RF Exposure

The equipment under test (EUT) is a LumiTek Neon Beast Monster Truck operating at 2.4G Band. The EUT can be powered by DC 3.0V (2 x 1.5V AA batteries). For more detail information pls. refer to the user manual

Antenna Type: Integral antenna.
Antenna Gain: 0dBi.
The normal peak radiated output power (e.i.r.p) is: -2.0dBm (tolerance: +/- 3dB).
The normal peak conducted output power is -2.0dBm (tolerance: +/- 3dB).
Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 93.8 dBμV/m at 3m in the frequency 2430MHz
The EIRP = [(FS*D) ^2 / 30] mW = -1.43dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 92.8dBμV/m at 3m in the frequency 2453MHz
The EIRP = [(FS*D) ^2 / 30] mW = -2.43dBm
which is within the production variation.

The maximum conducted output power specified is 1dBm= 1.259mW
The source- based time-averaging conducted output power
=1.259* Duty cycle mW <1.259 mW(Duty cycle <100%)

The SAR Exclusion Threshold Level:
= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.453) mW
= 9.58 mW

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.

The duty cycle is simply the on-time divided by the period:

The duration of one cycle = 4.000ms
Effective period of the cycle = 0.4058ms
DC =0.4058ms / 4.000ms =0.1015 or 10.15%