



# Maximum Permissible Exposure Evaluation

## FCC ID: 2AZWI-3960LEQI

### 1. Client Information

<b>Applicant</b>	:	Shenzhen Leqi Network Technology Co., LTD
<b>Address</b>	:	Rooms 103, 501 and 601, Building 5, Fenghe Industrial Park, Nos. 1301-50 Guanguang Road, Longhua District, Shenzhen, Guangdong, China.
<b>Manufacturer</b>	:	Shenzhen Leqi Network Technology Co., LTD
<b>Address</b>	:	Rooms 103, 501 and 601, Building 5, Fenghe Industrial Park, Nos. 1301-50 Guanguang Road, Longhua District, Shenzhen, Guangdong, China.

### 2. General Description of EUT

<b>EUT Name</b>	:	COB LED Video Light	
<b>Models No.</b>	:	RC350D, RC350B, RC450D, RC450B	
<b>Model Difference</b>	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is different customers, different model name.	
<b>Product Description</b>	:	Operation Frequency:	Bluetooth 5.0(BLE): 2402MHz~2480MHz
		Number of Channel:	40 channels
		RF Output Power:	9.33 dBm (Max)
		Antenna Gain:	2.3dBi PCB Antenna
<b>Power Rating</b>	:	Input: AC 100-240V, 50/60Hz Output: DC 48V/8.4A	
<b>Software Version</b>	:	V1	
<b>Hardware Version</b>	:	V1	
<b>Connecting I/O Port(S)</b>	:	Please refer to the User's Manual	
<b>Remark</b>	:	The adapter and antenna gain provided by the applicant, the verified for the RF conduction test provided by TOBY test lab.	



## MPE Calculations for 2.4G

**1. Antenna Gain:**

PCB Antenna:2.3dBi.

**2. EUT Operation Condition:**

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

**3. Exposure Evaluation:**

Equation from page 18 of OET Bulletin 65, Edition 97-01

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

Where

**S:** power density

**P:** power input to the antenna

**G:** power gain of the antenna in the direction of interest relative to an isotropic radiator.

**R:** distance to the center of radiation of the antenna

**4. Test Result:**

Worst Maximum MPE Result								
Mode	N <sub>TX</sub>	Freq. (MHz)	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm <sup>2</sup> ) [S]
BLE (1Mbps)	1	2402	6.93	7±1	8	2.3	20	0.0021
		2440	7.97	8±1	9	2.3	20	0.0027
		2480	9.33	9±1	10	2.3	20	0.0034
BLE (2Mbps)	1	2402	6.91	7±1	8	2.3	20	0.0021
		2440	7.98	8±1	9	2.3	20	0.0027
		2480	9.31	9±1	10	2.3	20	0.0034

Note:

(1) N<sub>TX</sub>= Number of Transmit Antennas

(2) RF Output power specifies that Maximum Conducted Peak Output Power.



**5. Conclusion:**

As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),

**Limits for General Population/ Uncontrolled Exposure**

Frequency Range (MHz)	Power density (mW/ cm <sup>2</sup> )
300-1,500	F/1500
1,500-100,000	1.0

For 2.4G:2402~2480 MHz

MPE limit S: 1mW/ cm<sup>2</sup>

The MPE is calculated as **0.0034 mW / cm<sup>2</sup> < limit 1mW / cm<sup>2</sup>**. So, RF exposure limit warning or SAR test are not required.

The EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47 CFR2.1091 (b).

The RF Exposure Information page from the manual is included here for reference.

**Note**

For a more detailed features description, please refer to the RF Test Report.

**6. Conclusion:**

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

-----END OF REPORT-----

