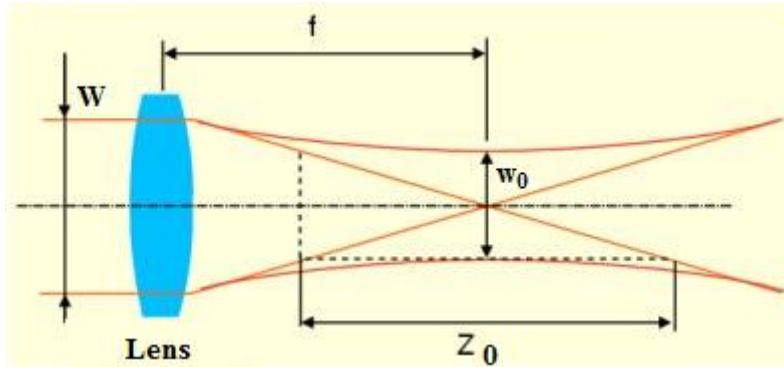


After going through a lens, the beam 'becomes' a hyperboloid. At the point where the density of the light is most intense, the beam does not pass through a focal point but a focal spot.



$$Z_0 = \frac{2 \times \lambda}{\pi} \sqrt{p^2 - 1} \times \left(\frac{2 \times f}{W} \right)^2$$

$$W_0 = \frac{2 \times \lambda}{\pi \times \theta_0} \text{ with } \theta_0 \sim \frac{W}{2 \times f}$$

Z_0 : Depth of field in mm

f : Distance of the focal point in mm

W_0 : Diameter of the focal spot in mm

λ : Wavelength in mm

W : Diameter of the beam before focusing in mm

p : Tolerance factor