We saw last time that \[ I = \frac{E_0 c n_1 |E|^2}{2} \]

\( I \) is the intensity, \( E \) is the electric field amplitude.

Consider the following situation.

\[ \begin{align*}
E_1 &\quad \rightarrow \quad E_2 \\
\text{medium } 1, &\quad \text{medium } 2, &\quad n_1, &\quad n_2 \\
\uparrow &\quad \text{boundary}
\end{align*} \]

Suppose the boundary is specially constructed so all energy is transmitted from medium 1 to medium 2. There is no reflected energy.

How are \( E_1 \) and \( E_2 \) related?

Answer in class.

The rest of this lecture follows Secs. 1.4, 1.5, 1.6 in O.f.P.