Answer on Question #72038- Physics-Other

Green light has a wavelength of 0.00000050m, and a speed of 300000000m/s

When the green light goes into glass, it slows down. Its new speed is 200000000m/s. What is its frequency in glass?

Solution

The frequency is constant, regardless of the medium:

$$f_{glass} = f_{air} = \frac{c_{air}}{\lambda_{air}} = \frac{300000000}{0.00000050} = 6 \cdot 10^{14} Hz.$$

Answer: $\mathbf{6 \cdot 10^{14} Hz}$.