\textbf{E16B.4} Equation E16.14 tells us that the average intensity of an EM wave is whose wave amplitude is roughly $E_0 = 25 \text{ N/C}$ is given by

$$I = \frac{1}{2} \varepsilon_0 c E_0^2 = \frac{1}{2} \left( \frac{e}{4\pi k} \right) E_0^2 = \frac{1}{2} \left( \frac{25 X/\varphi^2}{377 \varphi} \right) \left( \frac{1 Y}{1 \text{ m}} \right) \left( \frac{1 W}{1 \text{ m}^2} \right) = 0.83 \text{ W m}^{-2}.$$