

# Analysis Report

Report No.: 15010067HKG-001

The Equipment Under Test (EUT) is a 2.4GHz BLE transceiver for LED light that operated at 2402MHz to 2480MHz (39 channels with 2MHz channel spacing. The EUT is powered by 120VAC. After pairing with smartphone, the EUT can be controlled by smartphone via Bluetooth.

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 96.9 dB $\mu$ V/m at 3m

Maximum allowed field strength of production tolerance: +/- 6dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 102.9dB $\mu$ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = [(FS\*D) ^2\*1000 / 30] = 5.850mW

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power =5.850mW.

The power density at 20cm = 5.850 \*1.00/ 4 $\pi$ R<sup>2</sup>

= 0.00116 mWcm<sup>-2</sup>

**In the frequency range of 1,500 - 100,000MHz, the MPE limit is 1.0 mWcm<sup>-2</sup> for general population and uncontrolled exposure. As the measured power density at 20cm from the transmitter is lower than the MPE limit, the compliance to the MPE limit can be ensured by indicating the minimum 20cm separation between the transmitter's radiating structures and body of the user or nearby persons.**