

RF Exposure

BCNEW0203

FCC ID: 2ACLYBCNEW0203



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Content

Content.....	2
1. Summary.....	3
2. Analysis for FCC RF Exposure	3
2.1. Standard applicable.....	3
2.2. MPE Calculation	3
2.3. Results	3

1. Summary

This document describes the RF Exposure Analysis for the Beacon Ethernet Wide Beam BCNEW0203, FCC ID: 2ACLYBCNEW0203.

2. Analysis for FCC RF Exposure

2.1. Standard applicable

According to FCC rule parts §1.1307(b), §1.1310(e) and §2.1091, systems operation under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

For the 2.4 GHz band, the Maximum Permissible Exposure (MPE) is 1mW/cm², as stated in §1.1310(e).

2.2. MPE Calculation

The BCNEW0203 theoretical (worst case) maximum conducted power is 0dBm + 1dB tune-up tolerance corresponding to 1.3 mW. The antenna maximum gain is 6.7 dB. The formula to calculate MPE is the following:

$$\text{Power density (mW/cm}^2\text{)} = \frac{\text{Conducted Power (mW)} * \text{Antenna Gain}}{4 * \pi * (\text{Distance (cm)})^2}$$

2.3. Results

Power density at 20 cm distance: 0.0012 mW/cm²

MPE safe distance (Exposure is 1mW/cm²): 0.7 cm