

**Exposure limit according to §15.247(i)**

The beam detector is classified as a mobile device.

The FCC limit for power density for general population/uncontrolled exposure is  $f/1500$  mW/cm<sup>2</sup> for 300 – 1500 MHz frequency range:

$$P = 912.75/1500 = 0.61 \text{ mW/cm}^2$$

The power density  **$P$  (mW/cm<sup>2</sup>) =  $P_T / 4\pi r^2$**

$P_T$  is the transmitted power, which is equal to the peak transmitter output power 12.27 dBm plus maximum antenna gain (-2 dBi), the maximum equivalent isotropically radiated power EIRP is

$$P_T = 12.27 \text{ dBm} - 2 \text{ dBi} = 10.27 \text{ dBm} = 10.6 \text{ mW}.$$

The power density at 20 cm (minimum safe distance, required for mobile devices), calculated as follows:

$$\text{Compliance with FCC limit: } 10.6 \text{ mW} / 4\pi (20 \text{ cm})^2 = 0.002 \text{ mW/cm}^2 \ll 0.61 \text{ mW/cm}^2$$

General public cannot be exposed to dangerous RF level.