

INTERTEK TESTING SERVICES

MEASUREMENT/TECHNICAL REPORT

New Creation Technology Ltd. - MODEL: 20201 and 20204
FCC ID: NXS1200

June 6, 1998

This report concerns (check one:) Original Grant X Class II Change _____

Equipment Type: RF Lighting (example: computer, printer, modem, etc.)

Deferred grant requested per 47 CFR 0.457(d)(1)(ii)? Yes _____ No X

If yes, defer until: _____
date

Company Name agrees to notify the Commission by: _____
date

of the intended date of announcement of the product so that the grant can be issued on that date.

Report prepared by:

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EXHIBIT 1

GENERAL DESCRIPTION

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1.0 **General Description**

1.1 Product Description

The equipment under test (EUT) is a ballasted floor lamp with model numbers: 20201 (incorporates electronic ballast model 907-55 with power 55W) and 20204 (incorporates electronic ballast model 907-38 with power 38W). The two electronic ballasts are identical except the output power. Both models are tested, only the worst case of the result is reported. The EUT is powered by AC mains. There is only one control switch on the EUT. The following page shows the technical description and the outlook of the EUT.

1.2 Related Submittal(s) Grants

This is a single application of a Consumer RF lighting device.

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1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in MP-5. All measurements were performed in Open Area Test Sites. Preliminary scans were performed in the Open Area Test Sites only to determine worst case modes. For each scan, the procedure for maximizing emissions in Section 5 and 6 were followed. All Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application.

1.4 Test Facility

The open area test site and conducted measurement facility used to collect the emission data is located at Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong. This test facility and site measurement data have been fully placed on file with the FCC.

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1.5 Equipment List

1) Radiated Emissions Test for FCC Part 18

Equipment	Registration No.	Manufacturer	Model No.	Serial No.	Calibration Due Date
Loop Antenna	EI034	EMCO	6502	9206-2706	August 1998
EMI Test Receiver	EI-135	R&S	ESVS30	842807/001	November 1998
Biconical Antenna	EI-088	CDI	B100 B200 B300	3098 3112 3118	December 1998
EMI Test Receiver	EI-025	R&S	ESHS30	827128/009	December 1998

2) Disturbance Voltage Tests for FCC Part 18

Equipment	Registration No.	Manufacturer	Model No.	Serial No.	Calibration Due Date
EMI Test Receiver	EI-135	R&S	ESVS30	842807/001	November 1998
Absorbing Clamp	EI-128	R&S	MDS21	840031/001	November 1998
LISN	EI-130	R&S	ESH3-Z5	840731/013	February 1999

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EXHIBIT 2

SYSTEM TEST CONFIGURATION

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2.0 System Test Configuration

2.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in MP-5.

The EUT was powered from AC mains.

For maximizing emissions, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. This step by step procedure for maximizing emissions led to the data reported in Exhibit 3.0.

The unit was operated standalone and placed in the center of the turntable.

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). The EUT was placed on a rotatable platform which was less than 0.5 meters above ground level.

2.2 EUT Exercising Software

There was no special software to exercise the device. Once the EUT is turned on, it emits the RF noise.

2.3 Special Accessories

There are no special accessories necessary for compliance of this product.

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2.4 Equipment Modification

Any modifications installed previous to testing by New Creation Technology Ltd. will be incorporated in each production model sold/leased in the United States.

No modifications were installed by Intertek Testing Services.

2.5 Support Equipment List and Description

This product was tested in a standalone configuration.

All the items listed under section 2.0 of this report are

Confirmed by:

*C. K. Lam
Assistant Manager
Intertek Testing Services
Agent for New Creation Technology Ltd*

 Signature

 Date

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EXHIBIT 3

EMISSION RESULTS

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3.0 Emission Results

Data is included worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

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3.1 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

$$FS = RA + AF + CF - AG + PD + AV$$

where FS = Field Strength in dB μ V/m

RA = Receiver Amplitude (including preamplifier) in dB μ V

CF = Cable Attenuation Factor in dB

AF = Antenna Factor in dB

AG = Amplifier Gain in dB

PD = Pulse Desensitization in dB

AV = Average Factor in -dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

$$FS = RA + AF + CF - AG + PD + AV$$

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3.1 Field Strength Calculation (cont)

Example

Assume a receiver reading of 62.0 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

$$RA = 62.0 \text{ dB}\mu\text{V}$$

$$AF = 7.4 \text{ dB}$$

$$CF = 1.6 \text{ dB}$$

$$AG = 29.0 \text{ dB}$$

$$PD = 0 \text{ dB}$$

$$AV = -10 \text{ dB}$$

$$FS = 62 + 7.4 + 1.6 - 29 + 0 + (-10) = 32 \text{ dB}\mu\text{V/m}$$

$$\text{Level in mV/m} = \text{Common Antilogarithm} [(32 \text{ dB}\mu\text{V/m})/20] = 39.8 \mu\text{V/m}$$

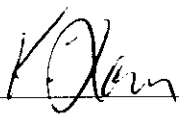
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3.3 Radiated Emission Data

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Judgement: Passed

TEST PERSONNEL:



Signature

Kenneth H. M. Lam, Compliance Engineer
Typed/Printed Name

June 3, 1998

Date

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Company: New Creation Technology Ltd.
Model: 20201

Date of Test: May 13, 1998

Table 1

Radiated Emissions

Polarity	Frequency (MHz)	Reading (dB μ V)	Antenna Factor (dB)	Pre- Amp Gain (dB)	Average Factor (-dB)	Net at 30m (dB μ V/m)	Limit at 30m (dB μ V/m)	Margin (dB)
No radiated emissions were detected above the measuring equipment noise floor, which is at least 20 dB below the applicable limits.								

- Notes:
1. Peak Detector Data unless otherwise stated.
 2. All measurements were made at 3 meter. Harmonic emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
 3. Negative value in the margin column shows emission below limit.
 4. An active loop antenna is used during test.

Test Engineer: Kenneth H. M. Lam

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Company: New Creation Technology Ltd.
Model: 20201

Date of Test: May 13, 1998

Graph 1

Conducted Emissions
Section 18.307 Requirements

Report No.: 9803496

Tested By: Hong, Report No.: 9803496

Scan Settings: 1. Range

Frequency			Perceiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamplifier	OpRge
400K	30M	5K	10K	PK	None	AMTO	DB OFF	60dB

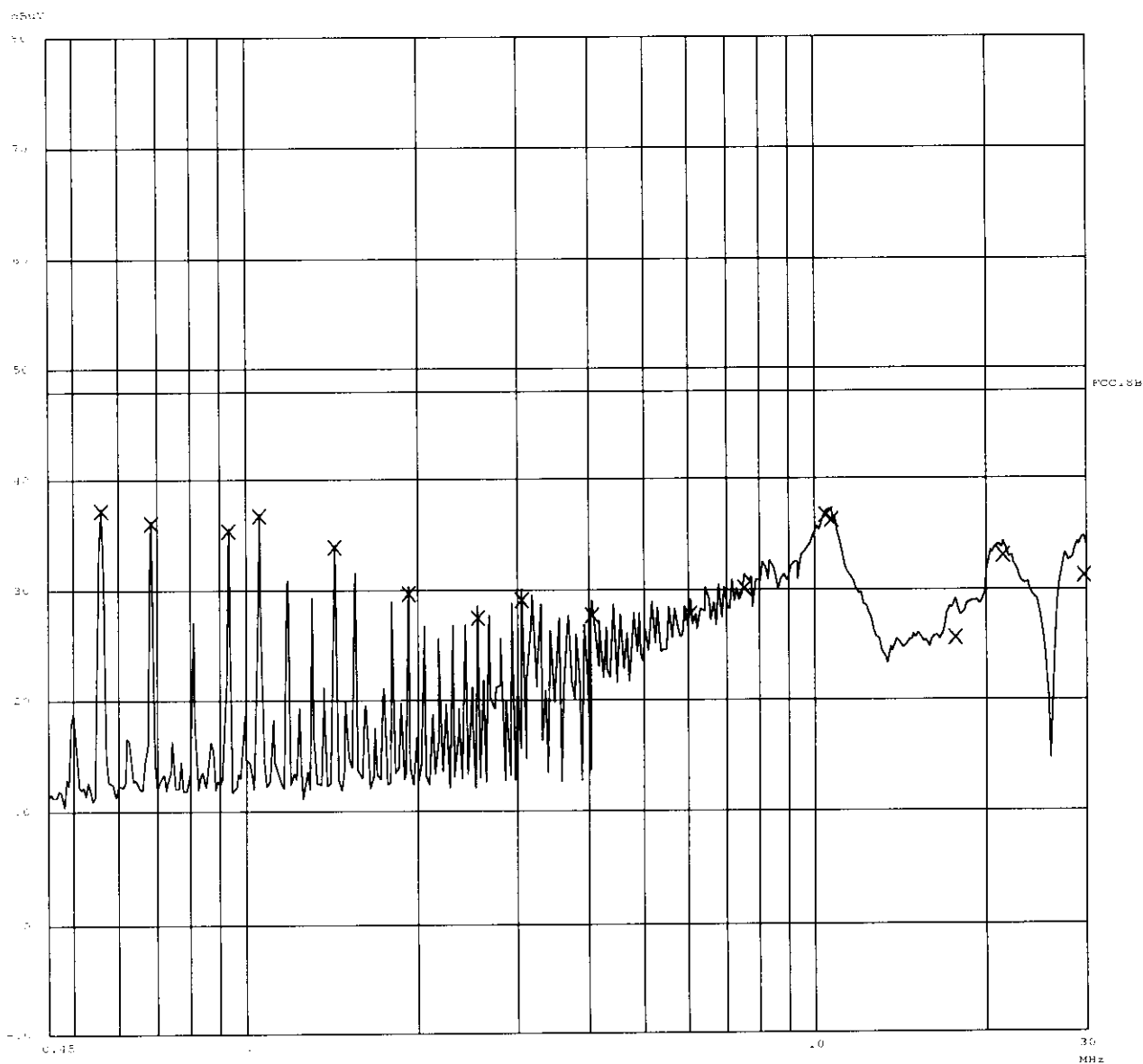
Final Measurement: X QP

Meas Time: 1 s

Subranges: 16

Avg Margin: 20dB

Transducer No.	Start	Stop	Name
2	9K	30M	E1078



PAGE 1

Ctrl. No.: N/A

FCC ID: NXS1200

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Company: New Creation Technology Ltd.
Model: 20201

Date of Test: May 13, 1998

Table 2

**Conducted Emissions
Section 18.307 Requirements**

Report No.: 9803496

Tested By: Hong, Report No.: 9803496

Scan Settings (1 Range)

|----- Frequencies -----|----- Receiver Settings -----|

Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
450k	30M	5k	10k	PK	20ms	AUTO	LN OFF	60dB

Final Measurement Results:

Frequency MHz	QP Level dBuV	QP Limit dBuV
0.56000	37.1	48.0
0.68500	36.0	48.0
0.93500	35.3	48.0
1.06000	36.6	48.0
1.43000	33.8	48.0
1.93000	29.6	48.0
2.55000	27.4	48.0
3.05000	29.0	48.0
4.05000	27.7	48.0
6.04000	27.8	48.0
7.53000	30.1	48.0
10.47000	36.7	48.0
10.71000	36.2	48.0
17.66500	25.6	48.0
21.44500	33.0	48.0
29.76500	31.2	48.0

* limit exceeded

Ctrl. No.: N/A

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3.5 Line Conducted Emission Configuration Data

The data on the following page lists the significant emission frequencies, the limit, and the margin of compliance. Numbers with a minus sign are below the limit.

Judgement: Passed by 10.9 dB

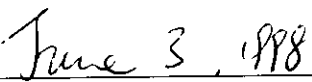
* All readings are peak unless stated otherwise.

TEST PERSONNEL:



Signature

Kenneth H. M. Lam, Compliance Engineer
Typed/Printed Name



Date

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EXHIBIT 4

EQUIPMENT PHOTOGRAPHS

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4.0 Equipment Photographs

Photographs of the tested EUT are attached.

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EXHIBIT 6

TECHNICAL SPECIFICATIONS

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6.0 Technical Specifications

The transmitter block diagram and schematics of the Low Power Transmitter are attached.