

Report No.

N0618673

Specifications
Test Method

FCC Part 18 - Certification
ANSI C63.4 1992

Applicant
address

FLAT 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 LAMP
K409, GK409 (Sample # N06673)

Results
Sample received
date

As detailed within this report
07 / 07 / 1998 (month / day / year)

Prepared by

project engineer

Authorized by

Vice General Manager

Issue date

(Jacob Lin)

(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 nay agency of U.S. Government.

★ FCC ID : L2ALC50915

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 two EUTs in this report . They are the same in 9W and GK409 with glass cap but K409 not . 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. : K409,GK409, 09 means W . G means with glass clap . For example, GK409 means 9W with glass clap .

Connection of EUT :

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

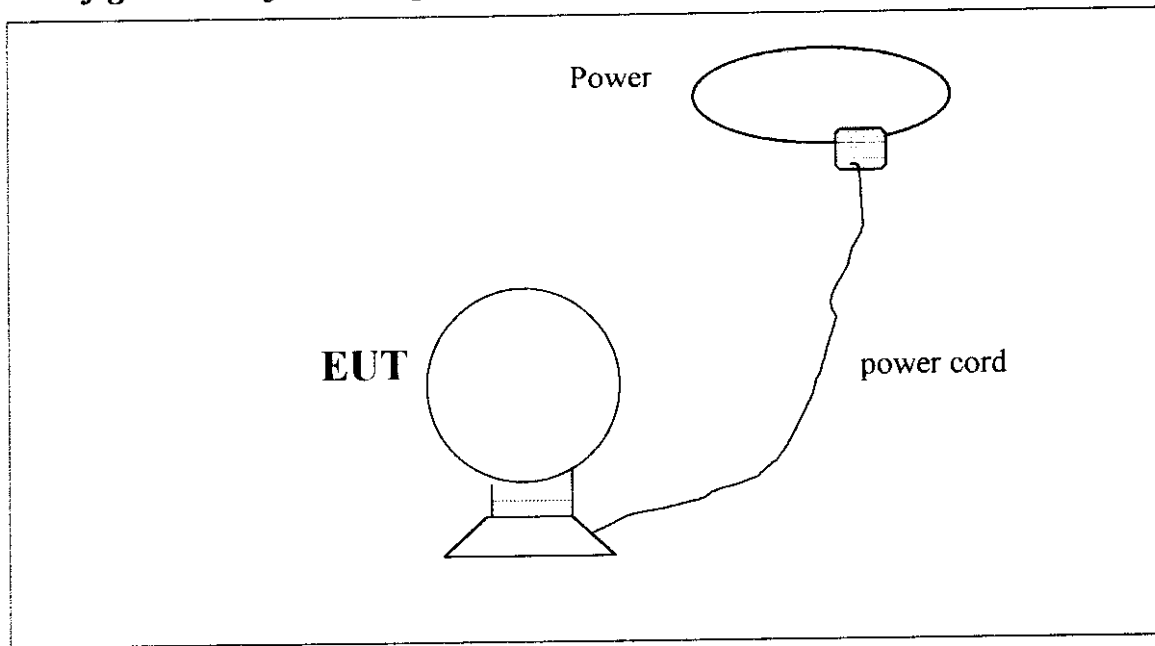
Test method :

Plug the power cord and make the lamp lights-up. The conducted and radiated of test result of K409 is the same as GK409. So one test data be shown in this report .

(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)

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.	<u>Calibration Date</u>	
				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)

Appendix A

Conducted Emission Test Result :

Testing room : Temperature : 24 ° C Humidity : 51 % RH

Line 1

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV/m)	Margin (dB)
0.451	38.92	48	-9.08
1.266	30.75	48	-17.25
2.007	25.55	48	-22.45
2.673	22.60	48	-25.40
3.412	20.33	48	-27.67
24.591	19.20	48	-28.80
28.096	27.83	48	-20.17
29.409	20.93	48	-27.07

Line 2

Frequency (MHz)	Amplitude (dBuV)	Limit (dBuV)	Margin (dB)
0.451	39.34	48	-8.66
1.488	29.40	48	-18.60
1.933	24.23	48	-23.77
2.747	20.81	48	-27.19
10.942	17.73	48	-30.27
28.096	26.60	48	-21.40
29.045	23.36	48	-24.64

Final statement :

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