

# 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:** TTRFFCCMPE-01\_V1 © 2018 Intertek





Intertek Testing Services Shanghai Building No.86, 1198 Qinzhou Road (North) Caohejing Development Zone Shanghai 200233, China

> Telephone: 86 21 6127 8200 www.intertek.com

Report no.: 210602810SHA-002

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:

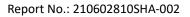
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Project Engineer Eric Li

**REVIEWED BY:** 

in

Reviewer Daniel Zhao





## **Revision History**

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

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#### **1 GENERAL INFORMATION**

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

Product name:	SMART LED STRIP LIGHT		
Type/Model:	Smart-LR1311-RGB-03		
	EUT is smart led strip light, it supports wifi 802.11b/g/n and IR remote		
Description of FUT	control, there is only one model, we test it and list the worst results in		
Description of EUT:	this report.		
	Input: 100-240V 50/60Hz,0.2A		
	Output:5V 2A		
Rating:	Power:10W		
Category of EUT:	Class B		
EUT type:	🔀 Table top 🔲 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		
	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)		
Type of Modulation:	IEEE 802.11n-HT40: OFDM (64-QAM, 16-QAM, QPSK, BPSK)		
	11 Channels for 802.11b, 802.11g and 802.11n(HT20)		
Channel Number:	7 Channels for 802.11n(HT40)		
	IEEE 802.11b: Up to 11 Mbps		
	IEEE 802.11g: Up to 54 Mbps		
	IEEE 802.11n-HT20: Up to MCS7		
Data Rate:	IEEE 802.11n-HT40: Up to MCS7		
Channel Separation:	5 MHz		
Antenna information	Internal PCB, gain is 1.5dBi.		

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## **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,	CNAS Accreditation Lab Registration No. CNAS L0139
certified, or accredited by these organizations:	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

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#### 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 <sub>eq</sub> (W/m²)
0-1 Hz	-	3,2 × 10 <sup>4</sup>	$4 \times 10^{4}$	-
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 <sup>1/2</sup>	0,73/f	0,92/f	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	1,375 f <sup>1/2</sup>	0,0037 f <sup>1/2</sup>	0,0046 f <sup>1/2</sup>	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

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#### 2.2 Assessment Results

Power density (S) is calculated according to the formula: S = P / (4πR<sup>2</sup>) 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,

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



#### 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.