

$$\overline{E}_i = \hat{y} \frac{2E_0}{3\sqrt{2}} e^{ik_x x + ik_z z} + E_0 \left[\frac{\hat{z}}{2\sqrt{2}} - \frac{\hat{x}}{2\sqrt{6}} \right] e^{ik_x x + ik_z z - i\pi/2}$$

$$\overline{E}_r = \hat{y} \frac{E_0}{3\sqrt{2}} e^{-ik_x x + ik_z z}$$

(c.i) $\phi = 0$

(c.ii) constant, maximum value $2E_0$