



# RF Exposure Evaluation Declaration

Product Name : LED lamp

Model No. : 9290022267

FCC ID : 2AGBW9290022267X

Applicant : Signify (China) Investment Co., Ltd.

Address : Building no.9, Lane 888, Tianlin Road, Minhang  
District, Shanghai 200233, China

Date of Receipt : July. 30, 2019

Test Date : July. 31, 2019~ Aug. 21, 2019

Issued Date : Sep. 03, 2019

Report No. : 1972174R-RF-US-P20V01

Report Version : V1.0

The test results presented in this report relate only to the object tested.

This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory.

The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to calculate the uncertainty associated with the measurement result.

This report is not used for social proof in China (or Mainland China) market.

# Test Report Certification

Issued Date : Sep. 03, 2019  
Report No. : 1972174R-RF-US-P20V01



Product Name : LED lamp  
Applicant : Signify (China) Investment Co., Ltd.  
Address : Building no.9, Lane 888, Tianlin Road, Minhang District, Shanghai 200233, China  
Manufacturer : Signify (China) Investment Co., Ltd.  
Address : Building no.9, Lane 888, Tianlin Road, Minhang District, Shanghai 200233, China  
Model No. : 9290022267  
FCC ID : 2AGBW9290022267X  
Brand Name : PHILIPS  
EUT Voltage : 110-130 Vac, 50-60 Hz, 7.5W  
Test Voltage : AC 120V/60Hz  
Applicable Standard : KDB 447498D01V06  
FCC Part1.1310  
Test Result : Complied  
Performed Location : DEKRA Testing & 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 Designation Number: CN1199  
Documented By :   
(Adm. Specialist: Kitty Li)  
Reviewed By :   
(Senior Project Manager: Frank He)  
Approved By :   
(Engineering Supervisor: Jack Zhang)

## 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 <sup>2</sup> )	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/ cm<sup>2</sup>

$P_{out}$  = 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

$P_d$  is the limit of MPE, 1 mW/cm<sup>2</sup>. 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	:	LED lamp
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

### ● Antenna Information:

Antenna manufacturer	N/A									
Antenna Delivery	<input checked="" type="checkbox"/> 1*TX+1*RX	<input type="checkbox"/> 2*TX+2*RX	<input type="checkbox"/> 3*TX+3*RX							
Antenna technology	<input checked="" type="checkbox"/> SISO <input type="checkbox"/> MIMO <table> <tr> <td><input type="checkbox"/> Basic</td> </tr> <tr> <td><input type="checkbox"/> CDD</td> </tr> <tr> <td><input type="checkbox"/> Beam-forming</td> </tr> </table>			<input type="checkbox"/> Basic	<input type="checkbox"/> CDD	<input type="checkbox"/> Beam-forming				
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<input type="checkbox"/> CDD										
<input type="checkbox"/> Beam-forming										
Antenna Type	<input type="checkbox"/> External <table> <tr> <td><input type="checkbox"/> Dipole</td> </tr> <tr> <td><input type="checkbox"/> PIFA</td> </tr> <tr> <td><input checked="" type="checkbox"/> PCB</td> </tr> <tr> <td><input type="checkbox"/> Ceramic Chip Antenna</td> </tr> <tr> <td><input type="checkbox"/> Stamping Antenna</td> </tr> <tr> <td><input type="checkbox"/> Metal plate type F antenna</td> </tr> <tr> <td><input type="checkbox"/> Monopole antenna</td> </tr> </table>	<input type="checkbox"/> Dipole	<input type="checkbox"/> PIFA	<input checked="" type="checkbox"/> PCB	<input type="checkbox"/> Ceramic Chip Antenna	<input type="checkbox"/> Stamping Antenna	<input type="checkbox"/> Metal plate type F antenna	<input type="checkbox"/> Monopole antenna	<input type="checkbox"/>	
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Antenna Gain	0.5dBi									

- **Power Density:**

**The tune-up power is 1.0dB, so the maximum conducted power of BT we used to calculate RF exposure is 10.31dBm.**

**The tune-up power is 1.0dB, so the maximum conducted power of Zigbee we used to calculate RF exposure is 10.41dBm.**

Test Mode	Frequency Band (MHz)	EIRP (dBm)	Limit of Power Density S(mW/cm <sup>2</sup> )	Power Density at R = 20 cm (mW/cm <sup>2</sup> )
BT	2400 ~ 2483.5	10.81	1	0.0024
Zigbee	2400 ~ 2483.5	10.91	1	0.0025

**Note:**

The maximum power density is 0.0025mW/cm<sup>2</sup> for LED lamp without any other radio equipment.

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The End

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