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RF Exposure Evaluation Report

Report No. :	CQASZ20210901580E-02
Applicant:	LaView Eagle-Eye Technology Inc.
Address of Applicant:	17333 Freedom Way, City of Industry, CA 91748, USA
Equipment Under Test (EUT):	
Product:	Y2 Wake-up Light
Model No.:	LV-WNY2-W
Test Model No.:	LV-WNY2-W
Brand Name:	LaView
FCC ID:	2APYR-WNY2
Standards:	47 CFR Part 1.1307
	47 CFR Part 1.1310
	KDB447498D01 General RF Exposure Guidance v06
Date of Receipt:	2021-09-10
Date of Test:	2021-09-10 to 2021-09-23
Date of Issue:	2021-11-04
Test Result :	**PASS***

***In the configuration tested, the EUT complied with the standards specified above**

Tested By: lewis zhou

(Lewis Zhou)

Reviewed By: Rock Huang

(Rock Huang)

Approved By:

(Jack ai)

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20210901580E-02	Rev.01	Initial report	2011-11-04

2 Contents

3 General Information

3.1 Client Information

Applicant:	LaView Eagle-Eye Technology Inc.
Address of Applicant:	17333 Freedom Way, City of Industry, CA 91748, USA
Manufacturer:	Shenzhen Linklite Smart Lighting Co., Ltd.
Address of Manufacturer:	4th floor, A3 building, Yangbei industrial park 1st phase, Huangtian, Hangcheng street, Bao'an district, Shenzhen city, Guangdong Province
Factory:	Shenzhen Linklite Smart Lighting Co., Ltd.
Address of Factory:	4th floor, A3 building, Yangbei industrial park 1st phase, Huangtian, Hangcheng street, Bao'an district, Shenzhen city, Guangdong Province

3.2 General Description of EUT

Product Name:	Y2 Wake-up Light	
Model No.:	LV-WNY2-W	
Test Model No.:	LV-WNY2-W	
Trade Mark:	LaView	
EUT Supports Radios application	2.4GHz: Wi-Fi:802.11b/g/n(HT20): 2412MHz ~2462 MHz; Wi-Fi:802.11n(HT40): 2422MHz ~2452 MHz;	
Hardware Version:	V1.0	
Software Version:	V1.0	
Power Supply:	Power by DC 5V	
Adapter:	Mode: TPA-45050200UU Input: 100-240V 50/60Hz, 0.3A Output: DC 5V 2000mA	
Product Type:	☐ Mobile ☐ Portable ☒ Fix Location	
Test Software of EUT	WIFI Test Tool V1.4.1(manufacturer declare)	
Antenna Type:	PCB antenna	
Antenna Gain:	2.4G WIFI	1.5 dBi

4 RF Exposure Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f^2)	6
30–300	61.4	0.163	1.0	6
300–1500	.....	.....	f/300	6
1500–100,000	.....	.....	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f^2)	30
30–300	27.5	0.073	0.2	30
300–1500	.....	.....	f/1500	30
1500–100,000	.....	.....	1.0	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $Pd = (Pout*G)/(4* Pi * R^2)$

Where

Pd = power density in mW/cm2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

Pd id the limit of MPE, 1 mW/cm2 . If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

4.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

4.1.3 EUT RF Exposure Evaluation standalone operations

For 2.4G WIFI

Antenna Gain: 1.5 dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.413 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Measurement Data

802.11b mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2412MHz)	9.42	9.5±1	10.5	11.22
Middle(2437MHz)	12.43	12.5±1	13.5	22.39
Highest(2462MHz)	13	13.0±1	14.0	25.12
802.11g mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2412MHz)	9.06	9.0±1	10.0	10.00
Middle(2437MHz)	11.7	11.5±1	12.5	17.78
Highest(2462MHz)	12.49	12.5±1	13.5	22.39
802.11n(HT20)mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2412MHz)	8.3	8.5±1	9.5	8.91
Middle(2437MHz)	11.32	11.5±1	12.5	17.78
Highest(2462MHz)	12.06	12.0±1	13.0	19.95
802.11n(HT40)mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2422MHz)	14.67	15.0±1	16.0	39.81
Middle(2437MHz)	16.27	16.0±1	17.0	50.12
Highest(2452MHz)	16.7	16.5±1	17.5	56.23

The worst case:

Maximum tune-up Power (mW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm^2)	Limit	Result
56.23	1.5	0.016	1.0	PASS

Note: 1) Refer to report No. CQASZ20210901580E-03 for EUT test Max Conducted Peak Output Power value.
2) Pd = (Pout*G)/(4* Pi * R^2)=(56.23*1.413)/(4*3.1416*20^2)=0.016