detected at 684.750 MHz with corrected signal level of 26.37dB(μV/m) (limit is 46.00 dB(μV/m)), when the antenna was 1.50m height and the turn table was at 100°.
NOTE 4 – The worst emission at vertical polarization was detected at 45.520 MHz with corrected signal level of 28.08 dB(μV/m) (limit is 40.00 dB(μV/m)), when the antenna was 1.80 m height and the turn table was at 120°.
NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

TEST ENGINEER: Rain Liang
(RAIN LIANG)

EUT	:	Energy Saving Lamp	Temperature :	20.8℃
Model No.	:	XEU38-24W	Humidity :	53%
Test Mode	:	ON	Date of Test :	Jan 15, 2001

Polarization	Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV/m)	Limits dB(μV/m)	Margin (dB)
Horizontal	34.850	16.12	0.74	25.51	27.85	18.93	40.00	21.07
	48.430	9.05	0.87	25.38	30.88	15.42	40.00	24.58
	120.210	13.11	1.40	25.10	28.07	17.48	43.50	26.02
	515.000	19.89	3.55	26.70	28.48	25.22	46.00	20.78
	596.480	20.60	3.84	26.70	30.61	28.35	46.00	17.65
	822.490	**23.16**	**4.46**	**26.52**	**30.01**	**31.11**	**46.00**	**14.89**
Vertical	30.970	17.73	0.68	25.56	32.19	25.04	40.00	14.96
	38.730	14.45	0.78	25.47	34.21	23.97	40.00	16.03
	47.460	**9.49**	**0.87**	**25.39**	**45.93**	**30.90**	**40.00**	**9.10**
	201.690	9.49	2.02	25.10	34.71	21.12	43.50	22.38
	271.530	13.45	2.37	25.10	31.83	22.55	46.00	23.45
	441.280	18.02	3.25	26.32	34.14	29.09	46.00	16.91

NOTE 1 – Emission Level = Meter Reading + Antenna Factor + Cable Loss – Preamp Factor
NOTE 2 – All reading are Quasi-Peak values.
NOTE 3 – The worst emission at horizontal polarization was detected at 822.490 MHz with corrected signal level of 31.11dB(μV/m) (limit is 46.00 dB(μV/m)), when the antenna was 1.50m height and the turn table was at 100°.
NOTE 4 – The worst emission at vertical polarization was detected at 47.460 MHz with corrected signal level of 30.90 dB(μV/m) (limit is 40.00 dB(μV/m)), when the antenna was 1.80 m height and the turn table was at 120°.
NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

TEST ENGINEER: Rain Liang
(RAIN LIANG)

EUT	:	Energy Saving Lamp	Temperature :	20.8℃
Model No.	:	XEU38-15T	Humidity :	53%
Test Mode	:	ON	Date of Test :	Jan 15, 2001

Polarization	Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV/m)	Limits dB(μV/m)	Margin (dB)
Horizontal	33.200	16.78	0.71	25.53	20.76	12.72	40.00	27.28
	95.800	9.22	1.16	25.12	22.50	7.76	43.50	35.74
	252.660	12.83	2.29	25.10	24.30	14.32	46.00	31.68
	342.760	15.42	2.75	25.53	22.60	15.24	46.00	30.76
	526.880	**19.99**	**3.59**	**26.70**	**30.20**	**27.08**	**46.00**	**18.92**
	585.450	20.50	3.80	26.70	28.50	26.10	46.00	19.90
Vertical	**30.460**	**17.96**	**0.68**	**25.56**	**34.14**	**27.22**	**40.00**	**12.78**
	38.430	14.57	0.78	25.47	22.37	12.25	40.00	27.75
	105.230	11.18	1.24	25.10	26.38	13.70	43.50	29.80
	155.560	10.82	1.71	25.10	22.34	9.77	43.50	33.73
	304.560	14.46	2.52	25.17	23.21	15.03	46.00	30.98
	456.200	18.46	3.31	26.41	25.10	20.46	46.00	25.54

NOTE 1 – Emission Level = Meter Reading + Antenna Factor + Cable Loss – Preamp Factor
NOTE 2 – All reading are Quasi-Peak values.
NOTE 3 – The worst emission at horizontal polarization was detected at 526.880 MHz with corrected signal level of 27.08dB(μV/m) (limit is 46.00 dB(μV/m)), when the antenna was 1.50m height and the turn table was at 100°.
NOTE 4 – The worst emission at vertical polarization was detected at 30.460 MHz with corrected signal level of 27.22 dB(μV/m) (limit is 40.00 dB(μV/m)), when the antenna was 1.80 m height and the turn table was at 120°.
NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

TEST ENGINEER: Rain Liang
(RAIN LIANG)

EUT	:	Energy Saving Lamp	Temperature :	20.8℃
Model No.	:	XEU38-18T	Humidity :	53%
Test Mode	:	ON	Date of Test :	Jan 15, 2001

Polarization	Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV/m)	Limits dB(μV/m)	Margin (dB)
Horizontal	45.190	10.51	0.84	25.41	20.75	6.69	40.00	33.31
	100.250	10.40	1.19	25.10	21.59	8.08	43.50	35.42
	272.230	13.48	2.38	25.10	24.30	15.06	46.00	30.94
	320.200	14.85	2.62	25.32	21.50	13.65	46.00	32.35
	526.300	19.99	3.59	26.70	30.20	27.80	46.00	18.92
	560.000	**20.30**	**3.72**	**26.70**	**29.79**	**27.11**	**46.00**	**18.89**
Vertical	**32.680**	**17.02**	**0.71**	**25.54**	**27.80**	**19.99**	**40.00**	**20.01**
	44.550	10.88	0.84	25.41	23.27	9.58	40.00	30.42
	109.230	11.79	1.29	25.10	26.80	14.78	43.50	28.72
	166.550	10.25	1.79	25.10	24.33	11.27	43.50	32.23
	304.280	14.46	2.52	25.17	25.11	16.92	46.00	29.08
	448.320	18.22	3.28	26.36	26.39	21.53	46.00	24.47

NOTE 1 – Emission Level = Meter Reading + Antenna Factor + Cable Loss – Preamp Factor
NOTE 2 – All reading are Quasi-Peak values.
NOTE 3 – The worst emission at horizontal polarization was detected at 560.000 MHz with corrected signal level of 27.11dB(μV/m) (limit is 46.00 dB(μV/m)), when the antenna was 1.50m height and the turn table was at 100°.
NOTE 4 – The worst emission at vertical polarization was detected at 32.680 MHz with corrected signal level of 19.99 dB(μV/m) (limit is 40.00 dB(μV/m)), when the antenna was 1.80 m height and the turn table was at 140°.
NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

TEST ENGINEER: Rain Liang
(RAIN LIANG)

EUT	:	Energy Saving Lamp	Temperature :	20.8℃
Model No.	:	XEU38-20T	Humidity :	53%
Test Mode	:	ON	Date of Test :	Jan 15, 2001

Polarization	Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV/m)	Limits dB(μV/m)	Margin (dB)
Horizontal	56.190	6.56	0.94	25.32	20.74	2.92	40.00	37.08
	91.110	7.90	1.14	25.13	20.50	4.41	43.50	39.09
	271.530	13.45	2.37	25.10	22.40	13.12	46.00	32.88
	328.760	15.08	2.67	25.40	21.50	13.85	46.00	32.15
	526.640	19.99	3.59	26.70	29.90	26.78	46.00	19.22
	597.450	**20.60**	**3.84**	**26.70**	**29.70**	**27.44**	**46.00**	**18.56**
Vertical	**32.910**	**16.92**	**0.71**	**25.53**	**28.14**	**20.24**	**40.00**	**19.76**
	48.430	9.05	0.87	25.38	22.28	6.82	40.00	33.18
	109.540	11.79	1.29	25.10	26.79	14.77	43.50	28.73
	155.130	10.82	1.71	25.10	21.33	8.76	43.50	34.74
	304.510	14.46	2.52	25.17	19.68	11.49	46.00	34.51
	441.280	18.02	3.25	26.32	24.88	19.83	46.00	26.17

NOTE 1 – Emission Level = Meter Reading + Antenna Factor + Cable Loss – Preamp Factor
NOTE 2 – All reading are Quasi-Peak values.
NOTE 3 – The worst emission at horizontal polarization was detected at 597.450 MHz with corrected signal level of 27.44 dB(μV/m) (limit is 46.00 dB(μV/m)), when the antenna was 1.50m height and the turn table was at 100°.
NOTE 4 – The worst emission at vertical polarization was detected at 32.910 MHz with corrected signal level of 20.24 dB(μV/m) (limit is 40.00 dB(μV/m)), when the antenna was 1.80 m height and the turn table was at 140°.
NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

TEST ENGINEER: Rain Liang
(RAIN LIANG)

EUT	:	Energy Saving Lamp	Temperature :	20.8℃
Model No.	:	XEU38-24T	Humidity :	53%
Test Mode	:	ON	Date of Test :	Jan 15, 2001

Polarization	Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Meter Reading dB(μV)	Emission Level dB(μV/m)	Limits dB(μV/m)	Margin (dB)
Horizontal	31.940	17.30	0.70	25.54	20.34	12.80	40.00	27.20
	40.670	13.46	0.80	25.45	16.75	5.56	40.00	34.44
	92.080	8.18	1.15	25.13	25.97	10.17	43.50	33.33
	114.390	12.51	1.34	25.10	18.08	6.83	43.50	36.67
	332.640	15.16	2.69	25.44	25.81	18.22	46.00	27.78
	652.740	**21.00**	**4.01**	**26.70**	**31.08**	**29.39**	**46.00**	**16.61**
Vertical	**30.970**	**17.73**	**0.68**	**25.56**	**20.80**	**13.65**	**40.00**	**26.35**
	38.730	14.45	0.78	25.47	22.80	12.56	40.00	27.44
	92.080	8.18	1.15	25.13	20.60	4.80	43.50	38.70
	300.630	14.35	2.50	25.12	21.70	13.43	46.00	32.57
	327.790	15.05	2.66	25.39	23.61	15.93	46.00	30.07
	385.990	16.37	2.99	25.90	26.10	19.56	46.00	26.44

NOTE 1 – Emission Level = Meter Reading + Antenna Factor + Cable Loss – Preamp Factor
NOTE 2 – All reading are Quasi-Peak values.
NOTE 3 – The worst emission at horizontal polarization was detected at 652.740 MHz with corrected signal level of 29.39dB(μV/m) (limit is 46.00 dB(μV/m)), when the antenna was 1.30m height and the turn table was at 125°.
NOTE 4 – The worst emission at vertical polarization was detected at 30.970 MHz with corrected signal level of 13.65 dB(μV/m) (limit is 40.00 dB(μV/m)), when the antenna was 1.60 m height and the turn table was at 125°.
NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

TEST ENGINEER: Rain Liang
(RAIN LIANG)