

TEST REPORT

Report Number: 100103739ATL-002

April 30, 2010

Product Designation: AACMR16WW60

Standard: CFR, Title 47, Chapter I, Part 15 Subpart B (USA)
ICES-003, Issue 4, 2004 (Canada)

Tested by:

Intertek Testing Services NA Inc.
1950 Evergreen Blvd., Suite 100
Duluth, GA 30096

Client:

Nexus Lighting, Inc
124 Floyd Smith Drive
Charlotte, NC 28262
Contact: Geoffrey Gibbs
Phone: 704.405.9758

Tests performed by:



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Report reviewed by:



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1.0 Introduction and Conclusion

The tests indicated in section 2.0 were performed on the product constructed as described in section 3.0. The remaining test sections are the verbatim text from the actual data sheets used during the investigation. These test sections include the test name, the specified test Method, a list of the actual Test Equipment Used, documentation Photos, Results and raw Data. No additions, deviations, or exclusions have been made from the standard(s) unless specifically noted.

Based on the results of our investigation, we have concluded the product tested complies with the requirements of the standard(s) indicated. The results obtained in this test report pertain only to the item(s) tested.

2.0 Test Summary

Section	Test Full Name	Test Date	Result
4.0	System setup including cable interconnection details, support equipment and simplified block diagram. (System Setup)		PASS
5.0	Conducted emissions on AC power lines (Conducted Emissions)	04/29/2010	PASS

3.0 Description of Equipment Under Test

Equipment Under Test			
Description	Manufacturer	Model Number	Serial Number
MR16 LED	Nexus Lighting, Inc	AACMR16WW60	Not labeled

EUT receive date:	4-27-2010
EUT receive condition:	Production

Description of EUT provided by Client:

The AACMR16WWR is a bi-pin (base GU5.3) MR16 type LED intended for domestic use.

Description of EUT exercising:

The AACMR16WW60 LED operates at 12VAC with a current draw of 3.3watts. Its internal clock is 120 Hz. EUT was at full illumination.

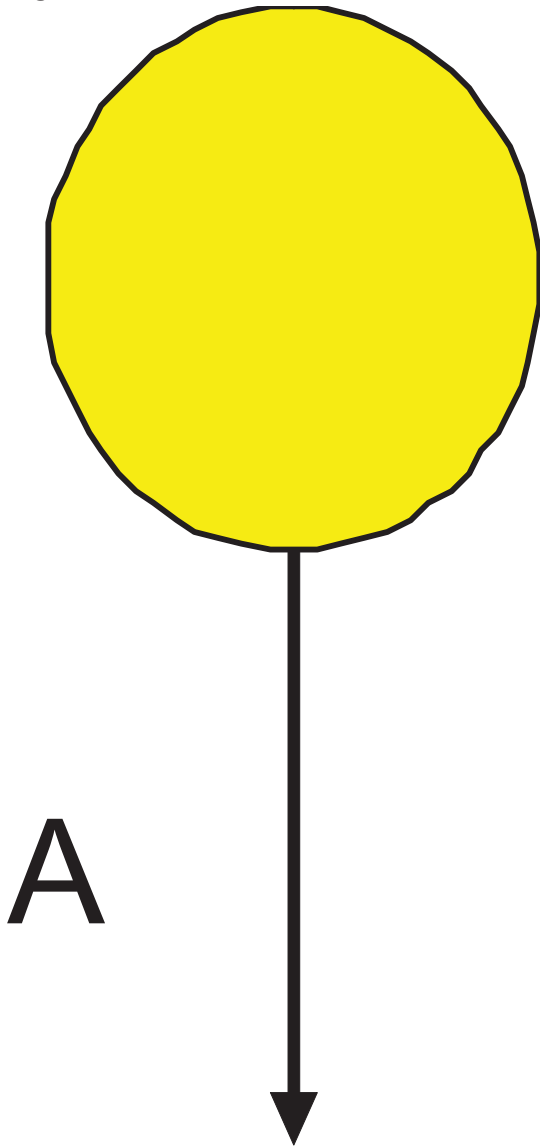
4.0 System setup including cable interconnection details, support equipment and simplified block diagram. (System Setup)

Method:

Record the details of EUTcabling, document the support equipment, and show the interconnections in a block diagram.

Results: The sample tested was found to Comply.

Drawing:



Block diagram

4.0 System setup including cable interconnection details, support equipment and simplified block diagram. (System Setup)

Data:

EUT Cabling						
ID	Description	Length	Shielding	Ferrites	Connection	
					From	To
A	AC Power Cord	1.5m	no	no	AC Source	EUT

Support Equipment			
Description	Manufacturer	Model Number	Serial Number
None			

5.0 Conducted emissions on AC power lines (Conducted Emissions)

Method:

Equipment setup for conducted disturbance tests shall follow the guidelines of ANSI C63.4:2003, EN 55022:1998 +A1:2000 +A2:2003, AS/NZS CISPR22: 2002 and VCCI V-3 / 2007.04.

Measurements in the frequency range of 150kHz to 30 MHz shall be performed with a quasi-peak or average detector instrument that meets the requirements of Section One of CISPR 16. An AMN shall be used to provide a defined impedance at high frequencies across the power feed at the point of measurement of terminal voltage and also to provide isolation of the circuit under test from the ambient noise on the power lines. An AMN defined in CISPR 16 shall be used.

In the frequency range of 150 kHz to 30 MHz, a resolution/video bandwidth of 9kHz/30kHz or greater shall be used.

The EUT shall be located so that the distance between the boundary of the EUT and the closest surface of the AMN is 0.8m.

If a flexible mains cord is provided by the manufacturer that is in excess of 1m, the excess cable shall be folded back and forth as far as possible to form a bundle not exceeding 0.4m in length.

The EUT shall be arranged and connected with cables terminated in accordance with the product specification.

Conducted disturbance shall be measured between each current carrying conductor and the reference ground. Each measured values shall be reported.

If EUT is intended for tabletop use, the EUT shall be placed on a table whose top is 0.8m above the ground plane. A vertical, metal reference plane is placed 0.4m from the EUT. The vertical metal reference-plane is at least 2m by 2m. The EUT shall be kept at least 0.8m from any other metal surface or other ground plane not being part of the EUT. The table shall be constructed of non-conductive materials. Its dimensions are at least 1m by 1.5m, but may be extended for larger EUT.

If EUT is floor standing, the floor standing EUT shall be placed on a horizontal metal ground plane and isolated from the ground plane by up to 12 mm of insulating material. The metal ground plane shall extend at least 0.5m beyond the boundaries of the EUT and had minimum dimensions of 2m by 2m.

TEST SITE

The test site for conducted emissions is located at 1950 Evergreen Blvd, Suite 100, Duluth, Georgia 30096. The VCCI Registration Number for this site is C-2818.

MEASUREMENT UNCERTAINTY

Compliance of the product is based on the measured value. However, the measurement uncertainty is included for informational purposes. The values given are the measurement uncertainty values with an expanded uncertainty of k=2.

150 kHz to 30 MHz: +/- 2.8 dB

Test Equipment Used:

Description:	Manufacturer:	Model:	Asset Number:	Cal Date:	Cal Due:
240V Variac	Staco	3PN2520B	211668	VBU	VBU
Cable E11, <18GHz	Huber-Suhner	Sucoflex 104PEA	E11 211266	06/19/2009	06/19/2010
EMI Receiver	Hewlett Packard	8546A	211505	02/02/2010	02/02/2011
EMI Receiver, Preselector section	Hewlett Packard	85460A	015762	02/02/2010	02/02/2011
Excel spreadsheet for conducted emissions tests	Software	Excel - CE Worksh	SW002	12/09/2009	12/09/2010
LISN	Solar Electronics	8012-50-R-24-BNC	213032	12/23/2009	12/23/2010
Multimeter	Fluke	87	213047	11/16/2009	11/16/2010
Tile - software profile for radiated and conducted emissions testing.	Software	Tile - Emissions	SW006	12/09/2009	12/09/2010

Results: The sample tested was found to Comply.

5.0 Conducted emissions on AC power lines (Conducted Emissions)

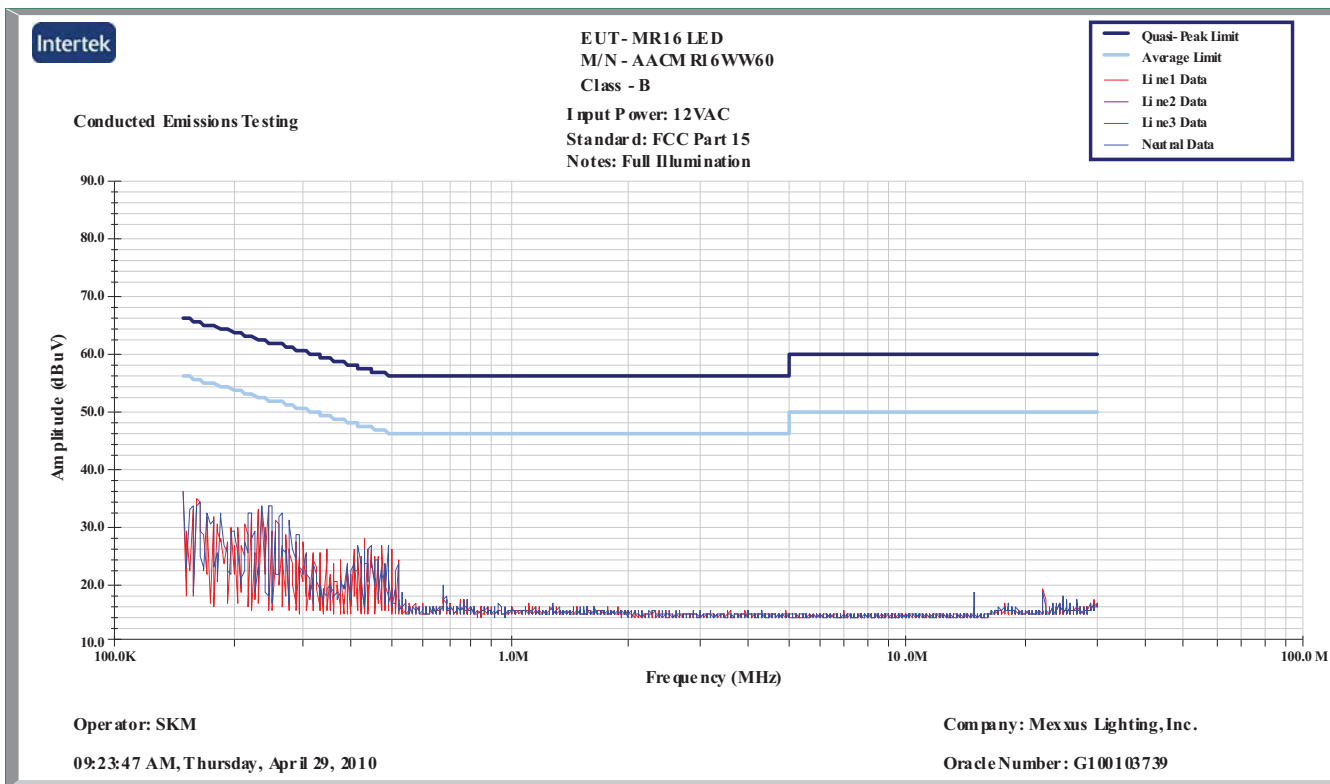
Photo:



Test set up

5.0 Conducted emissions on AC power lines (Conducted Emissions)

Plot:



Scan plot

5.0 Conducted emissions on AC power lines (Conducted Emissions)

Data:

Client: Nexxus Lighting, Inc.

Model Number: AACMR16WW60

Project Number: G100103739

Tested By: SKM

Date: 4-29-2010

Frequency Range (MHz): 0150 to 30

Input power: 12VAC

Receiver: HP 8546A

Cables: E11

LISN 1: 213032 Line 1

LISN 2: 213032 Line 2

Limit: CISPR Class B

Modifications for compliance (y/n): n

A	B	C	D	E	F	G	H	I
LISN Number 1,2	Detector (P, QP, A)	Frequency MHz	Reading dBuV	Cable Loss dB	LISN Ins. Loss dB	Net dBuV	Limit dBuV	Margin dB
EUT operates @ 12VAC								
1	P	0.151	29.9	0.6	0.5	31.0	56.0	-25.0
1	P	0.236	28.3	0.6	0.3	29.2	52.3	-23.1
1	P	0.426	23.2	0.6	0.1	23.9	47.3	-23.4
2	P	0.151	30.3	0.6	1.3	32.2	56.0	-23.8
2	P	0.238	27.9	0.6	1.0	29.5	52.3	-22.8
2	P	0.459	23.0	0.6	0.5	24.1	46.8	-22.7
Calculations		G=D+E+F		I=G-H				

Note: Peak measurements are compared to the average limit.