



中国认可
国际互认
检测
TESTING
CNAS L5313



DEKRA

RF Exposure Evaluation Declaration

Product Name : C-Reach
Model No. : CBYGEH001
FCC ID : PUU-CBYGEH001

Applicant : GE Lighting

Address : 1975 Noble Road Cleveland Ohio United States 44077

Date of Receipt : Mar. 31st, 2017
Test Date : Mar. 31st, 2017~ Apr. 28th, 2017
Issued Date : Jun. 20th, 2017
Report No. : 1732171R-RF-US-P20V01
Report Version : V1.0

The test results relate only to the samples tested.

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

This report must not be used to claim product endorsement by CNAS, TAF or any agency of the government.

The test report shall not be reproduced without the written approval of DEKRA Testing & Certification (Suzhou) Co., Ltd.

Test Report Certification

Issued Date : Jun. 20th, 2017

Report No. : 1732171R-RF-US-P20V01



Product Name : C-Reach
Applicant : GE Lighting
Address : 1975 Noble Road Cleveland Ohio United States 44077
Manufacturer : GE Lighting
Address : 1975 Noble Road Cleveland Ohio United States 44077
Model No. : CBYGEH001
FCC ID : PUU-CBYGEH001
Brand Name : GE Lighting
EUT Voltage : AC 120V/60Hz
Test Voltage : AC 120V/60Hz
Applicable Standard : KDB 447498D01V06
FCC Part1.1310
Test Result : Complied
Performed Location : DEKRA Testing and Certification (Suzhou) Co., Ltd.
No.99 Hongye Rd., Suzhou Industrial Park, Suzhou,
215006, Jiangsu, China
TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098
FCC Registration Number: 800392

Documented By :



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Approved By :



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1. RF Exposure Evaluation

1.1. 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

Friis Formula

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$

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, 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.

1.2. Test Procedure

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

The temperature and related humidity: 18°C and 78% RH.

1.3. Test Result of RF Exposure Evaluation

Product	:	C-Reach
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

● Antenna Gain:

The maximum Gain measured in fully anechoic chamber is 2.35dBi for BLE, and 3.5dBi for Wifi in linear scale.

● Power Density

Standalone modes:

Test Mode	Frequency Band (MHz)	EIRP (dBm)	Power Density at R = 20 cm (mW/cm ²)	Limit of Power Density S(mW/cm ²)
BLE	2400 ~ 2483.5	7.617	0.00115	1
Wifi	2400 ~ 2483.5	20.824	0.02405	1

Simultaneous transmission:

Operation Mode	Frequency Range (MHz)	Maximum EIRP (dBm)	Limit of Power Density S(W/m ²)	Power Density S(mW/m ²)
BLE	2400 ~ 2483.5	7.617	10	0.00115
Wifi	2400 ~ 2483.5	20.824	10	0.02405
Simultaneous transmission				0.0252

Note: The power density is 0.0252mW/cm² for C-Reach without any other radio equipment.

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