

FCC RF Exposure

EUT Description: LED smart bulb
Model No.: ZX-10830, ZX-10831, ZX-10832
FCC ID: 2BEFL-ZX-10830
Equipment type: Portable devices

According to KDB 447498 D01 General RF Exposure Guidance v06 and part 2.1093, Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numeric simulation, is not required when the corresponding SAR Test Exclusion Threshold condition(s), listed below, is (are) satisfied.

For 100 MHz to 6 GHz and test separation distances < 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance mm})] \cdot [f(\text{GHz})] < 3.0 \text{ for 1-g SAR, and } < 7.5 \text{ for 10-g extremity SAR, where}$$
$$f(\text{GHz}) \text{ is the RF channel transmit frequency in GHz}$$

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison

$$\text{EIRP} = \text{E}_{\text{Meas}} + 20 \log(d_{\text{meas}}) - 104.7$$

EIRP is the equivalent isotropically radiated power,

E_{Meas} in dBm is the field strength of the emission at the measurement distance, in dB u V/m

d_{meas} is the measurement distance, in m

Field strength(dBuV/m)	EIRP(dBm)	Max tune-up(mW)	Frequency(MHz)	Min. distance(mm)	Calc. thresholds	limit
93.61	-1.5476	0.7002	2402	5	0.2170	3.0
93.52	-1.6376	0.6859	2440	5	0.2143	3.0
91.82	-3.3376	0.4637	2480	5	0.1460	3.0

Conclusion: No SAR is required