

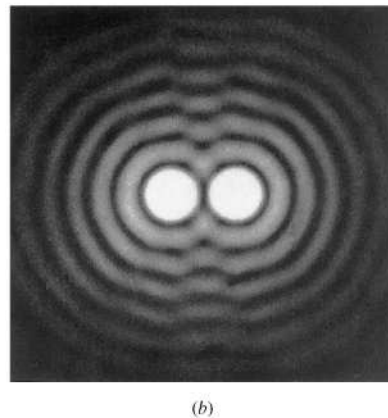
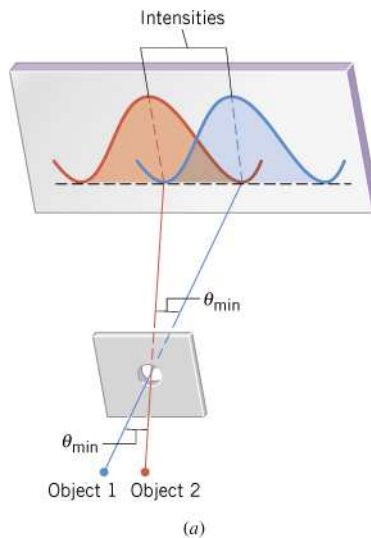
Resolving Power

Diffraction Circular Aperture:

$$\sin(\theta) = \frac{1.22\lambda}{D}$$

← diameter

**Raleigh Criterion: when central max from 1st point overlap
m=1 minimum from 2nd point**

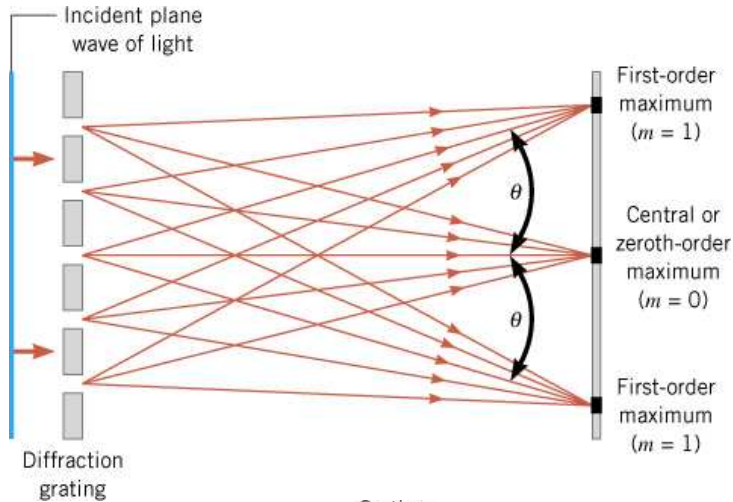


$$\theta_{\min} = \frac{1.22\lambda}{D}$$

$$y = L\theta_{\min}$$

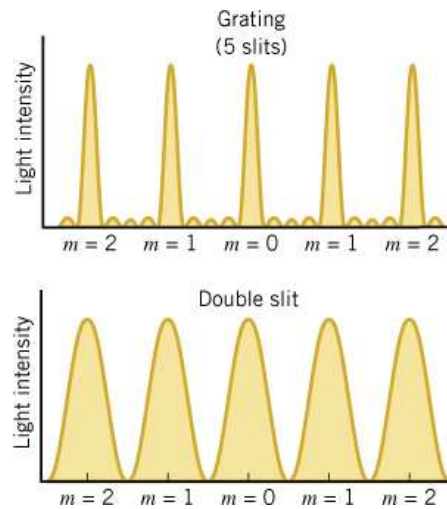
(small angle approximation)

Diffraction Grating



Narrow constructive maximums

$$\sin \theta = m \frac{\lambda}{d} \quad m = 0, 1, 2, 3, \dots$$



$$\text{Lines/cm} = 1/d$$