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Report No.: 1410RSU00903 Report Version: Issue Date: 10-27-2014

# **RF Exposure Evaluation Declaration**

FCC ID: 2ABX8SH-000000005

APPLICANT: Zhejiang shenghui lighting Co., Ltd. Shanghai Branch

**Application Type:** Certification

**Product: LED Lamp** 

Model No.: C01-A66XXE26(where X can be 0-9, A-Z, a-z or blank

for different customer code which will not influence

safety)

**Brand Name:** sengled

FCC Classification: Digital Transmission System (DTS)

Reviewed By : Robin Wu )

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(Marlin Chen)



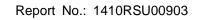
The test results relate only to the samples tested.

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
1410RSU00903	Rev. 01	Initial report	10-27-2014

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## 1. PRODUCT INFORMATION

## 1.1. Equipment Description

Product Name	LED Lamp	
Model No.	C01-A66XXE26(where X can be 0-9, A-Z, a-z or blank for	
	different customer code which will not influence safety)	
Power Type	120VAC / 60Hz	
Frequency Range	2402 ~ 2480 MHz	
Type of Modulation	FHSS	
Antenna Type	Internal Antenna	
Antenna Gain	1.35dBi	

Note: The difference of models is for different marketing requirement.



## 2. RF Exposure Evaluation

#### 2.1. 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	Electric Field	Magnetic Field	Power Density	Average Time
(MHz)	Strength (V/m)	Strength (A/m)	(mW/cm <sup>2</sup> )	(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: Pd = (Pout\*G)/(4\*pi\*r2)

Where

Pd = power density in mW/cm2

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, 1mW/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.

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## 2.2. Test Result of RF Exposure Evaluation

Product	LED Lamp
Test Item	RF Exposure Evaluation

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.35dBi for 2.4GHz in logarithm scale.

#### For 2.4G ISM Band:

Test Mode	Frequency Band	Maximum Average	Power Density at	Limit
	(MHz)	Output Power	R = 20 cm	(mW/cm <sup>2</sup> )
		(dBm)	(mW/cm <sup>2</sup> )	
Bluetooth	2402 ~ 2480	2.56	0.0005	1

#### **CONCULISON:**

Therefore, the Max Power Density at R (20 cm) = 0.0005mW/cm<sup>2</sup> < 1mW/cm<sup>2</sup>. So the EUT complies with the requirement.

— The End —	
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