

# Xiamen Topstar Lighting Co.,Ltd

# **MPE ASSESSMENT REPORT**

## **Report Type:**

FCC MPE assessment report

#### Model:

TSZ9A19-LD007

#### **REPORT NUMBER:**

220102130SHA-003

#### **ISSUE DATE:**

March 22, 2022

#### **DOCUMENT CONTROL NUMBER:**

TTRFFCCMPE-01 V1 © 2018 Intertek





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Report no.: 220102130SHA-003

**Applicant:** Xiamen Topstar Lighting Co.,Ltd

No. 676, Meixi Road, Tong'an, Xiamen | 361000

Manufacturer: Xiamen Topstar Lighting Co.,Ltd

No. 676, Meixi Road, Tong'an, Xiamen | 361000

Factory: Xiamen Topstar Lighting Co.,Ltd

No. 676, Meixi Road, Tong'an, Xiamen | 361000

FCC ID: ZPD-TSZ9A19LD7

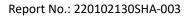
#### **SUMMARY:**

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06 FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

PREPARED BY:	REVIEWED BY:	
Sky Yang	Zric li	
Project Engineer Sky Yang	Reviewer Eric Li	

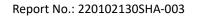
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# **Revision History**

Report No.	Version	Description	Issued Date
220102130SHA-003	Rev. 01	Initial issue of report	March 22, 2022





## **1 GENERAL INFORMATION**

## 1.1 Description of Equipment Under Test (EUT)

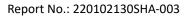
Product name:	Self-ballasted LED Lamp
Type/Model:	TSZ9A19-LD007
Description of EUT:	The EUT is a LED lamp with WIFI and Bluetooth function. There is only one model.
Rating:	AC120V, 60Hz, 9W, 125mA
EUT type:	☐ Table top ☐ Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	May 21, 2021
Date of test:	May 24, 2021 ~ June 11, 2021

## 1.2 Technical Specification

Frequency Band:	2400MHz ~ 2483.5MHz
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20, IEEE 802.11n-HT40
	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK)
	IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK)
	IEEE 802.11n-HT20: OFDM (64-QAM, 16-QAM, QPSK, BPSK)
Type of Modulation:	IEEE 802.11n-HT40: OFDM (64-QAM, 16-QAM, QPSK, BPSK)
	11 Channels for 802.11b, 802.11g and 802.11n(HT20)
Channel Number:	7 Channels for 802.11n(HT40)
	IEEE 802.11b: Up to 11 Mbps
	IEEE 802.11g: Up to 54 Mbps
	IEEE 802.11n-HT20: Up to MCS7
Data Rate:	IEEE 802.11n-HT40: Up to MCS7
Channel Separation:	5 MHz

Frequency Band:	2400MHz ~ 2483.5MHz
Support Standards:	Bluetooth LE
Type of Modulation:	GFSK
Channel Number:	40 (0 - 39)
Data Rate:	1Mbps
Channel Separation:	2 MHz

Antenna information:			
No.	Antenna Type	Gain (dBi)	Note
1	Ceramic Antenna	1.2	-

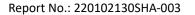




## 1.3 Description of Test Facility

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized,	CNAS Accreditation Lab Registration No. CNAS L0139
certified, or accredited by these organizations:	FCC Accredited Lab
organizations.	IC Registration Lab CAB identifier.: CN0014
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02





## 2 MPE Assessment

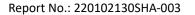
Test result: Pass

### 2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)		
0-1 Hz	-	3,2 × 10 <sup>4</sup>	4 × 10 <sup>4</sup>	- Seq ( <b>VV</b> / 111 /	
1-8 Hz	10 000	$3.2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-	
8-25 Hz	10 000	4 000/f	5 000/f	-	
0,025-0,8 kHz	250/f	4/f	5/f	-	
0,8-3 kHz	250/f	5	6,25	-	
3-150 kHz	87	5	6,25	-	
0,15-1 MHz	87	0,73/f	0,92/f	-	
1-10 MHz	87/f <sup>1/2</sup>	0,73/f	0,92/f	-	
10-400 MHz	28	0,073	0,092	2	
400-2 000 MHz	1,375 f <sup>1/2</sup>	0,0037 f <sup>1/2</sup>	0,0046 f <sup>1/2</sup>	f/200	
2-300 GHz	61	0,16	0,20	10	

Mobile device exposure for simultaneous transmission operations: the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is  $\leq$  1.0





#### **TEST REPORT**

### 2.2 Assessment Results

Power density (S) is calculated according to the formula:

 $S = P / (4\pi R^2)$ 

Where  $S = power density in mW/cm^2$ 

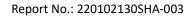
P = Radiated transmit power in mW

R = distance (cm)

As we can see from the test report 210501809SHA-001 and 210501809SHA-002:

Here R is chosen to be 20cm,

Mode	Frequency Range	Ро	wer	R	S	Limits
Mode	(MHz)	dBm	mW	(cm)	(mW/cm <sup>2</sup> )	(mW/cm <sup>2</sup> )
WIFI	2412 - 2462	13.92	24.66	20	0.0049	1
BLE	2402 - 2480	-2.95	0.51	20	0.0001	1





## **Appendix I**

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be
maintained between the antenna of this device and persons during device operation.
To ensure compliance, operations at closer than this distance is not recommended.

Definition below must be outlined in the User Manual: