

# Ningbo Yusing Lighting Co., Ltd.

## MPE ASSESSMENT REPORT

**Report Type:**

FCC MPE assessment report

**Model:**

Smart-LR1311-RGB-03

**REPORT NUMBER:**

210602810SHA-002

**ISSUE DATE:**

July 12, 2021

**DOCUMENT CONTROL NUMBER:**

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**Applicant:** Ningbo Yusing Lighting Co., Ltd.  
NO.1199 Mingguang Road, Jiangshan Town, Ningbo, China

**Manufacturer:** Ningbo Yusing Lighting Co., Ltd.  
NO.1199 Mingguang Road, Jiangshan Town, Ningbo, China

**Manufacturing site:** Ningbo Yusing Lighting Co., Ltd.  
NO.1199 Mingguang Road, Jiangshan Town, Ningbo, China

**FCC ID:** 2AHGM-S-LR

## SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06

FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

**PREPARED BY:**

**REVIEWED BY:**



Project Engineer  
Eric Li

Reviewer  
Daniel Zhao

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## Revision History

Report No.	Version	Description	Issued Date
210602810SHA-002	Rev. 01	Initial issue of report	July 12, 2021

## 1 GENERAL INFORMATION

### 1.1 Description of Equipment Under Test (EUT)

Product name:	SMART LED STRIP LIGHT
Type/Model:	Smart-LR1311-RGB-03
Description of EUT:	EUT is smart led strip light, it supports wifi 802.11b/g/n and IR remote control, there is only one model, we test it and list the worst results in this report.
Rating:	Input: 100-240V 50/60Hz,0.2A Output:5V 2A Power:10W
Category of EUT:	Class B
EUT type:	<input checked="" type="checkbox"/> Table top <input type="checkbox"/> Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	2021.6.28
Date of test:	2021.6.30~2021.7.5

### 1.2 Technical Specification

Frequency Range:	2400MHz ~ 2483.5MHz
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20, IEEE 802.11n-HT40
Type of Modulation:	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT20: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT40: OFDM (64-QAM, 16-QAM, QPSK, BPSK)
Channel Number:	11 Channels for 802.11b, 802.11g and 802.11n(HT20) 7 Channels for 802.11n(HT40)
Data Rate:	IEEE 802.11b: Up to 11 Mbps IEEE 802.11g: Up to 54 Mbps IEEE 802.11n-HT20: Up to MCS7 IEEE 802.11n-HT40: Up to MCS7
Channel Separation:	5 MHz
Antenna information	Internal PCB, gain is 1.5dBi.

### 1.3 Description of Test Facility

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L0139
	FCC Accredited Lab Designation Number: CN1175
	IC Registration Lab Registration code No.: 2042B-1
	VCCI Registration Lab Registration No.: R-4243, G-845, C-4723, T-2252
	A2LA Accreditation Lab Certificate Number: 3309.02

## 2 MPE Assessment

Test result: Pass

### 2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density $S_{eq}$ (W/m <sup>2</sup> )
0-1 Hz	-	$3,2 \times 10^4$	$4 \times 10^4$	-
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	4 000/f	5 000/f	-
0,025-0,8 kHz	250/f	4/f	5/f	-
0,8-3 kHz	250/f	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	0,73/f	0,92/f	-
1-10 MHz	$87/f^{1/2}$	0,73/f	0,92/f	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^{1/2}$	$0,0046 f^{1/2}$	f/200
2-300 GHz	61	0,16	0,20	10

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is  $\leq 1.0$**

**TEST REPORT****2.2 Assessment Results**

Power density (S) is calculated according to the formula:

$$S = P / (4\pi R^2)$$

Where S = power density in mW/cm<sup>2</sup>

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 210602810SHA-001:

The maximum radiated power = 17.49dBm = 56.10 mW;

Here R is chosen to be 20cm,

$$S = P / (4\pi R^2) = 56.10 / (4 * 3.14 * 20 * 20) = 0.0112 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$$

**TEST REPORT**

**Appendix I**

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation. To ensure compliance, operations at closer than this distance is not recommended.

\*\*\*\*\* END \*\*\*\*\*