

Result:

Wavelength is 1005 nm (1.005 μm).

Solution:

$$\frac{1}{\lambda} = 1.097 * 10^7 \text{ m}^{-1} \left(\frac{1}{n_2^2} - \frac{1}{n_1^2} \right) = 1.097 * 10^7 \text{ m}^{-1} \left(\frac{1}{3^2} - \frac{1}{7^2} \right) = 9.950 * 10^5 \text{ m}^{-1}$$

$$\text{So } \lambda = 1.005 * 10^{-6} \text{ m} = 1005 \text{ nm} = 1.005 \mu\text{m}$$