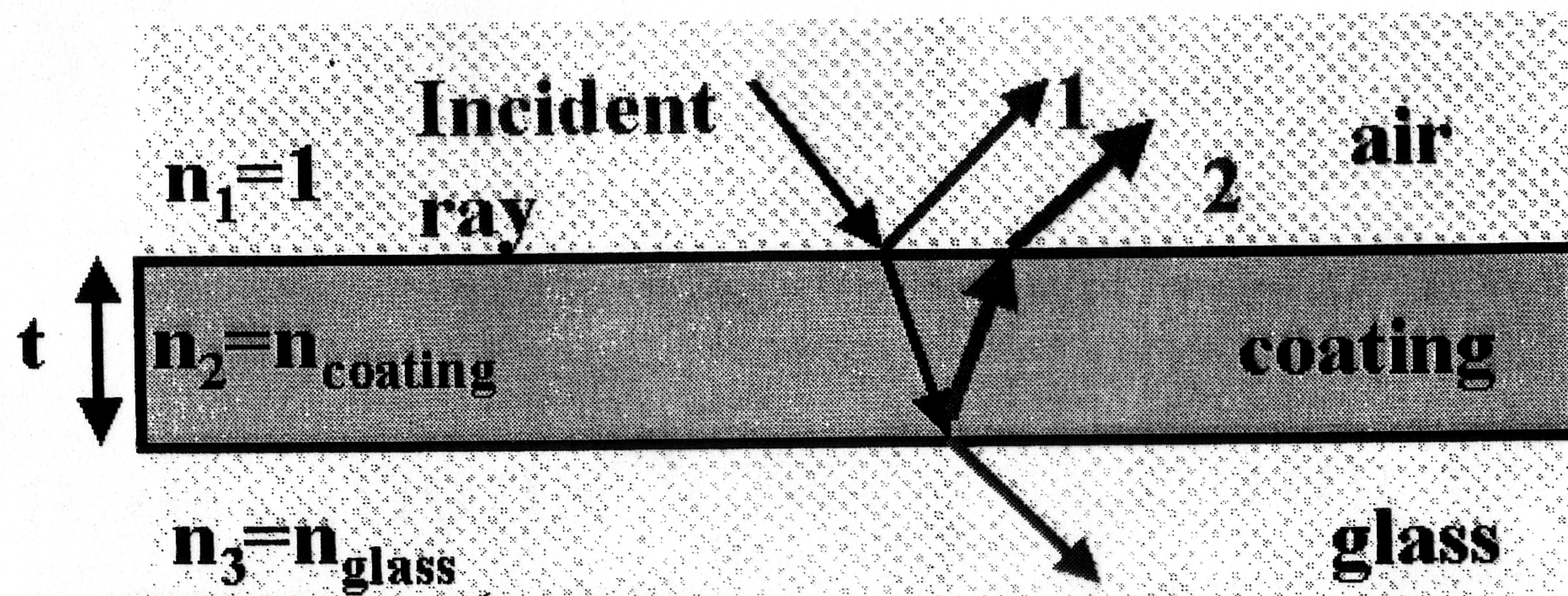# Applications:non-reflecting coating

- **A special application of thin lenses is the non-reflecting coating for lenses.**

- **Now medium 1 is air ($n_1=1$), medium 2 is the coating $n_2=n_{coating}$, medium 3 is glass ($n_3=n_{glass}$). In this application $n_2<n_3$.**

$$\begin{cases} 2t = (m+\tfrac{1}{2})\lambda_{med} \\ \text{Destructive Interference} \end{cases}$$

$$\boxed{\lambda_{med} = \frac{\lambda_{air}}{n_{med}}}$$

n_{med} = medium in coating

$$\begin{cases} 2t = m\,\lambda_{med} \\ \text{Constructive Interference} \end{cases}$$