RF Exposure Evaluation Declaration

Product Name	:	LED lamp
Model No.	:	9290022268
FCC ID	:	2AGBW9290022268X

Applicant	:	Signify (China) Investment Co., Ltd.
Address	:	Building no.9, Lane 888, Tianlin Road, Minhang District, Shanghai 200233, China

Date of Receipt	:	Jul. 30, 2019
Test Date	:	Jul. 31, 2019 ~ Aug. 30, 2019
Issued Date	:	Sep. 03, 2019
Report No.	:	1972175R-RF-US-P20V01
Report Version	:	V1.0

Test Report Certification

Issued Date : Sep. 03, 2019
Report No. : 1972175R-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.	:	9290022268
FCC ID	:	2AGBW9290022268X
Brand Name	:	PHILIPS
EUT Voltage	:	110-130 Vac, 50-60 Hz, 9.5W
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	:	Kathy Feng (Project Assistant: Kathy Feng)
Reviewed By	:	Frank he (Senior Engineer: Frank He)
Approved By	:	Jack zhang (Engineer 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/cm2)	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: Pd = (Pout*G)/(4*pi*r2)

Where

Pd = power density in mW/ cm^2

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 is the limit of MPE, 1 mW/cm^2 . 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℃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	☒	1*TX+1*RX	☐	2*TX+2*RX	☐	3*TX+3*RX
Antenna technology	☒	SISO				
	☐	MIMO	☐	Basic		
			☐	CDD		
			☐	Beam-forming		
Antenna Type	☐	External	☐	Dipole		
	☒	Internal	☐	PIFA		
			☒	PCB		
			☐	Ceramic Chip Antenna		
			☐	Stamping Antenna		
			☐	Metal plate type F antenna		
			☐	Monopole antenna		
Antenna Gain	0dBi					

- **Power Density:**

The tune-up power is 1dB, so the maximum conducted power of BT we used to calculate RF exposure is 10.39dBm.

The tune-up power is 1dB, so the maximum conducted power of Zigbee we used to calculate RF exposure is 10.51dBm.

Test Mode	Frequency Band (MHz)	EIRP (dBm)	Limit of Power Density S(mW/cm^2)	Power Density at R = 20 cm (mW/cm^2)
BT	2400 ~ 2483.5	10.39	1	0.002
Zigbee	2400 ~ 2483.5	10.51	1	0.002

Note:

The maximum power density is 0.002mW/cm^2 for LED lamp without any other radio equipment.

The End