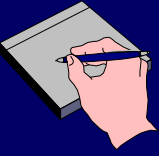


Intensity (I or S) = Power/Area



- Energy (U) hitting flat surface in time t

= Energy U in red cylinder:

$$U = u \times \text{Volume}$$

$$= u (AL) = uAct$$

- Power (P):

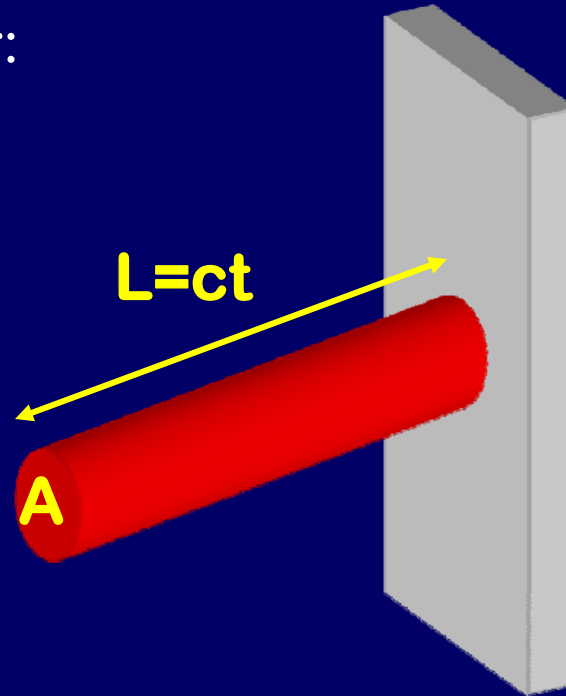
$$P = U/t$$

$$= uAc$$

- Intensity (I or S):

$$S = P/A \text{ [W/m}^2\text{]}$$

$$= uC = c\epsilon_0 E_{\text{rms}}^2$$



U = Energy

u = Energy Density (Energy/Volume)

A = Cross section Area of light

L = Length of box