

$$\vec{E}_{TOT} = 2E_0 \left\{ -\hat{x} [\sin(\omega t) \sin(2z)] + 2\hat{y} [\sin(\omega t - \frac{\pi}{2}) \sin(2z)] \right\}$$

- This can be interpreted as standing waves in the  $\hat{x}$  and  $\hat{y}$  directions, which are  $90^\circ$  out of phase with one another. The  $\hat{y}$  component has twice the amplitude as the  $x$ -component.

