

RF Exposure Evaluation Declaration

Applicant: Suzhou EICCOMM Technology CO., Ltd.
Address: Room 304, Building 4, Zhuyuan Road 209, GAOXIN
District, Suzhou, Jiangsu Province, China

Product: BLE Controller
Model No.: LCBLUECONTROL/W
Brand Name: RAB
FCC Classification: Digital Transmission System (DTS)
Test Procedure(s): FCC Part 2.1091
Test Date: February 05, 2021

Reviewed By: Sherry Jiang

Sherry Jiang

Approved By: Robin Wu

Robin Wu



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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Revision History

Report No.	Version	Description	Issue Date	Note
2012RSU046-U3	Rev. 01	Initial Report	02-24-2021	Valid

CONTENTS

Description	Page
1. GENERAL INFORMATION	4
1.1. Applicant	4
1.2. Manufacturer	4
1.3. Testing Facility	4
2. PRODUCT INFORMATION	5
2.1. Equipment Description	5
2.2. Description of Available Antennas.....	5
3. RF Exposure Evaluation.....	6
3.1. Limits	6
3.2. Test Result of RF Exposure Evaluation	7
Appendix A - EUT Photograph	8

1. GENERAL INFORMATION

1.1. Applicant

Suzhou EICCOMM Technology CO., Ltd.

Room 304, Building 4, Zhuyuan Road 209, GAOXIN District, Suzhou, Jiangsu Province, China

1.2. Manufacturer

RAB LIGHTING INC

170 Ludlow Ave, PO BOX 970, Northvale, NJ 07647-2305 USA

1.3. Testing Facility

<input checked="" type="checkbox"/>	Test Site – MRT Suzhou Laboratory
	Laboratory Location (Suzhou – Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
	Laboratory Location (Suzhou – SIP) 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China
	Laboratory Accreditations
	A2LA: 3628.01
	CNAS: L10551
	FCC: CN1166
	ISED: CN0001
	VCCI: R-20025, G-20034, C-20020, T-20020
<input type="checkbox"/>	Test Site – MRT Shenzhen Laboratory
	Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China
	Laboratory Accreditations
	A2LA: 3628.02
	CNAS: L10551
	FCC: CN1284
	ISED: CN0105
<input type="checkbox"/>	Test Site – MRT Taiwan Laboratory
	Laboratory Location (Taiwan) No. 38, Fuxing 2 nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
	Laboratory Accreditations
	TAF: L3261-190725
	FCC: 291082, TW3261
	ISED: TW3261

2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name	BLE Controller
Model No.	LCBLUECONTROL/W
Serial Model No.	LCBLUECONTROL/SS/W
Bluetooth Version	v5.0 single mode, LE only
Serial Number	20201214Sample#03
Power Supply	Input :120-277Vac 50/60Hz
Remark	LCBLUECONTROL/SS/W has 3 more lines than LCBLUECONTROL/W, used to adjust the color of the product, the other parts are identical.

2.2. Description of Available Antennas

Antenna Type	Frequency Band (GHz)	Antenna Gain (dBi)
External PCB Antenna	2.4~2.5	2.00

3. RF Exposure Evaluation

3.1. Limits

According to FCC 1.1310: 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 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

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

P_d is the limit of MPE, 1mW/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.

3.2. Test Result of RF Exposure Evaluation

Product	BLE Controller
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Maximum EIRP (dBm)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)
BLE	2402 ~ 2480	3.85	0.0005	1

CONCLUSION:

So, the safety distance is 20cm for BLE Controller installed without any other radio equipment.

————— The End —————

Appendix A - EUT Photograph

Refer to "2012RSU046-UE" file.