

RF Exposure Evaluation Report

Product : LED Light strip
Trade mark : N/A
Model/Type reference : 904105-RGB-NF-US
Serial Number : N/A
Report Number : EED32M00268702
FCC ID : 2A3MADEPU87762157
Date of Issue : Dec. 24, 2021
Test Standards : 47 CFR Part 1.1307
47 CFR Part 2.1091
KDB447498D01v06
Test result : PASS

Prepared for:

Lepro Innovation INC

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Prepared by:

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Dec. 24, 2021

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2 Version

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3 Contents

	Page
1 COVER PAGE.....	1
2 VERSION.....	2
3 CONTENTS.....	3
4 GENERAL INFORMATION.....	4
4.1 CLIENT INFORMATION.....	4
4.2 GENERAL DESCRIPTION OF EUT.....	4
4.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD.....	4
4.4 TEST LOCATION.....	6
4.5 DEVIATION FROM STANDARDS.....	6
4.6 ABNORMALITIES FROM STANDARD CONDITIONS.....	6
4.7 OTHER INFORMATION REQUESTED BY THE CUSTOMER.....	6
5 RF EXPOSURE EVALUATION.....	7
5.1 RF EXPOSURE COMPLIANCE REQUIREMENT.....	7
5.2 MAXIMUM PERMISSIBLE EXPOSURE.....	8
PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS.....	9

4 General Information

4.1 Client Information

Applicant:	Lepro Innovation INC
Address of Applicant:	3651 Lindell Road Suite D1048, Las Vegas, NV 89103, USA
Manufacturer:	Zhongshan Depu Lighting Co., Ltd.
Address of Manufacturer:	2/F, Building 2, No. 35 Yihui 1st Road, Henglan Town, Zhongshan City, Guangdong Province, P.R. China
Factory:	Zhongshan Depu Lighting Co., Ltd.
Address of Factory:	2/F, Building 2, No. 35 Yihui 1st Road, Henglan Town, Zhongshan City, Guangdong Province, P.R. China

4.2 General Description of EUT

Product Name:	LED Light strip
Model No.:	904105-RGB-NF-US
Test model.:	PR904118-RGB-US, 904105-RGB-NF-US, PR904110-RGB-WP-US, PR904110-RGB-US, PR904114-RGBW-WP-US, PR904118-RGB-US, PR904116-RGB-WP-US, 904103-RGB-F-US, PR904116-RGB-US, 904103-RGB-NF-US, PR904119-RGB-US, 904106-RGB-US, PR904107-RGB-US, PR904108-RGB-US, PR904111-RGB-WP-US, PR904112-RGB-WP-US, PR904113-RGB-WP-US, PR904111-RGB-US, PR904112-RGB-US, PR904113-RGB-US, PR904117-RGB-WP-US, 904104-RGB-F-US, PR904117-RGB-US, 904104-RGB-NF-US
Trade Mark:	N/A
EUT Supports Radios application	IEEE 802.11 b/g: 2412MHz to 2462MHz

4.3 Product Specification subjective to this standard

Frequency Range:	2412MHz to 2462MHz		
Modulation Type:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK)		
Number of Channels:	IEEE 802.11b/g: 11 Channels		
Test Power Grade:	Reference Table		
Test Software of EUT:	espRFTTool.exe		
Antenna Type:	PCB antenna		
Antenna Specification	3.5 dBi		
Maximum tune up power	IEEE 802.11b Mode:	15.63 dBm	(36.559 mW)
	IEEE 802.11g Mode:	14.60 dBm	(28.840 mW)
Power Supply:	Class 2 Power Supply	MODEL:HP18A-1201500-AU INPUT:100-240V~,50/60Hz ,0.5A OUTPUT:12V---1.5A	
Sample Received Date:	Aug. 28, 2020		
Sample tested Date:	Aug. 28, 2020 to Nov. 17, 2020		
Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.			

Model No.: PR904118-RGB-US, 904105-RGB-NF-US, PR904110-RGB-WP-US, PR904110-RGB-US, PR904114-RGBW-WP-US, PR904118-RGB-US, PR904116-RGB-WP-US, 904103-RGB-F-US, PR904116-RGB-US, 904103-RGB-NF-US, PR904119-RGB-US, 904106-RGB-US, PR904107-RGB-US, PR904108-RGB-US, PR904111-RGB-WP-US, PR904112-RGB-WP-US, PR904113-RGB-WP-US, PR904111-RGB-US, PR904112-RGB-US, PR904113-RGB-US, PR904117-RGB-WP-US, 904104-RGB-F-US, PR904117-RGB-US, 904104-RGB-NF-US.

Only the model 904105-RGB-NF-US was tested, PR904118-RGB-US, PR904110-RGB-WP-US, PR904110-RGB-US, PR904114-RGBW-WP-US, PR904118-RGB-US, PR904116-RGB-WP-US, 904103-RGB-F-US, PR904116-RGB-US, 904103-RGB-NF-US, PR904119-RGB-US, 904106-RGB-US, PR904107-RGB-US, PR904108-RGB-US, PR904111-RGB-WP-US, PR904112-RGB-WP-US, PR904113-RGB-WP-US, PR904111-RGB-US, PR904112-RGB-US, PR904113-RGB-US, PR904117-RGB-WP-US, 904104-RGB-F-US, PR904117-RGB-US and 904104-RGB-NF-US compared with 904105-RGB-NF-US, all parts of the product, Their electrical circuit design, layout, components used and internal wiring are identical, except only the length of the light strip, and model name are different.

4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 RF Exposure Evaluation

5.1 RF Exposure Compliance Requirement

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{377}$

Where E = Field strength in Volts / meter

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

5.2 Maximum Permissible Exposure

Substituting the MPE safe distance using $d = 20$ cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

IEEE 802.11b mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
1	2437	36.559	2.24	20	0.0163	1

IEEE 802.11g mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
6	2412	28.84	2.24	20	0.0129	1

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32M00268701 for EUT external and internal photos.

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*** End of Report ***