Exposure limit according to §15.247(i)

The PIR presence/security detector is classified as a mobile device.

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

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

The power density $\mathbf{P \ (mW/cm^2) \ = \ P_T \ / \ 4\pi \ r^2}$

P_T is the transmitted power, which is equal to the peak transmitter output power 13.99 dBm plus maximum antenna gain (-1) dBi, the maximum equivalent isotropically radiated power EIRP is

$$P_T = 13.99 \text{ dBm} + (-1) \text{ dBi} = 12.99 \text{ dBm} = 19.9 \text{ mW}.$$

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

Compliance with FCC limit: $19.9 \text{ mW} / 4\pi (20 \text{ cm})^2 = 0.004 \text{ mW/cm}^2 \ll 0.61 \text{ mW/cm}^2$

General public cannot be exposed to dangerous RF level.