Directionality

Diameter of Laser beam is the position in the beam cross section at which:

$$I = \frac{I_c}{e^2}$$
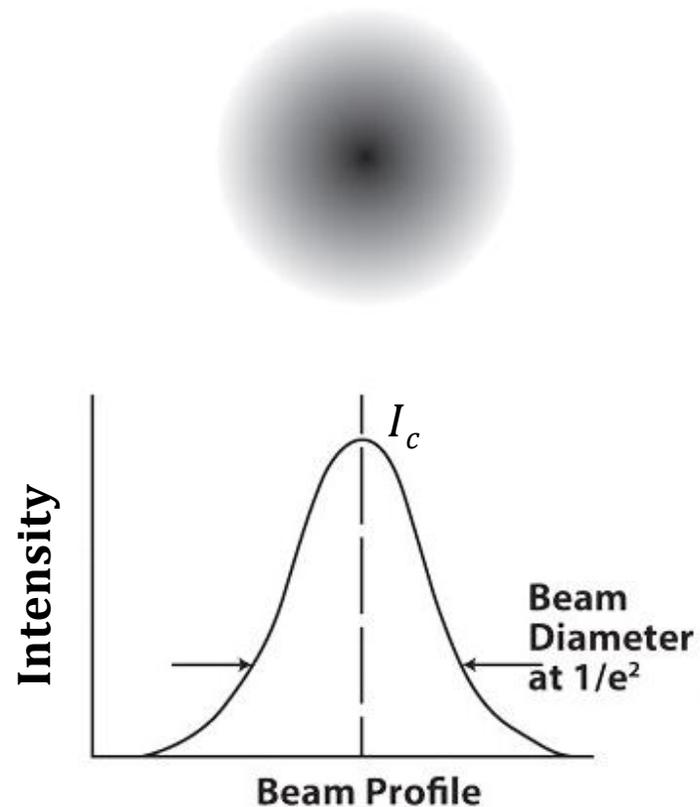
Beam Profile

TEM$_{00}$ Fundamental (Gaussian) Mode

Intensity

I_c

Beam Diameter at 1/e²

Axis

Cross section

LASER Cavity
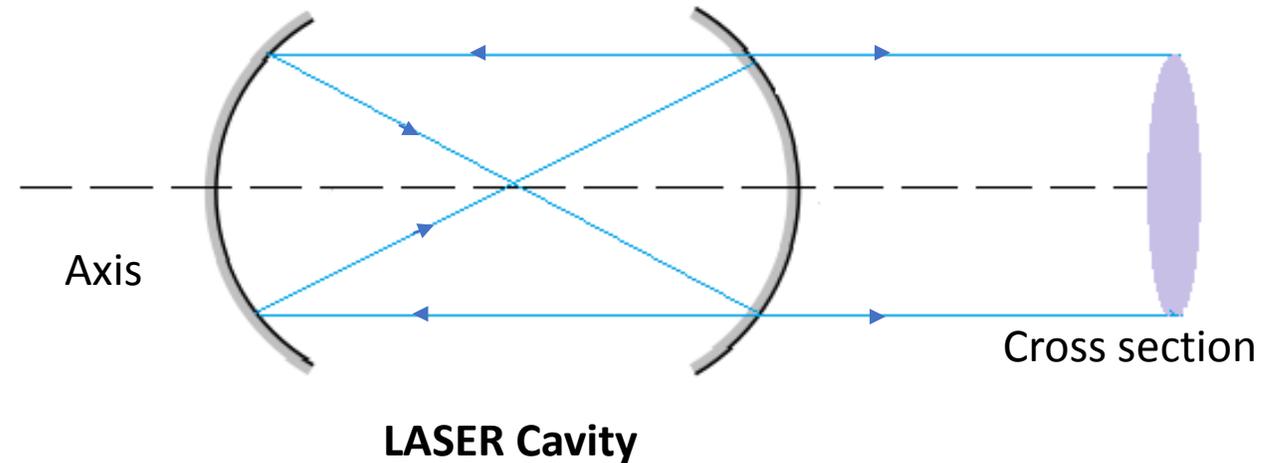
Spot dimension of Laser: $\omega_0 = \dfrac{2\lambda}{\pi\theta}$ where θ = angle of convergence

λ = wavelength of light
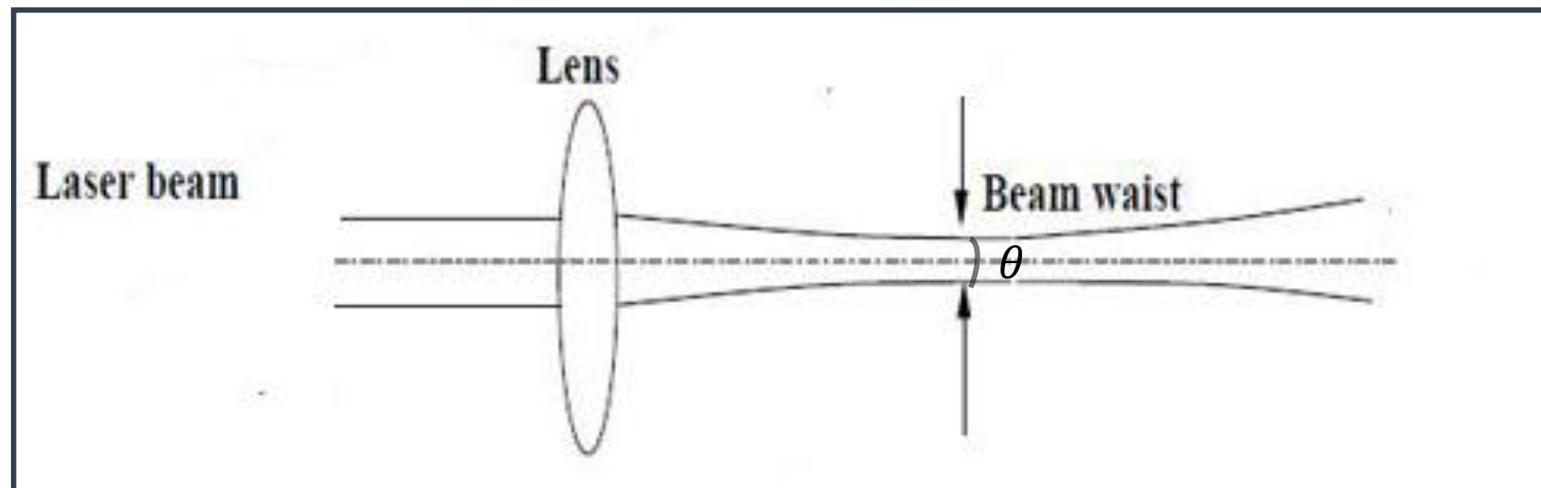
Intensity

 It is measured in terms of Irradiance(I) = $\dfrac{E}{tA} = \dfrac{P}{A}$

E = energy of beam at time(t), A = area of cross section of beam

P = power of Laser beam