

W4IMTWOBS

Imaging: Object is "Two bars" and cylindrical lens is used.

$$f/10 = f/2a$$

a is "radius" of cylindrical lens

$$Y := -.02, -.019 \dots .02$$

$$b1 \equiv -.008$$

$$b2 \equiv -.005$$

$$\lambda := .0005$$

$$\text{Tol} := .01$$

$$b3 \equiv .005$$

$$b4 \equiv .008$$

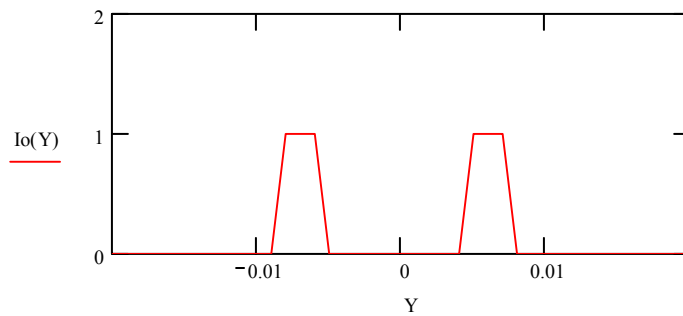
$$k := \frac{2 \cdot \pi}{\lambda}$$

$$f := 500 \quad a := 25$$

$$Io1(Y) := (\Phi(b2 - Y) - \Phi(b1 - Y))$$

$$Io2(Y) := (\Phi(b4 - Y) - \Phi(b3 - Y))$$

Object $Io(Y) := Io1(Y) + Io2(Y)$



$$Iim1(Y) := \int_{b1}^{b2} 4 \cdot a^2 \cdot \left[\frac{\sin\left[\frac{k \cdot a \cdot (Y - YY)}{f}\right]}{k \cdot a \cdot \frac{(Y - YY)}{f}} \right]^2 dYY$$

$$Iim2(Y) := \int_{b3}^{b4} 4 \cdot a^2 \cdot \left[\frac{\sin\left[\frac{k \cdot a \cdot (Y - YY)}{f}\right]}{k \cdot a \cdot \frac{(Y - YY)}{f}} \right]^2 dYY$$

$$Iim(Y) := Iim1(Y) + Iim2(Y)$$

