So, in terms of the variable \( z \), the rays oscillate about the axis of the Selfoc. The rate (wave number) in terms of \( z \) for oscillation depends on the amplitude because of the relation

\[
\frac{\pi}{n_0^2 - 2K} = \frac{\pi}{n_0^2 - 2K} \cdot Z
\]

It is easy to check that

\[
p_x = \dot{x} = \omega A_x \cos (\omega z + \phi_x) \text{ etc.} \Rightarrow
\]

\[
h = \frac{p_x^2 + p_y^2}{2} + \frac{\omega^2}{2} (x^2 + y^2) = \frac{\omega^2}{2} (A_x^2 + A_y^2) \Rightarrow
\]

\[
\left[ n_0^2 - 2K \right]^{-1/2} = \left[ n_0^2 - \omega^2 (A_x^2 + A_y^2) \right]^{-1/2}
\]