



LIGHTSTEC CO.,LIMITED

FCC TEST REPORT

Prepared For:	LIGHTSTEC CO.,LIMITED 5F-6F, No.41 WANLE EAST ROAD, SHENG FENG, XIAOLAN TOWN, ZHONGSHAN, CHINA
Product Name:	Led strip light
Trade Mark:	LIGHTSTEC
Model:	LT-3528W60R-W12, LT-3528W120R-W12, LT-3528W240R-W12, LT-3528W60R-W24, LT-3528W120R-W24, LT-3528W240R-W24, LT-5050W30R-W12, LT-5050W60R-W12, LT-5050W120R-W12, LT-5050W30R-W24, LT-5050W60R-W24, LT-5050W120R-W24, LT-2835W60R-W12, LT-2835W120R-W12, LT-2835W192R-W12, LT-2835W60R-W24, LT-2835W120R-W24, LT-2835W192R-W24, LT-3014W60R-W12, LT-3014W120R-W12, LT-3014W60R-W24, LT-3014W120R-W24, LT-3014W238R-W24, LT-3014W240R-W24, LT-335W60R-W12, LT-335W120R-W12, LT-335W60R-W24, LT-335W120R-W24, LT-2216W300R-W24, LT-2835W240R-W24, "W" is the led color red/yellow/blue/green/white/nature white/warm white/RGB/RGBW
Prepared By:	Shenzhen United Testing Technology Co., Ltd. 2F, Annex Bldg, Jiahuangyuan Tech Park, #365 Baotian 1 Rd, Tiegang Community, Xixiang Str, Bao'an District, Shenzhen, China
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TEST REPORT DECLARATION

Applicant	:	LIGHTSTEC CO.,LIMITED
Address	:	5F-6F, No.41 WANLE EAST ROAD, SHENGFENG, XIAOLAN TOWN, ZHONGSHAN, CHINA
EUT Description	:	Led strip light
Model Number	:	LT-3528W60R-W12, LT-3528W120R-W12, LT-3528W240R-W12, LT-3528W60R-W24, LT-3528W120R-W24, LT-3528W240R-W24, LT-5050W30R-W12, LT-5050W60R-W12, LT-5050W120R-W12, LT-5050W30R-W24, LT-5050W60R-W24, LT-5050W120R-W24, LT-2835W60R-W12, LT-2835W120R-W12, LT-2835W192R-W12, LT-2835W60R-W24, LT-2835W120R-W24, LT-2835W192R-W24, LT-3014W60R-W12, LT-3014W120R-W12, LT-3014W60R-W24, LT-3014W120R-W24, LT-3014W238R-W24, LT-3014W240R-W24, LT-335W60R-W12, LT-335W120R-W12, LT-335W60R-W24, LT-335W120R-W24, LT-2216W300R-W24, LT-2835W240R-W24, "W" is the led color red/yellow/blue/green/white/nature white/warm white/RGB/RGBW

Test Standards:

FCC Part15B:2017
ANSI C63.4:2014

The EUT described above is tested by US to determine the maximum emission levels emanating from the EUT, the maximum emission levels are compared to the FCC Part 15 limits. The measurement results are contained in this test report. and United Testing Technology (Hong Kong) Limited is assumed of full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT is to be technically compliant with the FCC requirements. This report applies to above tested sample only and shall not be reproduced in part without written approval of United Testing Technology (Hong Kong) Limited.

Prepared by:



Kahn yang/Editor

Reviewer:



Sherwin Qian/Supervisor

Approved & Authorized Signer:


Liuze/Manager

1. GENERAL INFORMATION

1.1. Report information

1.1.1. This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that UNI approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that UNI in any way guarantees the later performance of the product/equipment.

1.1.2. The sample/s mentioned in this report is/are supplied by Applicant, UNI therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

1.1.3. Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through UNI, unless the applicant has authorized UNI in writing to do so.

1.2. Measurement Uncertainty

Available upon request.

1.3. Test Facility

Site Description

EMC Lab. :

Name of Firm : Shenzhen United Testing Technology Co., Ltd.

Site Location : 2F, Annex Bldg, Jiahuangyuan Tech Park, #365 Baotian 1 Rd,
Tiegang Community, Xixiang Str, Bao'an District, Shenzhen, China

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19. The testing quality system of our laboratory meets with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

CNAS-LAB Code: L6494

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of testing Laboratories.

Designation Number: CN1227

Test Firm Registration Number: 674885

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

1.4. Test Uncertainty

Conducted Emission Uncertainty = $\pm 2.66\text{dB}$

Radiated Emission Uncertainty = $\pm 4.26\text{dB}$

2. PRODUCT DESCRIPTION

2.1.EUT Description

Description	:	Led strip light
Applicant	:	LIGHTSTEC CO.,LIMITED 5F-6F, No.41 WANLE EAST ROAD, SHENG FENG, XIAOLAN TOWN, ZHONGSHAN, CHINA
Manufacturer	:	LIGHTSTEC CO.,LIMITED 5F-6F, No.41 WANLE EAST ROAD, SHENG FENG, XIAOLAN TOWN, ZHONGSHAN, CHINA
Model Number	:	LT-3528W60R-W12

2.2.Test Conditions

Temperature: 23~25℃

Relative Humidity: 55~63 %

3. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	Test Results
Conducted disturbance	N/A*
Radiated disturbance	Pass

Note: This test item is not applied because of the power supply of EUT is DC.

4. TEST EQUIPMENT USED

4.1. Conducted Emission Measurement

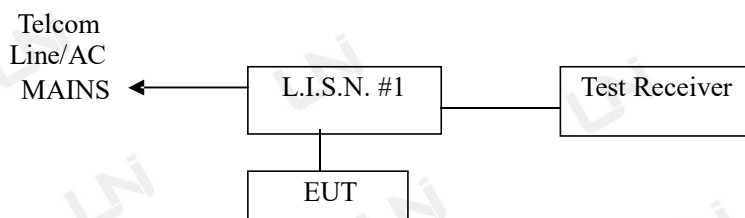
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	AMN	SCHWARZBECK	NNLK8121	8121370	2018.9.9
2	AMN	ETS	3810/2	00020199	2018.9.9
3	EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	101210	2018.9.9
4	AAN	TESEQ	T8-Cat6	38888	2018.9.9

4.2. Radiated Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	Horn Antenna	Sunol	DRH-118	A101415	2018.9.29
2	Broadband Hybrid Antenna	Sunol	JB1 Antenna	A090215	2018.9.29
3	Amplifier	HP	8449B	3008A00160	2018.9.9
4	Amplifier	HP	8447D	2944A07999	2018.9.9
5	EMI TEST RECEIVER	ROHDE&SCHWARZ	ESR3	101891	2018.9.9
6	MXA Signal Analyzer	Keysight	N9020A	MY51110104	2018.9.9
7	Biconical antenna	Schwarzbeck	VHA 9103	91032360	2018.9.8
8	Biconical antenna	Schwarzbeck	VHA 9103	91032361	2018.9.8
9	Broadband Hybrid Antenna	Schwarzbeck	VULB9163	VULB9163#958	2018.9.8
10	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1680	2018.1.12
11	Active Receive Loop Antenna	Schwarzbeck	FMZB 1919B	00023	2018.11.02
12	Loop Antenna	Beijing daze Technology	ZN30401	13015	2018.9.9
13	EM CAMLP	SCHWARZBECK	MDS21	03350	2018.9.12
14	Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170651	2018.03.14
15	Microwave Broadband Preamplifier	Schwarzbeck	BBV 9721	100472	2018.10.24

5. CONDUCTED EMISSION TEST

5.1. Block Diagram of Test Setup



5.2. Test Standard

FCC Part15B:2017
ANSI C63.4:2014

5.3. Conducted Emission Limit

Frequency iwox	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.

5.4. EUT Configuration on Test

The following equipments are installed on conducted emission test to meet Part 15 requirement and operating in a manner, which tends to maximize its emission characteristics in a normal application.

5.5. Operating Condition of EUT

5.5.1. Setup the EUT and simulators as shown in Section 5.1.

5.5.2. Turn on the power of all equipments.

5.5.3. Let the EUT work in test modes (EUT Working) and test it.

5.6. Test Procedure

The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI test receiver (R&S Test Receiver ESCS30) is used to test the emissions form both sides of AC line. The bandwidth of EMI test receiver is set at 9kHz.

The bandwidth of the test receiver (R&S Test Receiver ESHS30) is set at 10KHz. and all the scanning waveform are attached within Appendix I.

5.7. Test Result

N/A

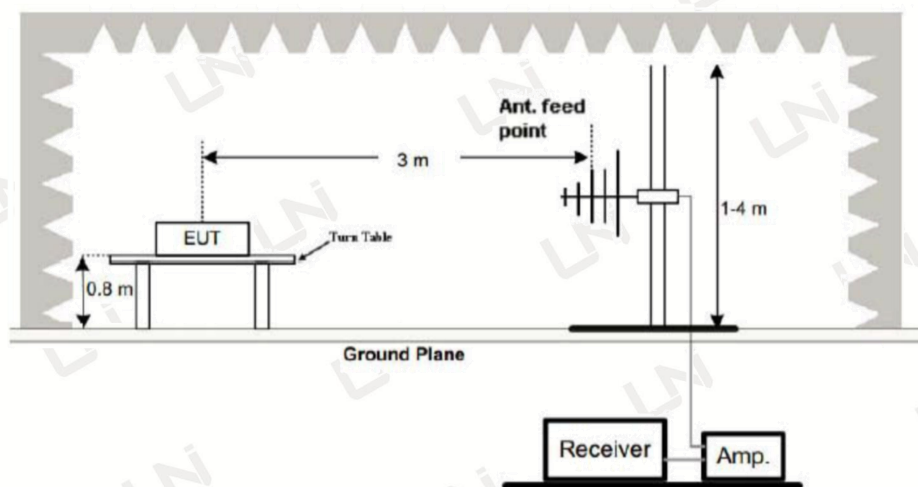
6. RADIATED EMISSION MEASUREMENT

6.1. Block Diagram of EUT Configuration

6.1.1. Block Diagram of connection between the EUT and the simulators



6.1.2. Block diagram of test setup (in semi-Anechoic Chamber)



6.2. Test Standard

FCC Part15B:2017
ANSI C63.4:2014

6.3. Radiated Emission Limit (Class B)

FREQUENCY (iwoxsz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dBmV/m)
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0

Note: (1) The smaller limit shall apply at the edge between two frequency bands.
(2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the EUT or system.

6.4.EUT Configuration on Test

The following equipment are installed on Radiated Emission Measurement to meet the Commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

6.5.Operating Condition of EUT

6.5.1.Setup the EUT as shown on Section 6.1.2

6.5.2.Turn on the power of all equipments.

6.5.3.Let the EUT work in test mode(EUT working) and measure it.

6.6.Test Procedure

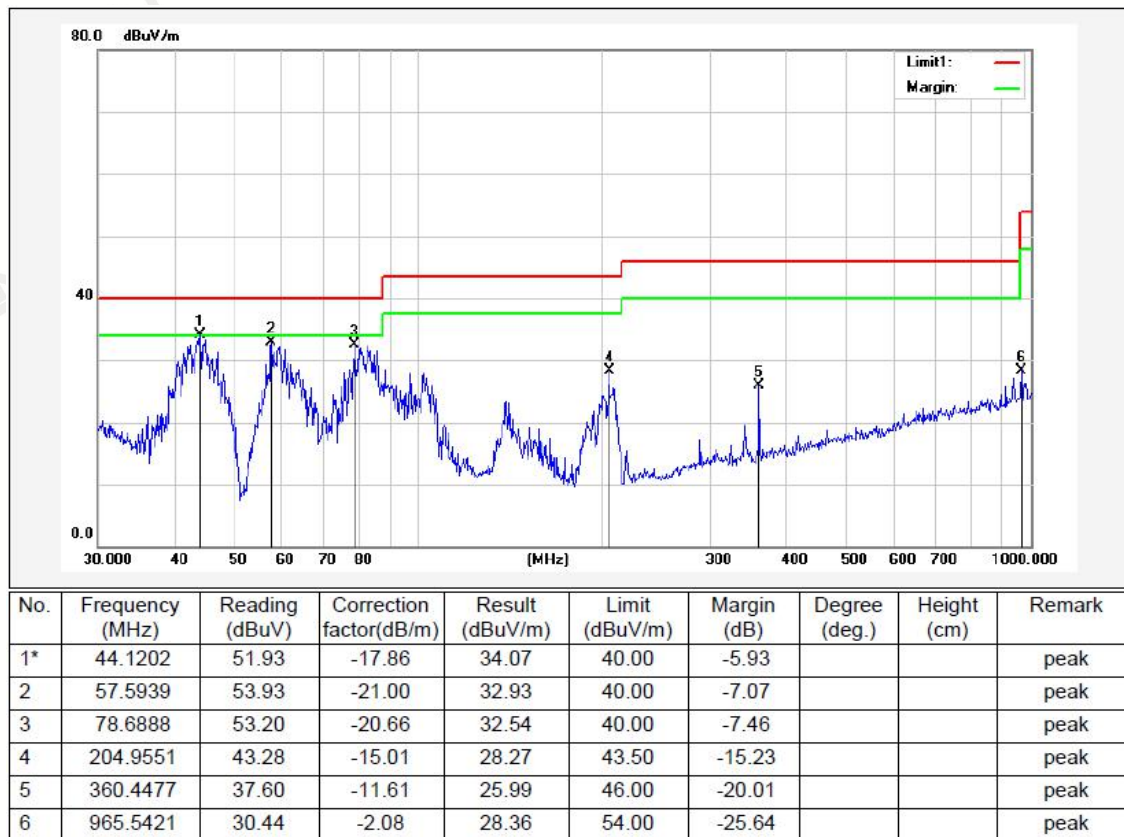
The EUT is placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can move up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna (calibrated by dipole antenna) are used as a receiving antenna. Both horizontal and vertical polarization of the antenna are set on measurement.

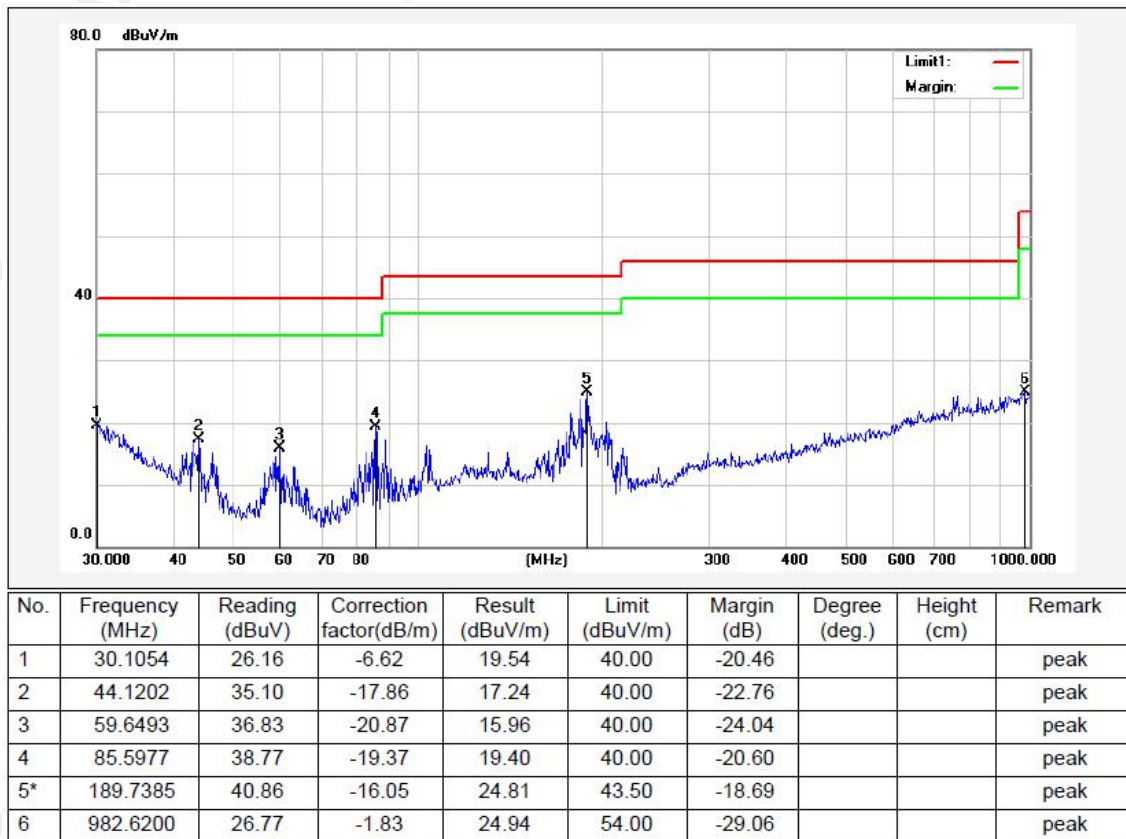
The bandwidth setting on the test receiver (R&S TEST RECEIVER ESCS20) is 120 KHz. The EUT is tested in Anechoic Chamber. The frequency range from 30MHz to 1000 MHz is checked. All the test results are listed in Section 6.7. and all the scanning waveform are attached within Appendix I.

6.7.Test Result

PASS

APPENDIX I

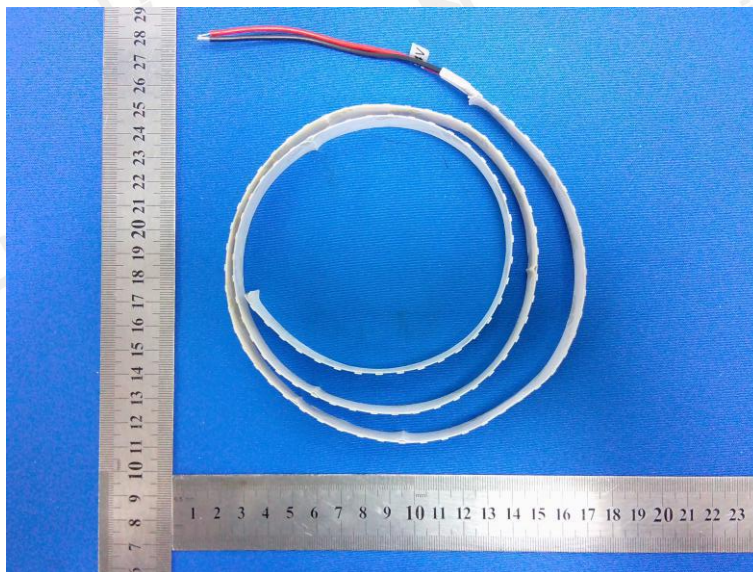


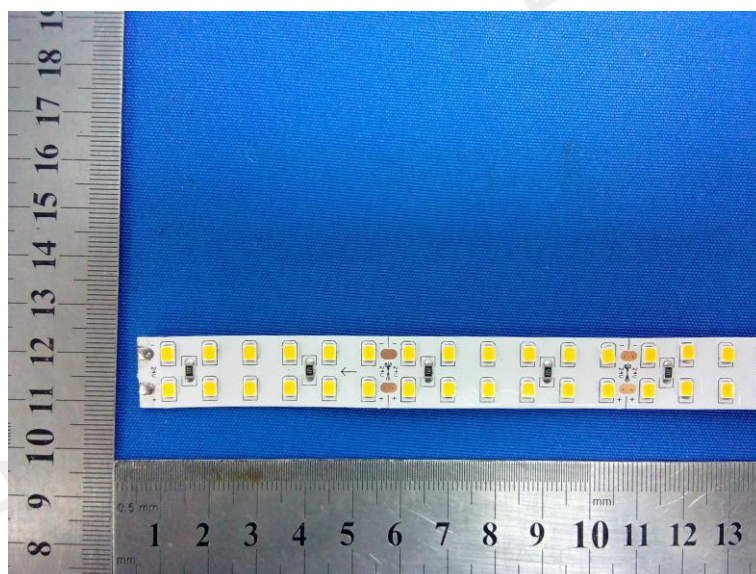
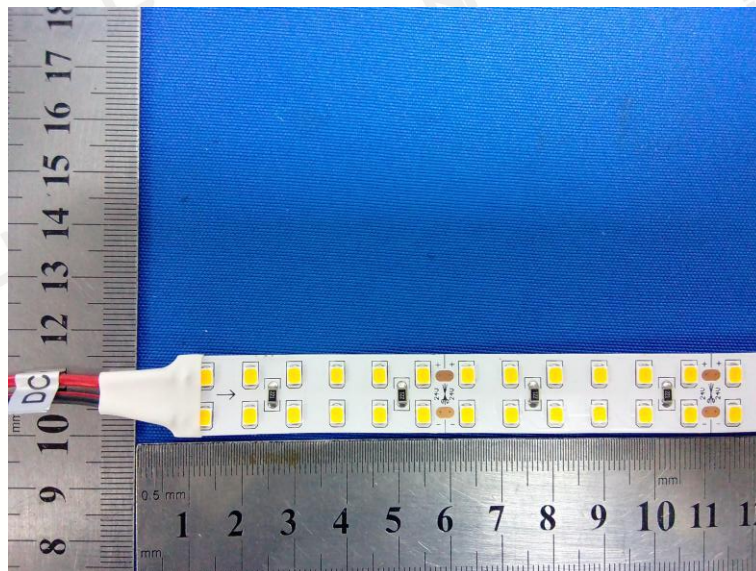


Note: Result=Reading+Factor Over Limit=Result-Limit



APPENDIX II







End of Report