

Report No.

N0618672

Specifications

FCC Part 18 - Certification

Test Method

ANSI C63.4 1992

Applicant
addressFLAT 4, 11/F, EMPIRE CENTRE, 68 MODY ROAD,
TST EAST, KOWLOON, HONG KONG.Applicant
Items tested
Model No.NEONLITE ELECTRONIC & LIGHTING (HK) LTD.
ENERGY SAVING LAMPK315, K318, K320, K323, K325, K327, B415, B418, B420,
B423, B425, B427 (Sample # N06672)Results
Sample received
dateAs detailed within this report
07 / 07 / 1998 (month / day / year)

Prepared by

project engineer

Authorized by

Vice General Manager
(Jacob Lin)

Issue date

(month / day / year)

Modifications

None

Tested by

Training Research Co., Ltd.

Office and

No. 15, Lane 530, Pa-Lian RD., Sec. 1, His-Chih Town

Open site at

Taipei Hsien, Taiwan, R.O.C.

Conditions of issue:

- (1) This test report shall not be reproduced except in full, without written approval of TRC. And the test result contained within this report only relate to the sample submitted for testing.
- (2) This report must not be used by the client to claim product endorsement by NVLAP or any agency of U.S. Government.

★ FCC ID : L2ALC61527

Contents

Chapter 1 Introduction

Description of EUT.....	3
Configuration of Test Setup.....	4

Chapter 2 Conducted Emission Test

Test Condition and Setup.....	5
Conducted Test Placement.....	6

Chapter 3 Radiated Emission Test

Test Condition and Setup.....	7
Radiated Test Placement.....	8

Appendix A :

Conducted test result.....	9
----------------------------	---

Chapter 1 Introduction

Description of EUT :

These products are energy saving lamp. There are six EUTs in 15W, 18W, 20W, 23W, 25W and 27W separately tested in this report. Each lamp is provided with an Edison medium type lamp base for connection to a 110-120v AC source of supply through medium base lampholder .

***P.S.: Model No. K3XX and B4XX, XX means W . For example , K315 means 15W.

Connection of EUT :

- (1) Plug the EUT in the lamp set .
- (2) Connect the power cord to 110Vac source.

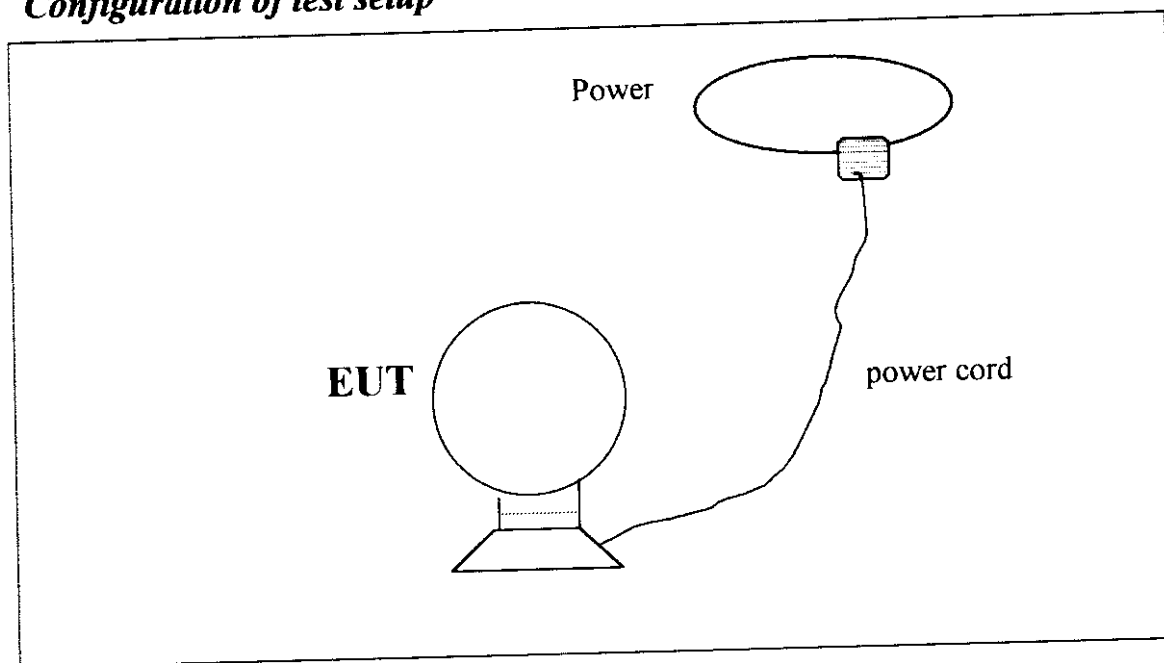
Test method :

Plug the power cord and make the lamp lights-up.

(If the emission is close to the ambience, the resolution BW and view resolution will be reduced and the data will be recorded by detection of maximum hold peak mode.)

The testing configuration of test setup is shown on the next page.

Configuration of test setup



Connections :

*** The power cord 175 cm long, non-shielded.**

Chapter 2 Conducted emission test

Test condition and set up :

All the equipment is placed and setup according to the ANSI C63.4 - 1992 .
The EUT is assembled on a wooden table which is 80 cm high , is placed 40 cm from the back-wall which is a vertical conducting plane . One LISN is for EUT ,the other LISN is for support equipment. They are all placed on the conductive ground .The EUT's LISN connect a line switch box for selecting L1 or L2 ,then connect to a preamplifier and spectrum.

The spectrum scans from 450KHz to 30MHz . Conducted emission levels are detected at max. peak mode . But if the max. peak mode failed ,it will be measured by CISPR's quasi-peak detection mode .

While testing, there is a the worst-emission plot printed at peak detection mode ,and there are more than 6 highest emissions relative to limit recorded. The plot is kept as the original data, not included in test report .

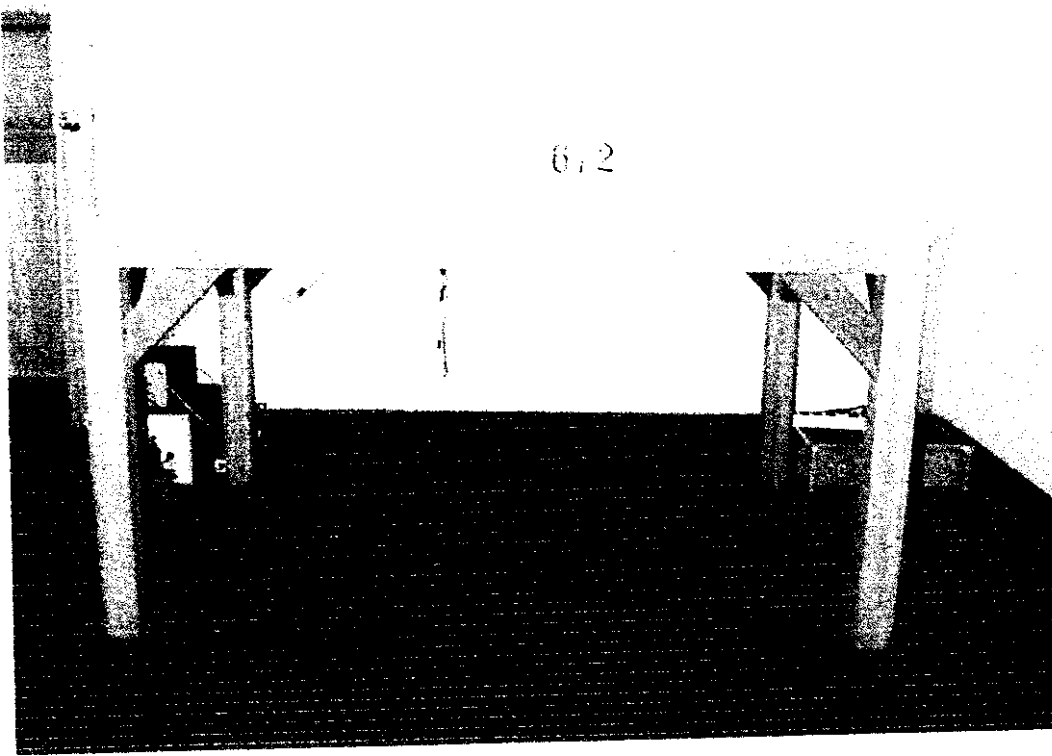
List of test Instrument :

Instrument Name	Model No.	Brand	Serial No.	Calibration Date	
				Last time	Next time
Spectrum analyzer	8591EM	H P	3619A00821	08/29/97	08/29/98
LISN (EUT)	3825/2	EMCO	9411-2284	05/15/98	05/15/99
Preamplifier	8447F	H P	2944A03706	05/13/98	05/15/99
Line switch box	AC1-003	TRC	-----	05/15/98	05/15/99
Line selector	AC1-002	TRC	-----	05/15/98	05/15/99

The level of confidence of 95% ,the uncertainty of measurement of conducted emission is ± 2.4 dB .

Test Result : Pass (Appendix A)

Conducted Test Placement : (Photographs)



P/S : Because the space is not large enough for taking photograph of rear side . Please refer to the radiated testing setup .

Chapter 3 Radiated emission test

Test condition and setup :

Pretest : Prior to the final test (OATS test), the EUT is placed in a shielded enclosure, GTEM, and scan from 30MHz to 1GHz. This is done to ensure the radiation is exactly emitted from the EUT.

Final test : Final radiation measurements is made on a open-field test site. The EUT is placed on a nonconductive table which is 0.8 m height, the top surface is 1.0 x 1.5 meter. All the placement is according to ANSI C63.4 - 1992.

The spectrum is examined from 30 MHz to 1000 MHz measured by HP spectrum.

The EMCO whole range Antenna is used to measure frequency from 30 MHz to 1GHz. The final test is used the spectrum HP 8594EM.

Measure more than six top marked frequencies generated from pretest by computer step by step at each frequency. The EUT is rotated 360 degrees, and antenna is raised and lowered from 1 to 4 meter to find the maximum emission levels. The antenna is used with both horizontal and vertical polarization.

Appropriated preamplifier which is made by TRC is used for improving sensitivity and precautions is taken to avoid overloading. The spectrum analyzer's 6dB bandwidth is set to 120 K Hz, and the EUT is measured at quasi-peak mode.

If the emission is close to the frequency band of ambience, the data will be rechecked by the tester and the corrected data will be written in the test data sheet. If the emission is just within the ambience, the data from GTEM will be taken as the final data.

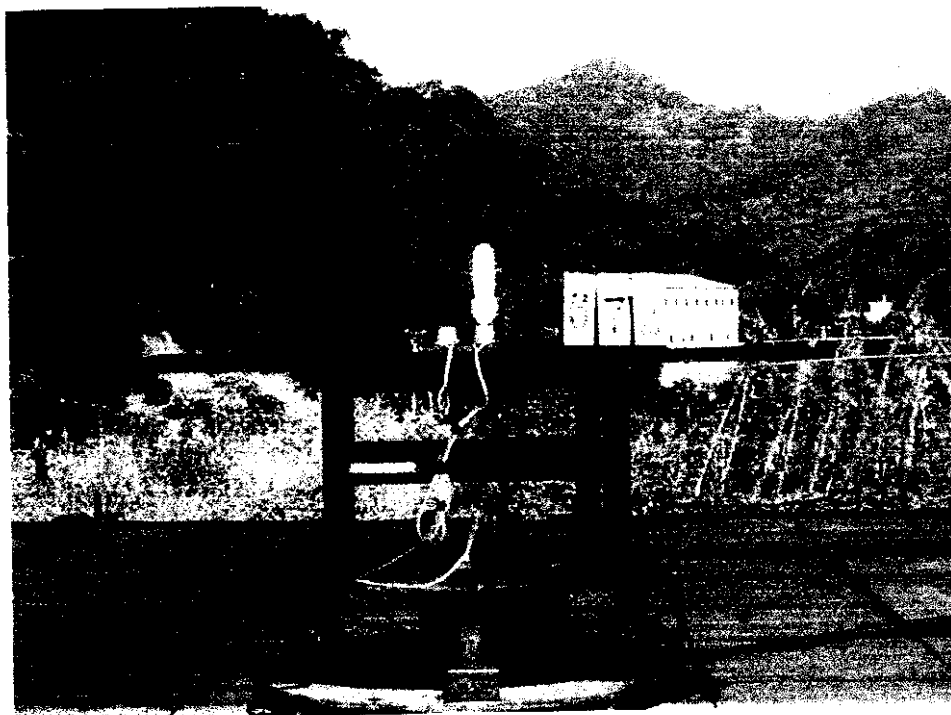
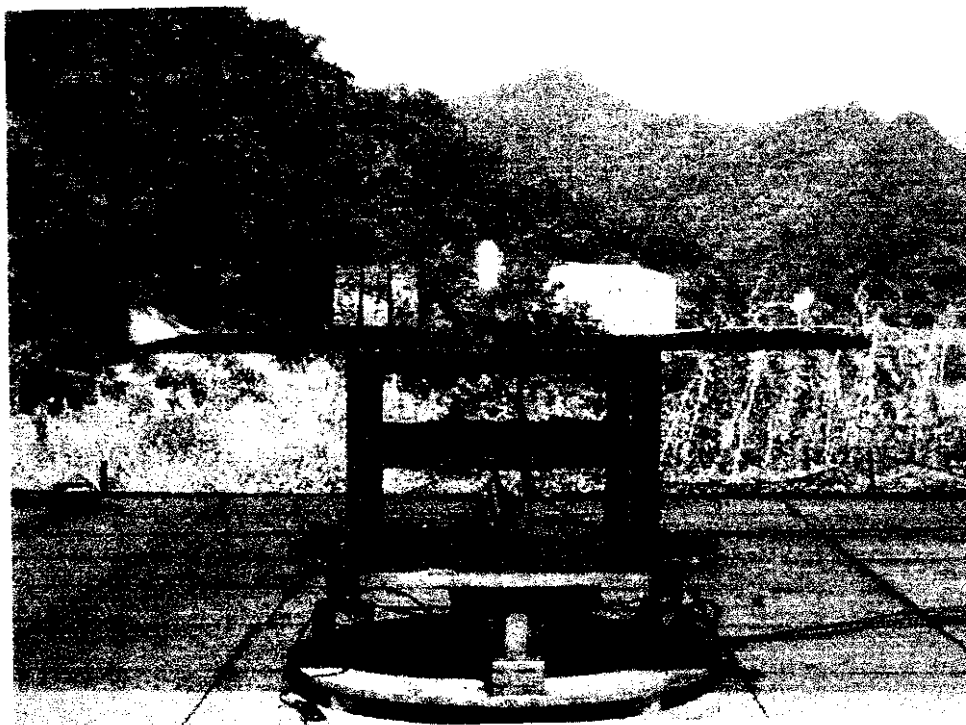
List of test Instrument :

Instrument name	Model No.	Brand	Serial No.	Calibration Date	
				Last	Next
Spectrum analyzer	8568B	H P	3004A18617	05/15/98	05/15/99
Quasi-peak Adapter	85650A	H P	2521A00984	05/15/98	05/15/99
RF Pre-selector	85685A	H P	2947A01011	05/15/98	05/15/99
Spectrum analyzer	8594EM	H P	3619A00198	08/07/97	08/07/98
Antenna(30M-2G Hz)	3142	EMCO	9610-1094	10/30/97	10/30/98
Open test side (Antenna, Amplify, cable calibrated together)				05/15/98	05/15/99

The level of confidence of 95%, the uncertainty of measurement of radiated emission is ± 4.96 dB.

Test Result : Pass (All emissions are under limit 20dB)

Radiated Test Placement : (Photographs)



Appendix A**Conducted Emission Test Result : (K315,B415)**

Testing room : Temperature : 25 ° C Humidity : 50 % RH

Line 1

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV/m)	Margin (dB)
0.451	39.27	48	-8.73
1.192	35.14	48	-12.86
2.673	36.39	48	-11.61
4.226	27.09	48	-20.91
4.965	25.33	48	-22.67
5.852	24.08	48	-23.92
6.443	22.89	48	-25.11
8.288	20.76	48	-27.24
9.689	20.48	48	-27.52
28.096	26.19	48	-21.81

Line 2

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV)	Margin (dB)
0.451	45.74	48	-2.26
2.155	33.53	48	-14.47
2.673	37.46	48	-10.54
4.226	26.86	48	-21.14
4.891	26.08	48	-21.92
5.704	24.12	48	-23.88
7.550	21.68	48	-26.32
8.362	21.05	48	-26.95
8.804	19.45	48	-28.55
28.096	26.00	48	-22.00

Conducted Emission Test Result : (K318, B418)**Line 1**

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV/m)	Margin (dB)
0.451	33.77	48	-14.23
1.710	30.99	48	-17.01
1.933	26.86	48	-21.14
2.673	24.69	48	-23.31
3.486	21.37	48	-26.63
7.845	19.15	48	-28.85
28.169	24.50	48	-23.50
28.899	22.86	48	-25.14

Line 2

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV)	Margin (dB)
0.525	32.36	48	-15.64
1.636	30.64	48	-17.36
2.451	28.46	48	-19.54
8.878	18.73	48	-29.27
11.236	18.01	48	-29.99
24.664	20.23	48	-27.77
27.440	20.63	48	-27.37
28.096	25.34	48	-22.66

Conducted Emission Test Result : (K320, B420)**Line 1**

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV/m)	Margin (dB)
0.451	29.30	48	-18.70
2.451	30.53	48	-17.47
2.673	28.86	48	-19.14
4.152	23.35	48	-24.65
5.630	21.01	48	-26.99
9.689	19.16	48	-28.84
22.030	17.99	48	-30.01
25.833	19.54	48	-28.46
28.096	25.36	48	-22.64
29.628	20.66	48	-27.34

Line 2

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV)	Margin (dB)
0.525	27.05	48	-20.95
2.155	29.08	48	-18.92
2.747	30.43	48	-17.57
3.708	22.41	48	-25.59
8.214	19.82	48	-28.18
11.899	17.89	48	-30.11
28.096	26.25	48	-21.75

Conducted Emission Test Result : (K323, B423)**Line 1**

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV/m)	Margin (dB)
0.451	29.46	48	-18.54
2.377	30.44	48	-17.56
2.747	30.37	48	-17.63
5.039	22.97	48	-25.03
5.778	21.77	48	-26.23
7.919	20.70	48	-27.30
24.518	19.19	48	-28.81
27.221	20.61	48	-27.39
28.096	28.80	48	-19.20

Line 2

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV)	Margin (dB)
0.451	29.30	48	-18.70
2.229	27.29	48	-20.71
2.673	25.63	48	-22.37
3.486	23.35	48	-24.65
4.891	22.32	48	-25.68
5.778	20.54	48	-27.46
20.053	17.84	48	-30.16
28.096	28.56	48	-19.44
29.409	23.17	48	-24.83

Conducted Emission Test Result : (K325,B425)**Line 1**

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV/m)	Margin (dB)
0.451	32.06	48	-15.94
1.933	23.43	48	-24.57
11.531	17.64	48	-30.36
28.096	24.42	48	-23.58
29.555	23.03	48	-24.97

Line 2

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV)	Margin (dB)
0.451	32.02	48	-15.98
1.488	23.86	48	-24.14
2.229	22.28	48	-25.72
25.906	20.50	48	-27.50
26.491	21.43	48	-26.57
28.096	29.04	48	-18.96
29.555	23.65	48	-24.35

Conducted Emission Test Result : (K327, B427)***Line 1***

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV/m)	Margin (dB)
0.451	34.07	48	-13.93
2.525	33.34	48	-14.66
2.747	30.77	48	-17.23
3.486	25.23	48	-22.77
4.152	22.73	48	-25.27
5.409	21.56	48	-26.44
6.369	21.18	48	-26.82
25.468	20.26	48	-27.74
26.272	22.89	48	-25.11
28.169	24.66	48	-23.34

Line 2

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV)	Margin (dB)
0.525	32.01	48	-15.99
2.451	31.70	48	-16.30
2.673	29.82	48	-18.18
4.152	22.88	48	-25.12
6.886	22.29	48	-25.71
12.562	17.05	48	-30.95
23.787	18.65	48	-29.35
25.979	20.46	48	-27.54
26.491	22.33	48	-25.67
28.169	25.12	48	-22.88

Final statement :

This test report, measurements made by TRC are traceable to the NIST.