

## 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: 2AQA6-H6056

### EUT Specification

<b>EUT</b>	Govee Flow Plus Light Bar
<b>Frequency band (Operating)</b>	<input checked="" type="checkbox"/> WLAN: 2.412GHz ~ 2.462GHz <input type="checkbox"/> WLAN: 5.18GHz ~ 5.24GHz <input type="checkbox"/> WLAN: 5.745GHz ~ 5.825GHz <input checked="" type="checkbox"/> Others: 2.402GHz~2.480GHz
<b>Device category</b>	<input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others ____
<b>Exposure classification</b>	<input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm <sup>2</sup> ) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm <sup>2</sup> )
<b>Antenna diversity</b>	<input type="checkbox"/> Single antenna <input checked="" type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity
<b>Max. output power</b>	BLE:-0.14dBm (0.0010W); 2.4G WIFI: 16.99dBm (0.05W)
<b>Antenna gain (Max)</b>	BLE: 1.5 dBi; 2.4G WIFI: 1.5 dBi
<b>Evaluation applied</b>	<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 <sup>2</sup> )	Average Time
<b>(A) Limits for Occupational/Control Exposures</b>				
300-1500	--	--	<b>F/300</b>	<b>6</b>
1500-100000	--	--	<b>5</b>	<b>6</b>
<b>(B) Limits for General Population/Uncontrol Exposures</b>				
300-1500	--	--	<b>F/1500</b>	<b>6</b>
1500-100000	--	--	<b>1</b>	<b>30</b>

## 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	Measured Power	Tune up tolerance	Max. Tune up Power	Antenna Gain	Power density at 20cm	Power density Limits ( $mW/cm^2$ )
	(MHz)	(dBm)	(dBm)	(dBm)	(dBi)	( $mW/cm^2$ )	
802.11b	2412	14.08	14.08 ±1	15.08	1.5	0.0091	1
	2437	13.73	13.73 ±1	14.73	1.5	0.0084	1
	2462	13.08	13.08 ±1	14.08	1.5	0.0072	1
802.11g	2412	15.00	15.00 ±1	16	1.5	0.0112	1
	2437	16.75	16.75 ±1	17.75	1.5	0.0167	1
	2462	16.99	16.99 ±1	17.99	1.5	0.0177	1
802.11n (HT20)	2412	15.06	15.06 ±1	16.06	1.5	0.0113	1
	2437	16.83	16.83 ±1	17.83	1.5	0.0171	1
	2462	16.50	16.50 ±1	17.5	1.5	0.0158	1
BLE	2402	-0.32	-0.32 ±1	0.68	1.5	0.0003	1
	2440	-0.14	-0.14 ±1	0.86	1.5	0.0003	1
	2480	-0.45	-0.45 ±1	0.55	1.5	0.0003	1

**Note: BT & 2.4G WIFI cannot support simultaneous transmission.**