

FCC TEST REPORT

On Model Name: T8-T5 Converter Fitting

Model Number: 120V-T5-23WHEB,240V-T5-23WHEB,
277V-T5-23WHEB

Brand Name: LM (Light Master)

FCC ID Number: PPT277T5LAMP

Prepared for ACL Marketing Ltd

According to FCC 47 CFR Part 18(2012)

Test Report #: ACL-1205-10824-FCC

Tested by: Seniorine ECMG
Engineer Company Name

Reviewed by: Jamerynn ECMG
Senior Engineer Company Name

QC Manager: Swall Zhang ECMG
QC Manager Company Name

Test Report Released by: Swall Zhang September 19th, 2012
Swall Zhang Date

Test Location

Tests performed in a Certified ANSI Semi-Anechoic Chamber and Shielded Room.

Test Site Location (1):

Shenzhen Academy of Metrology and quality Inspection.

Bldg. of Metrology & Quality Inspection, Longzhu Road, Nanshan District, Shenzhen, Guangdong, China.

Tel: (86)-755-26941599

Fax: (86)-755-26941615

Test Facility

The test facility was recognized, certified, or accredited by the following organizations:

CNAL- LAB Code: L0579

SMQ EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of Testing Laboratories.

FCC -Registration No.: 979748

SMQ EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC was maintained in our files.

Tests performed in a Certified ANSI Semi-Anechoic Chamber and Shielded Room.

Test Site Location (2): NTEK Testing Technology Co.,Ltd.

*Fenda Science Park, Sanwei
Community, Xixiang Street, Bao'an*

Tel: (86)-755-61156588

Fax: (86)-755-61156599

Test Facility

The test facility was recognized, certified, or accredited by the following organizations:

CNAL- LAB Code: L5516

NTEK EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of Testing Laboratories.

FCC -Registration No.: 238937

NTEK EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC was maintained in our files.

List of Attached Files

<i>Exhibit Type</i>	<i>File Description</i>	<i>File Name</i>
<i>Test Report</i>	<i>Test Report</i>	<i>PPT277T5LAMP _Test report.pdf</i>
<i>Operation Description</i>	<i>Technical Description</i>	<i>PPT277T5LAMP _operation description.pdf</i>
<i>External Photos</i>	<i>External Photos</i>	<i>PPT277T5LAMP _External Photos</i>
<i>Internal Photos</i>	<i>Internal Photos</i>	<i>PPT277T5LAMP _Internal Photos</i>
<i>Block Diagram</i>	<i>Block Diagram</i>	<i>PPT277T5LAMP _Block Diagram.pdf</i>
<i>Schematics</i>	<i>Circuit Diagram</i>	<i>PPT277T5LAMP _Schematics.pdf</i>
<i>ID Label/Location</i>	<i>Label and Location</i>	<i>PPT277T5LAMP _Label & Location.pdf</i>
<i>User Manual</i>	<i>User Manual</i>	<i>PPT277T5LAMP _User Manual.pdf</i>
<i>Test set-up photos</i>	<i>Test setup photos</i>	<i>PPT277T5LAMP _Test Set-up Photos</i>

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Reproduction Clause

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Opinions and Interpretations

This test report relates to the abovementioned equipment under test (EUT). Without the permission of ECMG Electronic Technical Testing Corp (Shenzhen) Test Lab this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark on this or similar products. The manufacturer has sole responsibility of continued compliance of the device.

Statement of Measurement Uncertainty

The data and results referenced in the document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities that can account for a nominal measurement error. Furthermore, component and process variability of devices similar to that tested may result in additional deviation.

Administrative Data

Test Sample : *T8-T5 Converter Fitting*

Model Numbers : *120V-T5-23WHEB, 240V-T5-23WHEB, 277V-T5-23WHEB*

Model Tested : *120V-T5-23WHEB, 240V-T5-23WHEB, 277V-T5-23WHEB*

Incept Date : *July 6th, 2012*

Date Tested : *July 9th, 2012 to August 24th, 2012*

Applicant : *ACL Marketing Ltd.*

Address : *Flat 3B, Pilkem House 45-51 Pilkem Street, Yau Ma Tei, HONG KONG*

Telephone : *(852)24923009*

Fax : *(852)24923009*

Manufacturer : *Haining XinGuangYuan Lighting Co., Ltd.*

Address : *No.89 Jiangchao Road, Dingqiao Town, Haining, Zhejiang, China*

Telephone : *(86) -573-87662511*

Fax : *(86) -573-87670505*

Factory : *Haining XinGuangYuan Lighting Co., Ltd.*

Address : *No.5 Fenghuang Road, Qianjiang industrial Area, Dingqiao Town, Haining, Zhejiang, China*

Telephone : *(86) -573-87662511*

Fax : *(86) -573-87670505*

EUT Descriptions

ACL Marketing Ltd., model tested 120V-T5-23WHEB, 240V-T5-23WHEB, 277V-T5-23WHEB (referred to as the EUT in this report) is a T8-T5 Converter Fitting.

EUT Model: 120V-T5-23WHEB

Rating(s): AC100-120V/23Watts

EUT Model: 240V-T5-23WHEB

Rating(s): AC220-240V/23Watts

EUT Model: 277V-T5-23WHEB

Rating(s): AC250-290V/23Watts

NOTE: For more detailed informations or features please refer to user's manual of EUT.

EUT Model Derived

Models of 120V-T5-23WHEB/240V-T5-23WHEB/277V-T5-23WHEB are the same products, they have the same Principle of circuits&PCB layout except for input voltage, resistor and electrolytic capacitor.

Test Summary

The Electromagnetic Compatibility requirements on model 120V-T5-23WHEB, 240V-T5-23WHEB, 277V-T5-23WHEB for this test are stated below. All results listed in this report relate exclusively to this above-mentioned model as the Equipment under Test. This report confers no approval or endorsement upon any other component, host or subsystem used in the test set-up.

Emission Tests				
Specifications	Description	Test Results	Test Point	Remark
FCC Part 18.307; FCC/OST MP-5	Conducted Emission	Passed	AC Input Port	Attachment 1
FCC Part 18.307; FCC/OST MP-5	Radiated Emission	Passed	Enclosure	Attachment 2

Test Mode Justification

This device complies with Part 18 of the FCC rules. The EUT was tested in the lighting mode.

EUT Exercise Software

The device is not programmable and does not use software.

Equipment Modification

Any modifications installed previous to testing by ACL Marketing Ltd., will be incorporated in each production model sold or leased in United States.

There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen). Test personnel.

EUT Sample Photos



EUT- Exterior View #1



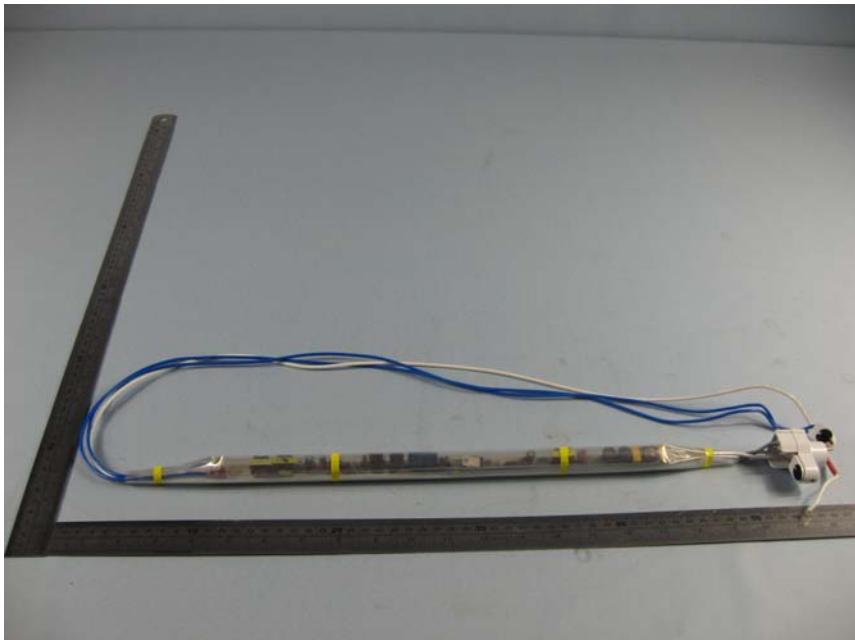
EUT- Exterior View #2



EUT- Exterior View #3



Inside View of 120V-T5-23WHEB



Inside View of 240V-T5-23WHEB



Inside View of 277V-T5-23WHEB



PCB Board top view of 120V-T5-23WHEB



PCB Board bottom view of 120V-T5-23WHEB



PCB Board top view of 277V-T5-23WHEB



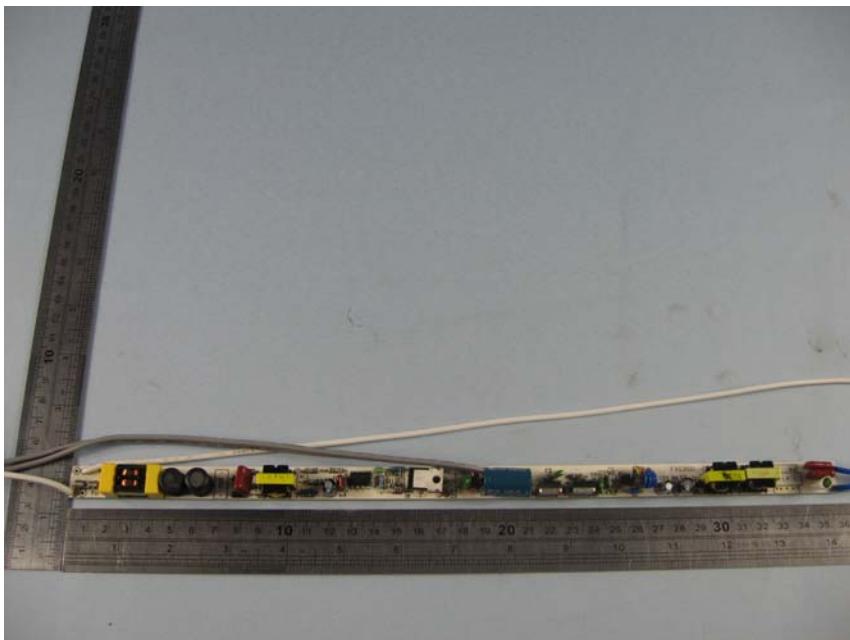
PCB Board bottom view of 277V-T5-23WHEB

FCC Test Report #: ACL-1205-10824-FCC

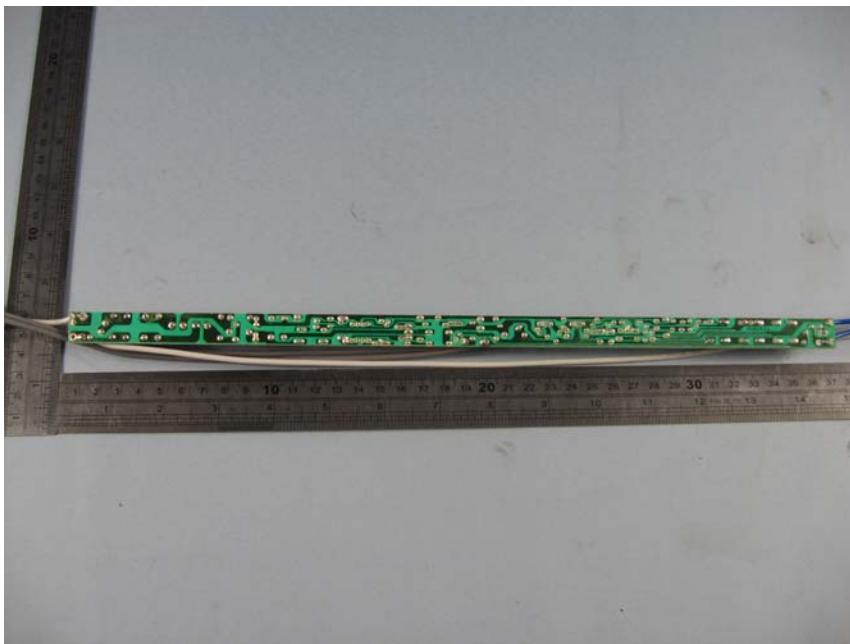
Prepared for ACL Marketing Ltd.

Prepared by ECMG Electronic Technical Testing Corp (Shenzhen)

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PCB Board top view of 240V-T5-23WHEB



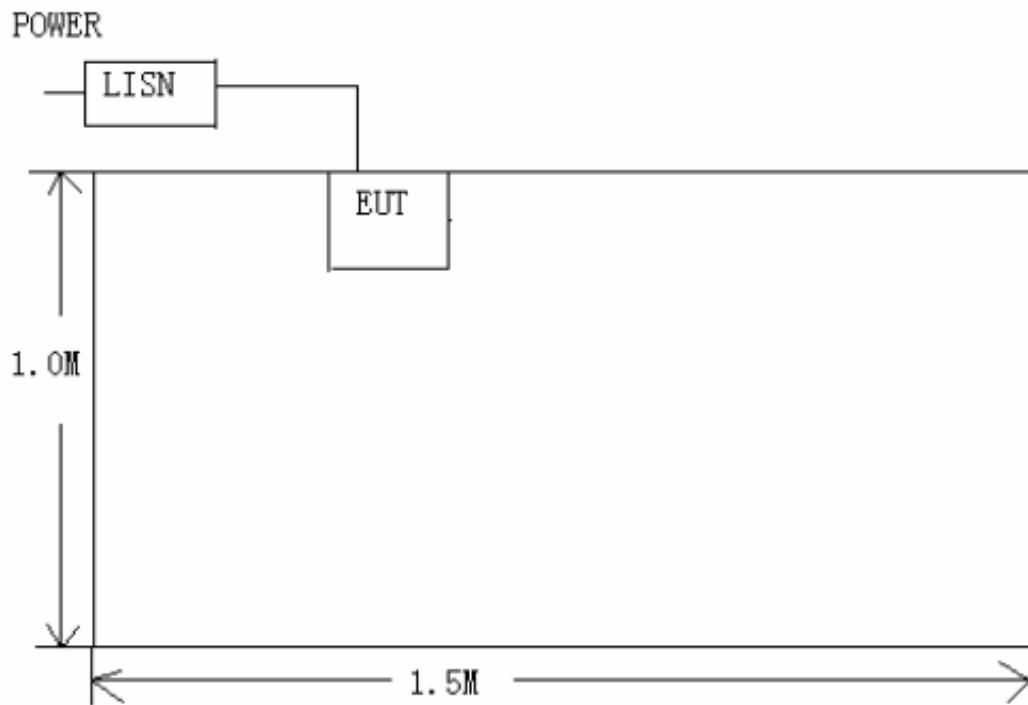
PCB Board bottom view of 240V-T5-23WHEB

Test System Details

EUT			
Model Number:	120V-T5-23WHEB, 240V-T5-23WHEB, 277V-T5-23WHEB		
Model Tested:	120V-T5-23WHEB, 240V-T5-23WHEB, 277V-T5-23WHEB		
Description:	T8-T5 Converter Fitting		
Manufacturer:	Haining XinGuangYuan Lighting Co., Ltd		
Support Equipment			
<i>Description</i>	<i>Model Number</i>	<i>Serial Number</i>	<i>Manufacturer</i>
None			

Cable Description					
<i>Description</i>	<i>From</i>	<i>To</i>	<i>Length (Meters)</i>	<i>Shielded (Y/N)</i>	<i>Ferrite (Y/N)</i>
Power cord of EUT	EUT	Plug	1.5	N	N

Configuration of Tested System



ATTACHMENT 1 - CONDUCTED EMISSION TEST RESULTS

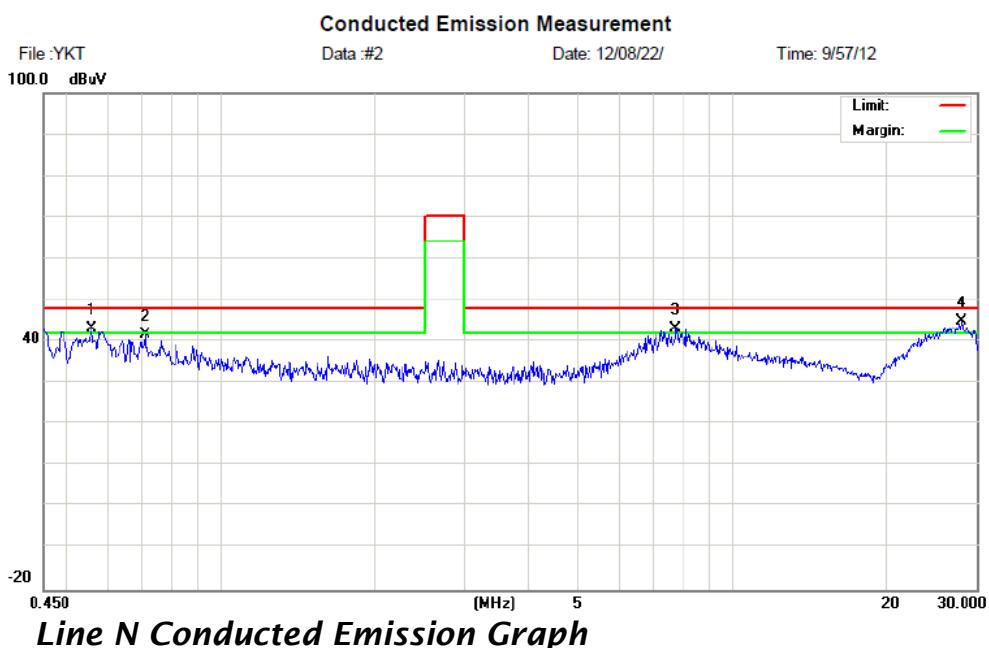
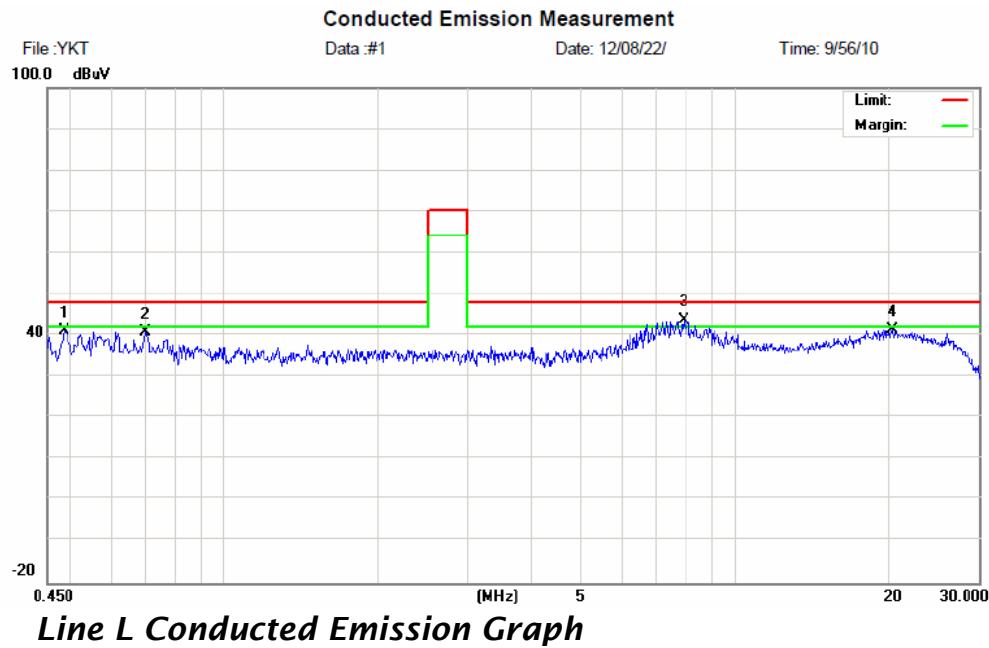
CLIENT:	ACL MARKETING LTD	TEST STANDERD:	FCC Part 18: 2012, section 18.307
MODEL NUMBERS:	120V-T5-23WHEB, 240V-T5-23WHEB, 277V-T5-23WHEB	PRODUCT:	T8-T5 Converter Fitting
MODEL TESTED:	120V-T5-23WHEB, 240V-T5-23WHEB, 277V-T5-23WHEB	EUT DESIGNATION:	Home or Office
TEMPERATURE:	23°C	HUMIDITY:	51%
ATM PRESSURE:	103kPa	GROUNDING:	None
TESTED BY:	Sewen	DATE OF TEST:	August 22 nd , 2012
TEST REFERENCE:	FCC/OST MP-5 (1986)		
TEST PROCEDURE:	a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface. b. Connect EUT to the power mains through a line impedance stabilization network(LISN) . c. The LISN provides 50ohm coupling impedance for the measuring instrument. d. Both sides of AC line were checked for maximum conducted interference. e. The frequency range from 150KHz to 30MHz was searched. f. Set the test-receiver system to Peak Detect Function and Specified bandwidth. g. If the emission level of the EUT in peak mode was 20 dB lower than the specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be tested using the quasi-peak method in about six maximal points and the results will be reported.		
TESTED RANGE:	450kHz to 30MHz		
TEST VOLTAGE:	120VAC/60Hz; 240VAC/60Hz; 277VAC/60Hz		
RESULTS:	The EUT meets the requirements of test reference for Conducted Emissions. The test results relate only to the equipment under test provided by client.		
CHANGES OR MODIFICATIONS:	There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen). Test personnel.		
M. UNCERTAINTY:	Freq. $\pm 2 \times 10^{-7} \times$ Center Freq., Amp ± 2.6 dB		

18.307 Conducted limit

<i>Frequency of Emission (MHz)</i>	<i>Consumer Equipment</i>	
	<i>Maximum RF line voltage measured with a 50 uH/50 ohm LISN (uV)</i>	<i>Quasi-Peak (dBuV)</i>
0.45-2.51	250	48
2.51-3.0	3000	70
3.0-30	250	48

Note :Emission Level dB (μ V) = 20 log Emission Level (μ V)

120V-T5-23WHEB:



240V-T5-23WHEB:

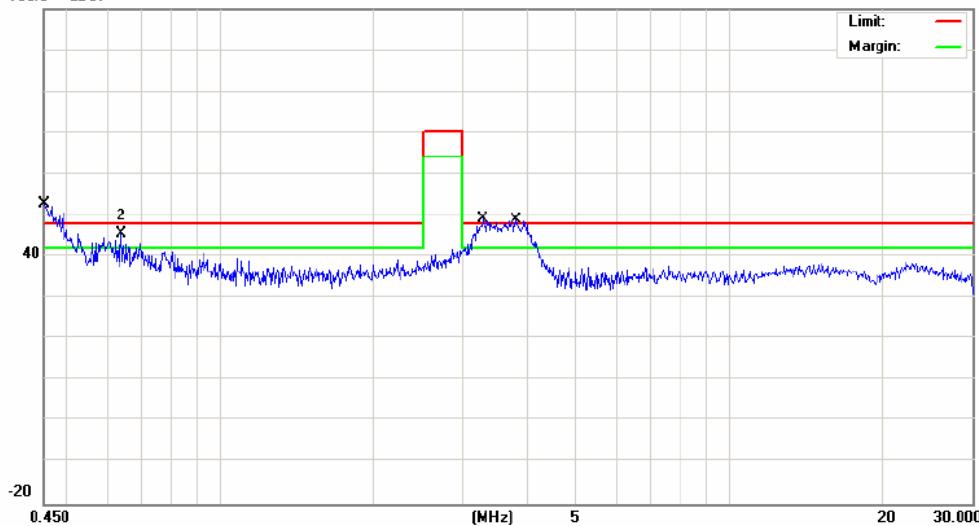
Conducted Emission Measurement

File :YKT
100.0 dBuV

Data #:3

Date: 12/08/22/

Time: 10/01/41



Line L Conducted Emission Graph

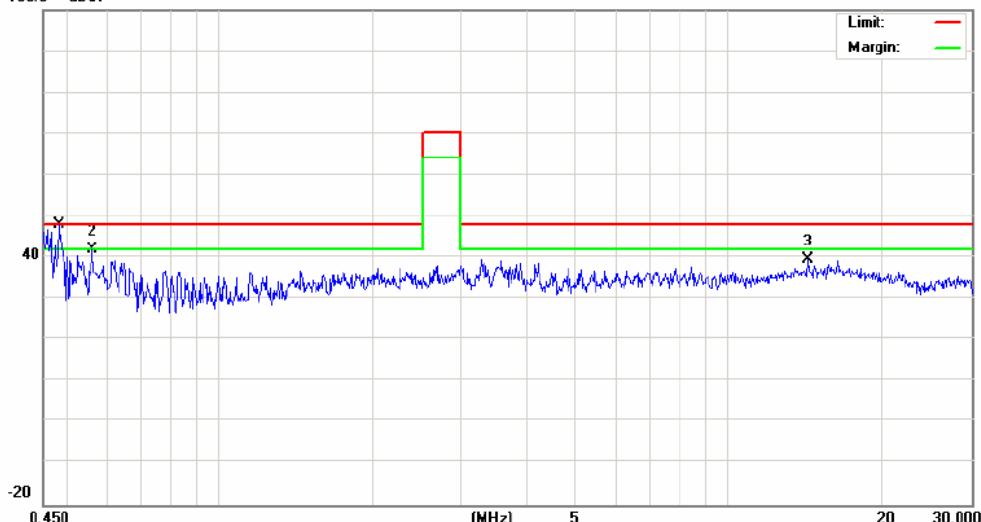
Conducted Emission Measurement

File :YKT
100.0 dBuV

Data #:4

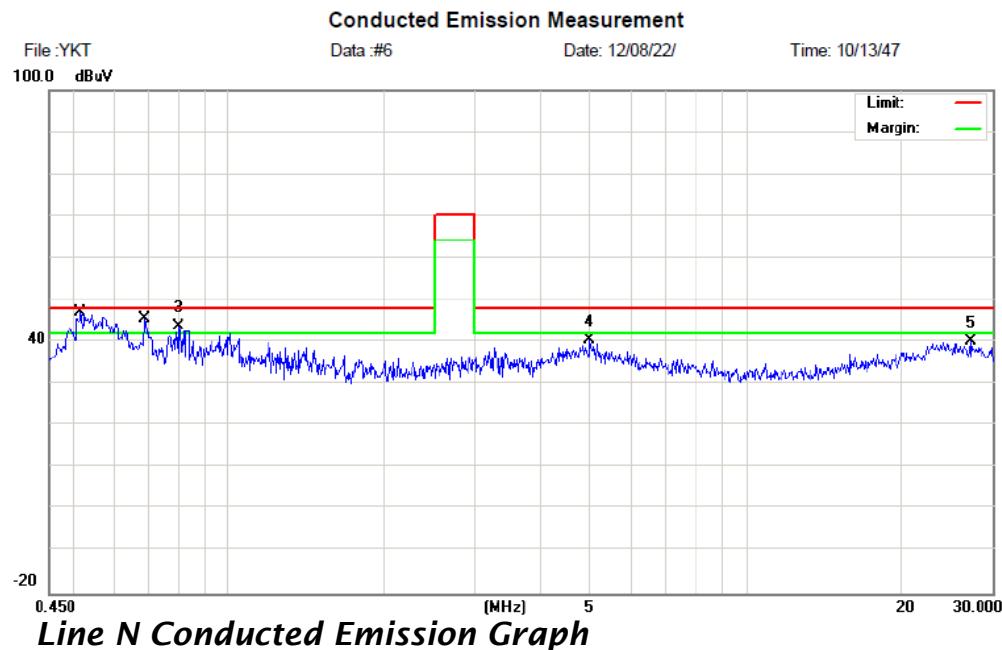
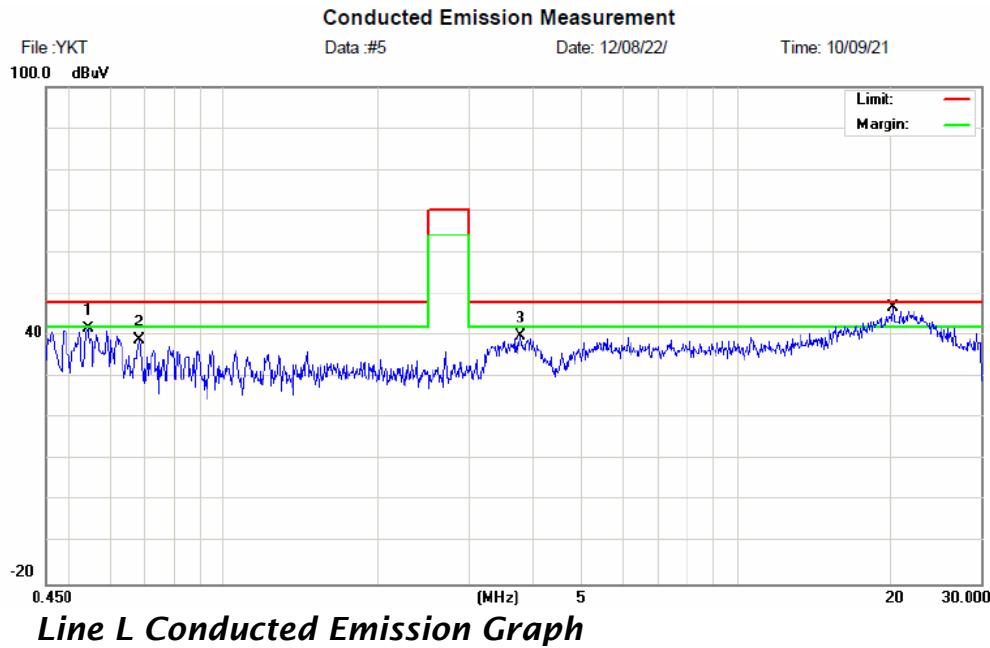
Date: 12/08/22/

Time: 10/04/11



Line N Conducted Emission Graph

277V-T5-23WHEB:



Test Data:

Lines (L/N)	Frequency (MHz)	Corrected QP Level (dBuV)	Limits QP (dBuV)	Margin QP (dB)	Frequency (MHz)	Corrected AV Level (dBuV)	Limits AV (dBuV)	Margin QP (dB)
120V-T5-23WHEB								
L	0.486	41.16	48	-6.84	/	/	/	/
L	0.701	40.73	48	-7.27	/	/	/	/
L	7.930	43.62	48	-4.38	/	/	/	/
N	0.558	43.07	48	-4.93	/	/	/	/
N	7.750	43.27	48	-4.73	/	/	/	/
N	28.022	44.98	48	-3.02	/	/	/	/
240V-T5-23WHEB								
L	0.450	47.40	48	-0.60	/	/	/	/
L	0.638	45.48	48	-2.52	/	/	/	/
L	3.280	43.3	48	-4.70	/	/	/	/
N	0.482	42.2	48	-5.80	/	/	/	/
N	0.562	41.83	48	-6.17	/	/	/	/
N	14.290	39.43	48	-8.57	/	/	/	/
277V-T5-23WHEB								
L	0.542	41.75	48	-6.25	/	/	/	/
L	0.682	39.05	48	-8.95	/	/	/	/
L	3.798	40	48	-8.00	/	/	/	/
N	0.518	44.4	48	-3.60	/	/	/	/
N	0.684	42.5	48	-5.50	/	/	/	/
N	0.798	43.61	48	-4.39	/	/	/	/
<p><i>Note :</i></p> <ol style="list-style-type: none"> 1. All readings are using a bandwidth of 9 kHz, with a 500 ms sweep time. A video filter was not used. 2. "QP" means "Quasi-Peak" values, "AV" means "Average" values. 								

Test Equipment list:

Test Equipment	Model No.	Manufacturer	Serial No.	Last Cal.	Cal. Due
LISN	ENV216	R&S	101313	2012-07-06	2013-07-06
EMI Receiver	ESCI	R&S	101160	2012-07-06	2013-07-06

Note: All testing were performed using internationally recognized standards. All test instruments were calibrated and traceable to the National Institute of Standards and Technology (NIST).

TESTED BY:

James

ENGINEER

REVIEWED BY:

James

SENIOR ENGINEER

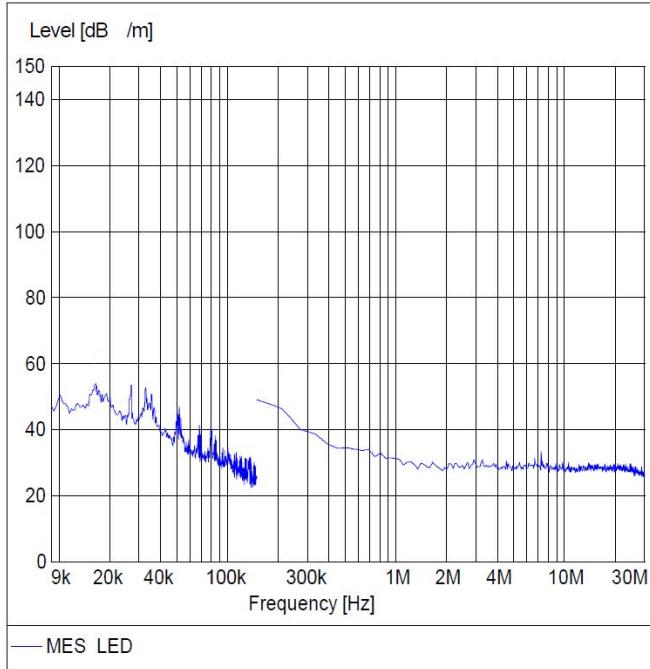


Conducted Emission Test Set-up

ATTACHMENT 2 - RADIATED EMISSION TEST RESULTS

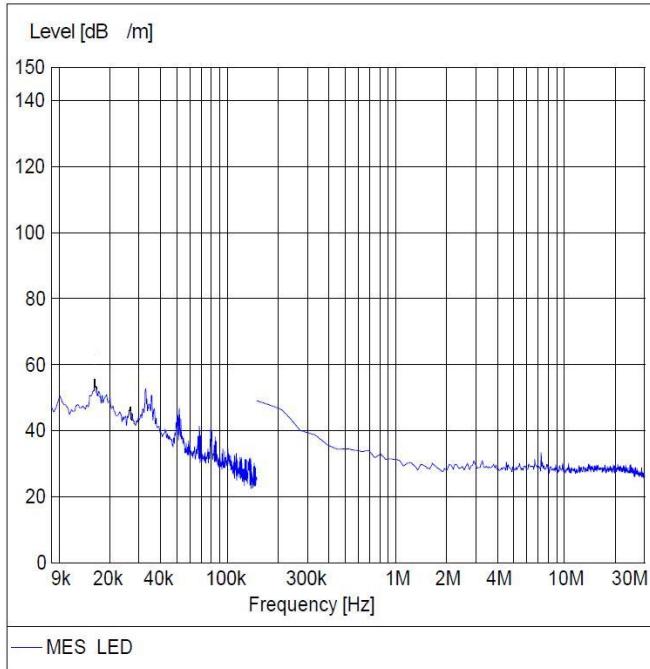
CLIENT:	ACL MARKETING LTD.	TEST STANDERD:	FCC Part 18:2012, Section 18.305
MODEL NUMBERS:	120V-T5-23WHEB, 240V-T5-23WHEB,277V-T5-23WHEB	PRODUCT:	T8-T5 Converter Fitting
EUT MODEL:	120V-T5-23WHEB, 240V-T5-23WHEB,277V-T5-23WHEB	EUT DESIGNATION:	Lighting Equipment
TEMPERATURE:	23°C	HUMIDITY:	47%RH
ATM PRESSURE:	101.0kPa	GROUNDING:	None
TESTED BY:	Sewen Guo	DATE OF TEST:	August 22 th ,2012
TEST REFERENCE:	FCC/OST MP-5 (1986)		
TEST PROCEDURE:	<p>a. The EUT was placed on a rotatable table with 1.0 meters above ground. b. The EUT was set 3 meters from the interference-receiving antenna, which was mounted on the top of a variable height antenna tower. c. For each suspected emission the EUT was arranged to its worst case and turn table (from 0 degree to 360 degree) to find the maximum reading. d. If the emission level of the EUT in peak mode was 20 dB lower than the specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be tested using the quasi-peak method in about six maximal points and the results will be reported.</p> <p>Explanation of the Correction Factor are given as follows: $FS = RA + AF + CF - AG$ Where: FS = Field Strength RA = Receiver Amplitude AF = Antenna Factor CF = Cable Attenuation Factor AG = Amplifier Gain</p>		
TESTED RANGE:	0.009MHz to 30MHz		
TEST VOLTAGE:	120VAC/60Hz,240VAC/60Hz,270VAC/60Hz		
RESULTS:	According to the recorded data in following data table, the EUT complied with the FCC Part 18:2012,The test results relate only to the equipment under test provided by client.		
CHANGES OR MODIFICATIONS:	There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen) test personnel.		
M. UNCERTAINTY:	Freq. 2×10^{-7} x Center Freq., Amp. 2.6 dB		

120V-T5-23WHEB:



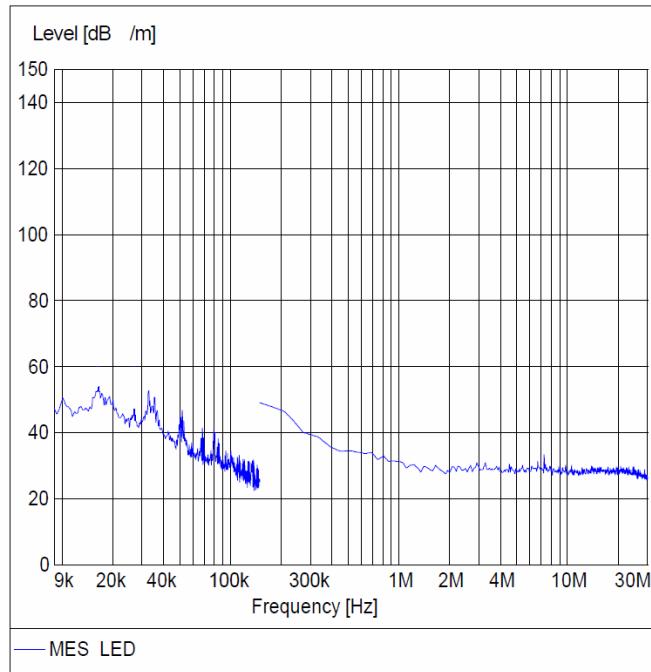
Field Strength Emission Plots (Peak,Max hold)

240V-T5-23WHEB:



Field Strength Emission Plots (Peak,Max hold)

277V-T5-23WHEB:



Field Strength Emission Plots (Peak,Max hold)

Test Data:**120V-T5-23WHEB:**

Frequency (MHz)	Detector (PK/QP/Ave.)	Cord. Amplitude	
		dB μ A/m	dB μ V/m
0.0130	QP	-7.8	43.7
0.0180	QP	-5.9	45.6
0.0190	QP	-8.6	42.9
0.0280	QP	-5.8	45.7
0.0320	QP	-6.2	45.3
0.0360	QP	-11.2	40.3

NOTE: dB μ V/m = dB μ A/m + 51.5 dB

240V-T5-23WHEB:

Frequency (MHz)	Detector (PK/QP/Ave.)	Cord. Amplitude	
		dB μ A/m	dB μ V/m
0.0130	QP	-7.0	44.5
0.0180	QP	-3.9	47.6
0.0190	QP	-7.9	43.6
0.0280	QP	-11.3	40.2
0.0320	QP	-7.8	43.7
0.0360	QP	-9.4	42.1

NOTE: dB μ V/m = dB μ A/m + 51.5 dB

277V-T5-23WHEB:

Frequency(MHz)	Detector (PK/QP/Ave.)	Cord. Amplitude	
		$dB\mu A/m$	$dB\mu V/m$
0.0130	QP	-9.3	42.2
0.0180	QP	-8.3	43.2
0.0190	QP	-9.0	42.5
0.0280	QP	-11.2	40.3
0.0320	QP	-7.8	43.7
0.0360	QP	-8.9	42.6

NOTE: $dB\mu V/m = dB\mu A/m + 51.5 \text{ dB}$

Test Equipment List:

Test Equipment	Model No.	Manufacturer	Serial No.	Last Cal.	Cal. Due
EMI Receiver	ESI26	R&S	SB3436	2012-07-06	2013-07-08
Triple Loop Antenna	HXYZ9170	Schwarzbeck	SB2662	2012-07-06	2013-07-07

Note: All testing were performed using internationally recognized standards. All test instruments were calibrated and traceable to the National Institute of Standards and Technology (NIST).

TESTED BY: J. Hernandez
ENGINEER

REVIEWED BY: J. Hernandez
SENIOR ENGINEER



Radiated Emission Test Set-up