

RF EXPOSURE EVALUATION

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)

FCC ID: 2A7Y8-LBC001

EUT Specification

| | |
|-----------------------------------|--|
| EUT | Light Bulb Camera |
| Frequency band (Operating) | <input checked="" type="checkbox"/> WLAN: 2.412GHz ~ 2.462GHz <input type="checkbox"/> WLAN: 5.18GHz ~ 5.32GHz / 5.50GHz ~ 5.70GHz <input type="checkbox"/> WLAN: 5.745GHz ~ 5825GHz <input type="checkbox"/> Others: BLE: 2402-2480MHz |
| Device category | <input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others ____ |
| Exposure classification | <input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm ²) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm ²) |
| Antenna diversity | <input checked="" type="checkbox"/> Single antenna <input type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity |
| Max. output power | 16.26 dBm (0.0423W) |
| Antenna gain (Max) | 0.5dBi |
| Evaluation applied | <input checked="" type="checkbox"/> MPE Evaluation <input type="checkbox"/> SAR Evaluation |

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 |
|--|------------------------------|------------------------------|------------------------------------|--------------|
| (A) Limits for Occupational/Control Exposures | | | | |
| 300-1500 | -- | -- | F/300 | 6 |
| 1500-100000 | -- | -- | 5 | 6 |
| (B) Limits for General Population/Uncontrol Exposures | | | | |
| 300-1500 | -- | -- | F/1500 | 6 |
| 1500-100000 | -- | -- | 1 | 30 |

Friis transmission formula: $P_d = \frac{P_{out} * G}{4 * \pi * R^2}$

Where

P_d = Power density in mW/cm^2

P_{out} = 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

P_d the limit of MPE, $1mW/cm^2$. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

Measurement Result

| Operating Mode | Channel Frequency (MHz) | Maximum output power (dBm) | Tune up tolerance (dBm) | Max. Tune up Power (dBm) | Antenna Gain (dBi) | Power density at 20cm (mW/ cm ²) | Power density Limits (mW/cm ²) |
|----------------|-------------------------|----------------------------|-------------------------|--------------------------|--------------------|--|--|
| 802.11b | 2412 | 16.25 | 16.25 ± 1 | 17.25 | 0.5 | 0.0119 | 1 |
| | 2437 | 15.84 | 15.84 ± 1 | 16.84 | 0.5 | 0.0108 | 1 |
| | 2462 | 15.92 | 15.92 ± 1 | 16.92 | 0.5 | 0.0110 | 1 |
| 802.11g | 2412 | 16.26 | 16.26 ± 1 | 17.26 | 0.5 | 0.0119 | 1 |
| | 2437 | 15.94 | 15.94 ± 1 | 16.94 | 0.5 | 0.0110 | 1 |
| | 2462 | 16.11 | 16.11 ± 1 | 17.11 | 0.5 | 0.0115 | 1 |
| 802.11n (HT20) | 2412 | 16.26 | 16.26 ± 1 | 17.26 | 0.5 | 0.0119 | 1 |
| | 2437 | 16.22 | 16.22 ± 1 | 17.22 | 0.5 | 0.0118 | 1 |
| | 2462 | 16.11 | 16.11 ± 1 | 17.11 | 0.5 | 0.0115 | 1 |