



RF Exposure Evaluation Declaration

Product Name : LED lamp
Model No. : 9290012575A
FCC ID : 2AGBW9290012575AX

Applicant : Philips Lighting (China) Investment Co., Ltd.
Address : Building 9, Lane 888, Tianlin Road, Minhang district, Shanghai, China

Date of Receipt : Sep. 13th, 2017
Test Date : Sep. 04th, 2017 ~ Sep. 14th, 2017
Issued Date : Oct. 16th, 2017
Report No. : 1792056R-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 A2LA, 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 : Oct. 16th, 2017

Report No. : 1792056R-RF-US-P20V01



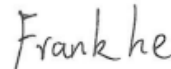
Product Name : LED lamp
Applicant : Philips Lighting (China) Investment Co., Ltd.
Address : Building 9, Lane 888, Tianlin Road, Minhang district, Shanghai
Manufacturer : Philips Lighting (China) Investment Co., Ltd.
Address : Building 9, Lane 888, Tianlin Road, Minhang district, Shanghai
Model No. : 9290012575A
FCC ID : 2AGBW9290012575AX
EUT Voltage : AC 110-130V,50-60Hz
Test Voltage : AC 120V/60Hz
Brand Name : N/A
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: CN1199

Documented By :



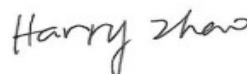
(Project Assistant Supervisor: Kery Zha)

Reviewed By :



(Senior Project Manager: Frank He)

Approved By :



(Engineering Manager: Harry Zhao)

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	:	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	<input type="checkbox"/>	Basic		
			<input type="checkbox"/>	Sectorized antenna systems		
			<input type="checkbox"/>	Cross-polarized antennas		
			<input type="checkbox"/>	Unequal antenna gains, with equal transmit powers		
			<input type="checkbox"/>	Spatial Multiplexing		
			<input type="checkbox"/>	CDD		
			<input type="checkbox"/>	Beam-forming		
Antenna Type	<input type="checkbox"/>	External	<input type="checkbox"/>	Dipole		
	<input checked="" type="checkbox"/>	Internal	<input type="checkbox"/>	PIFA		
			<input checked="" type="checkbox"/>	PCB		
			<input type="checkbox"/>	Ceramic Chip Antenna		
			<input type="checkbox"/>	Metal plate type F antenna		
			<input type="checkbox"/>	Cross-polarize Antenna		
Antenna Gain	3.1dBi					

- Output Power into Antenna & RF Exposure Evaluation Distance
- Standalone modes

Test Mode	Frequency Band (MHz)	Maximum Output Power to Antenna (dBm)	Directional Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Power Density Limit at R = 20 cm (mW/cm ²)
Zigbee	2400 ~ 2483.5	4.16	3.1	0.0011	1.0

Note: The simultaneous transmission power density is 0.0011mW/cm² for LED Lamp without any other radio equipment.

_____ The End _____