light ray $'\mathrm{B}'$ travels extra distance $2L$ (for small angles)

has wavelength in coating $\lambda_{\text{coat}} = (\frac{n_1}{n_2})\,\lambda_{\text{air}}$

has phase shift of $\frac{1}{2}\lambda$ at reflection with silicon if $n_2 < n_3$

$$\frac{2L}{\lambda_{\text{air}}(\frac{n_1}{n_2})} \quad = \quad N + \frac{1}{2} \qquad N = 0, 1, 2, 3, ...$$

$$L \quad = \quad \frac{1}{4}\,\lambda_{\text{air}}\,(\frac{n_1}{n_2})(N-1) \qquad N = 0, 1, 2, 3, ...$$