

# **RF Exposure Evaluation Declaration**

Product Name	:	LED LAMP
Model No.	:	LED9DR30/CLFE
FCC ID	:	PUU-R30-CLFE

Applicant : GE Lighting Co. Ltd

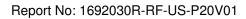
Address : No. 88, Iane 1517, Hu yi Road, Jiading District, Shanghai,

Date of Receipt	:	Sep. 08, 2016
Test Date	:	Aug. 29, 2016~ Aug. 31, 2016
Issued Date	:	Dec. 07, 2016
Report No.	:	1692030R-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 QuieTek Corporation.





# Test Report Certification Issued Date : Dec. 07, 2016

Issued Date : Dec. 07, 2016 Report No. : 1692030R-RF-US-P20V01



a DEKRA company

Product Name	:	LED LAMP
Applicant	:	GE Lighting Co. Ltd
Address	:	No. 88, lane 1517, Hu yi Road, Jiading District, Shanghai,
Manufacturer	:	LEEDARSON LIGHTING CO., LTD.
Address	:	Xingtai Industrial Zone, Changtai County, Zhangzhou, Fujian, China
Model No.	:	LED9DR30/CLFE
FCC ID	:	PUU-R30-CLFE
EUT Voltage	:	120V,60Hz,9W
Brand Name	:	GE
Applicable Standard	:	KDB 447498D01V06
		FCC Part1.1310(b)
Test Result	:	Complied
Performed Location	:	Quietek Corporation - Suzhou EMC Laboratory
		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	:	Kathy Feng
		(Adm. Specialist: Kathy Feng)
		ТТ
Reviewed By	:	Jack zhang
		(Conjer Engineer, Joek Zhang )
		(Senior Engineer: Jack Zhang)
Approved Dv		Harry zhan
Approved By		Harry zhans
		(Engineering Manager: Harry Zhao )



### Laboratory Information

We, **QuieTek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted(audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scope:

Taiwan R.O.C.	:	BSMI, NCC, TAF
USA	:	FCC
Japan	:	VCCI
China	:	CNAS

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site : <u>http://www.quietek.com/english/about/certificates.aspx?bval=5</u> The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : <u>http://www.quietek.com/index\_en.aspx</u>

If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

#### HsinChu Testing Laboratory :

No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C. TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : <u>service@quietek.com</u>

### LinKou Testing Laboratory :

No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C. TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : <u>service@quietek.com</u>

### Suzhou Testing Laboratory :

No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China TEL: +86-512-6251-5088 / FAX: 86-512-6251-5098 E-Mail: <u>service@quietek.com</u>



# History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1692030R-RF-US-P20V01	V1.0	Initial Issued Report	Dec. 07, 2016



### 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)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm2)	Average Time (Minutes)				
(A) Limits for C	(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:  $Pd = (Pout^{*}G)/(4^{*}pi^{*}r^{2})$ 

Where

Pd = power density in mW/cm2

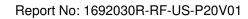
Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

Pd id 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:  $18^\circ\!\!\mathbb{C}\,and\,78\%\,$  RH.

## 1.3. Test Result of RF Exposure Evaluation

Product	:	LED LAMP
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

### • Antenna Gain:

Antenna	N/A					
manufacturer						
Antenna Delivery	$\square$	1*TX+1*R	Х	□ 2*TX+2*RX □ 3*TX+3*RX		
Antenna technology	$\square$	I SISO				
		MIMO		Basic		
				CDD		
				Beam-forming		
Antenna Type		External	ernal 🔲 Dipole			
	$\boxtimes$	Internal		PIFA		
				PCB		
				Ceramic Chip Antenna		
			$\boxtimes$	IFA Antenna		
				Dipole		
Antenna Gain	1.02	dBi				



• Output Power into Antenna & RF Exposure Evaluation Distance:

Test Mode Frequency Band (MHz)	Maximum	Directional	Power Density	Limit of Power	
	Output Power to	Gain	at R = 20 cm	Density	
		Antenna (dBm)	(dBi)	(mW/cm2)	S(mW/cm2)
BLE	2402~2480	10.25	1.02	0.0027	1.0

Note: The power density is 0.0027 mW/cm2 for LED LAMP without any other radio equipment.

——— The End