

**Application for FCC Identifier**  
On Behalf of

**KWANGZHOU BEAUTY SHADOW LAMP EQUIPMENT CO., LTD.**

**(FCC ID RRHBEAUTYLIGHT)**

**Summary**

The equipment comply with the requirements according to the following standard(s):

47CFR Part 18: Industrial, Scientific, and Medical Equipment

FCC/OET MP-5 (1986): FCC Methods of Measurements of Radio Noise Emissions From Industrial, Scientific, and Medical Equipment

ANSI C63.4 (2003): American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40GHz.

**Description**

The appliances were tested by *QuiTek Corporation* and found compliance with relevant requirements described in FCC Part 18 RF Lighting Device.

Test results are contained in this test report and Intertek Testing Services ETL SEMKO Shanghai Limited is assumed full responsibility for the accuracy and completeness of these measurements.

The test report applies to tested samples only and shall not be reproduced in part without written approval of Intertek Testing Services ETL SEMKO Shanghai Limited.

Date of Test: October 30, 2003

Date of Issue: February 19, 2004

Prepared by:

Report Approved by:



Tino Pan (Projector Engineer)



Steve Li (EMC Manager)

**FCC ID RRHBEAUTYLIGHT**

## **Description of Test Facility**

Name of Firm : QuieTek Corporation.  
Site Location : 716 Yi Shan Road Shanghai City,  
China

Name of contact : Mr. Hall (first name) Wang (last name)

Phone : 86-21-64700066EXT201

Fax : 86-21-64514252

E-mail address : hall\_wang@hotmail.com

Registration Code : 142171

## CONTENTS

<b>Summary .....</b>	<b>1</b>
<b>Description .....</b>	<b>1</b>
<b>Description of Test Facility .....</b>	<b>2</b>
<b>1.Applicant Information .....</b>	<b>4</b>
<b>2.Information of Equipment Under Test (EUT).....</b>	<b>4</b>
2.1 Identification of the EUT .....	4
2.2 Additional information about the EUT .....	4
2.3 Peripheral equipment .....	5
<b>3. Conducted Powerline Measurement.....</b>	<b>6</b>
3.1 Conduction Limit .....	6
3.2 Instruments List.....	6
3.3 Test Setup.....	7
3.4 Test Configuration .....	7
3.5 Test Procedure.....	8
3.6 Test Results .....	8
3.7 Measurement Uncertainty.....	10
<b>4. Conducted Powerline Calculation.....</b>	<b>11</b>

## 1.Applicant Information

Applicant : KWANGZHOU BEAUTY SHADOW LAMP EQUIPMENT CO., LTD.  
No.2 Building 1, Xin Shi Road, Xin Ke Village, Xin Shi Town, Bai Yun District, Guangzhou City, P.R.China

Manufacturer: KWANGZHOU BEAUTY SHADOW LAMP EQUIPMENT CO., LTD.  
No.2 Building 1, Xin Shi Road, Xin Ke Village, Xin Shi Town, Bai Yun District, Guangzhou City, P.R.China

Country of origin: P.R. China

Name of contact: Mr. Ye (first name) Zuling (last name)

Telephone: 86-20-86097831

Telefax: 86-20-86097913

## 2.Information of Equipment Under Test (EUT)

### 2.1 Identification of the EUT

Equipment: Compact Fluorescent Lamp

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

Type/model:

Serial number: 031008-20-008, 031008-20-006, 031008-20-010, 031008-20-009

Date of sample receipt 2003-10-29

Date of test 2003-10-30

Rating: 120V~, 60Hz  
28W for 4UELM-00, 28W for SELM-00  
15W for 3UELM-08-15, 20W for 3UELM-08-20

### 2.2 Additional information about the EUT

The family of product contains 4 models, which were described above. They are the same in schematic diagram, difference between them are their appearance and rating.

Internal clock frequencies or other used frequencies: None

The tests have been performed on the EUT provided with the following modification: None

### **2.3 Peripheral equipment**

None

### 3. Conducted Powerline Measurement

#### 3.1 Conduction Limit

For Consumer Equipment

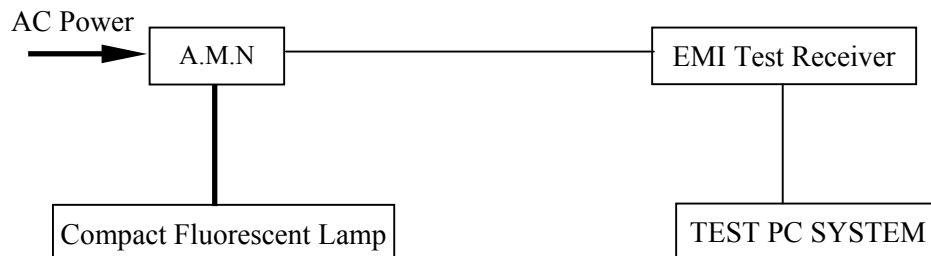
Frequency (MHz)	Maximum RF line voltage measured with a 50uH/50 ohm LISN	
	( $\mu$ V)	dB( $\mu$ V)
0.45 – 2.51	250	48
2.51 – 3.0	3000	69.5
3.0 – 30	250	48
RF Line Voltage dB( $\mu$ V) = 20 lg RF Line Voltage ( $\mu$ V)		



#### 3.2 Instruments List

The following instruments were used during the measurement of RF voltage conducted back into the power lines.

Item	Equipment	Manu.	Type	Serials no.	Last Cal.	Cal. Interval
1	EMI Test Receiver	Rohde & Schwarz	ESCS30	100070	Aug 28, 03	1 Year
2	A.M.N	Rohde & Schwarz	ESH3-Z5	100211	June 08, 03	1 Year

### 3.3 Test Setup



Note:  means “power line”  
 means “signal line”

### 3.4 Test Configuration

The Conducted Powerline Measurement was proceeded in a shielded room.

The EUT was connected to AC power source through an Linear Impedance Stability Network (L.I.S.N.). which provides a 50 ohm, standardized RF impedance for the measuring equipment.

The EUT was placed 40 centimeters from the wall of the earthed shielded room, which was considered as Ground Reference Plane(GRP), and kept at least 80 centimeters from any other earthed conducting surface.

The EUT was placed at a distance of 80 centimeters from the L.I.S.N.’s, and connected thereto by a unshielded lead of 1 meter in length.

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 measurement.

The frequency range from 450 kHz to 30 MHz was checked.

The bandwidth of Test Receiver ESCS 30 was set at 10 kHz.

During measurement, EUT was set at “LIGHTING ON” mode.

Test Results were listed in sec. 3.6.

### 3.5 Test Procedure

- 3.5.1 Establish the test setup as sec. 3.3.
- 3.5.2 Lighting on the EUT to its stable operation.
- 3.5.3 Proceed the measurement.

### 3.6 Test Results

☒ Pass ☐ Fail

#### 3.6.1 Measurement environment

Temperature : 22.9 °C

Relative Humidity : 46.7 %

#### 3.6.2 Test Personnel

Name: Hall Wang Title: Supervisor

Tel: 86-21-64700066EXT201

Fax: 86-21-64514252

E-mail address: [hall\\_wang@hotmail.com](mailto:hall_wang@hotmail.com)

#### 3.6.3 Data table

All emissions not listed below are too low against the prescribed limits.

**Emission level = Reading level + Factor**

Since the test software will automatically add factor to the reading level, only the emission level was listed in the test report. The highest six points were chose automatically through software by its compare the pre-scanned graph to the limit.



**Model : SELM-00**

Test Line	Frequency (MHz)	Reading Level dB(μV)	Factor dB	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.481599	30.3	10.1	40.40	48.00	7.6
	0.629281	28.9	10.1	39.00	48.00	9.0
	0.712180	29.9	10.1	40.00	48.00	8.0
VB	<b>0.644535</b>	<b>31.0</b>	<b>10.1</b>	<b>41.10</b>	<b>48.00</b>	<b>6.9</b>
	0.842181	29.2	10.2	39.40	48.00	8.6
	2.349468	25.3	10.4	35.70	48.00	12.3

Note:

1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.644535 MHz with emission level 41.10 dBμV, at line VB.
3. Emission Level = Reading Level + Factor

**Model : 4UELM-00**

Test Line	Frequency (MHz)	Reading Level dB(μV)	Factor dB	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.511318	30.1	10.1	40.20	48.00	7.8
	0.558255	26.2	10.1	36.30	48.00	11.7
	0.599846	28.6	10.1	38.70	48.00	9.3
VB	0.673469	30.5	10.1	40.60	48.00	7.4
	<b>0.765238</b>	<b>30.6</b>	<b>10.2</b>	<b>40.80</b>	<b>48.00</b>	<b>7.2</b>
	0.809223	29.6	10.2	39.80	48.00	8.2

Note:

1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.765238 MHz with emission level 40.80 dBμV, at line VB.
3. Emission Level = Reading Level + Factor

**Model : 3UELM-08-15**

Test Line	Frequency (MHz)	Reading Level dB(μV)	Factor dB	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.464603	24.3	10.1	34.40	48.00	13.6
	0.866047	22.7	10.2	32.90	48.00	15.1
	1.061600	19.0	10.2	29.20	48.00	18.8
VB	<b>0.489351</b>	<b>26.0</b>	<b>10.1</b>	<b>36.10</b>	<b>48.00</b>	<b>11.9</b>
	0.703701	20.9	10.1	31.00	48.00	17.0
	1.707154	19.0	10.3	29.30	48.00	18.7

Note:

1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.489351 MHz with emission level 36.10 dBμV, at line VB.
3. Emission Level = Reading Level + Factor

**Model : 3UELM-08-20**

Test Line	Frequency (MHz)	Reading Level dB(μV)	Factor dB	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
VA	0.511318	29.0	10.1	39.10	48.00	8.9
	0.587992	25.5	10.1	35.60	48.00	12.4
	0.723643	28.0	10.1	38.10	48.00	9.9
VB	<b>0.551610</b>	<b>29.9</b>	<b>10.1</b>	<b>40.00</b>	<b>48.00</b>	<b>8.0</b>
	0.747126	27.2	10.1	37.30	48.00	10.7
	0.876481	28.5	10.2	38.70	48.00	9.3

Note:

4. All data listed are Quasi-Peak value.
5. The worst emission was founded at 0.467 MHz with emission level 47.03 dBμV, at line VA.
6. Emission Level = Reading Level + Factor

Test Engineer:

JiKai Xu  
JiKai Xu

Date of test: 2003-10-30

### 3.7 Measurement Uncertainty

Measurement uncertainty of conducted power line test is 3.34dB

The measurement uncertainty is given with a confidence of 95%

#### 4. Conducted Powerline Calculation

The emission level of the conducted power line is calculated by adding Factor to Reading Level. The basic equation with a sample calculation is as follows:

$$EL = RL + F$$

Where EL= Emission Level

RL= Reading Level

F= Factor

$$dB (\mu V) = 20\log(\mu V)$$

**Example 1: @ 0.644535 MHz**

The limit of Part 18 RF lighting devices =  $250 \mu V = 48 \text{ dB } (\mu V)$

Reading Level =  $31.0 \text{ dB } (\mu V)$

Factor =  $10.1 \text{ dB}$

So EL (Emission Level) =  $31.0 + 10.1 = 41.10 \text{ dB } (\mu V)$

Margin =  $48 - 41.10 = 6.90 \text{ dB}$

The Emission Level at this frequency is 6.90 dB below the limit.