1-3

Photons energy with wavelength λ is $\Delta E = h\frac{c}{\lambda}$

If the number of photons they emit per second are n_1 for light bulb and n_2 for microwave oven then:

$$n_1 = \frac{E_1}{\Delta E_1} = \frac{75}{6.63 \times 10^{-34} \times \dfrac{3 \times 10^8}{500 \times 10^{-9}}} = 1885 \times 10^{17}$$

$$n_1 = \frac{E_2}{\Delta E_2} = \frac{850}{6.63 \times 10^{-34} \times \dfrac{3 \times 10^8}{150 \times 10^{-9}}} = 6417 \times 10^{17}$$

Energy of a quanta is negligible with respect to overall Energy so we can consider energy spectrum to be continuous.

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