Answer to the question #57683, Physics / Astronomy | Astrophysics

The wavelength of a light wave having a frequency of 80,000,000 hz is

Answer:

The wavelength λ of a sinusoidal waveform traveling at constant speed c is given by $\lambda = \frac{c}{\nu}$, where speed of light $c = 3 \cdot 10^8\ m/s$. 80,000,000 Hz = 80,000,000 s^{-1}

$$\lambda = \frac{c}{\nu} = \frac{3 \cdot 10^8\ m/s}{8 \cdot 10^7\ s^{-1}} = 3.75\ m$$