I19FABRYAS

Fabry-Perot Ring pattern in Transmission and Reflection depending on angle.

Near normal incidence. Parameters: reflection coefficient, thickness d, refractive index and range of angles in Rad. All length in mm. .

$\Delta = 2\pi/\lambda \ \ 2dn2 \cos\theta$

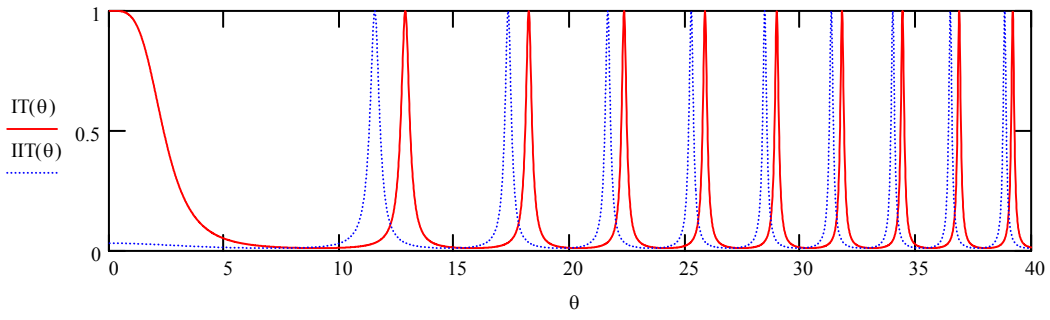
$$n2 := 1 \qquad g := \frac{2\cdot r}{1 - r^2}$$

$$IT(\theta) := \frac{1}{1 + g^2\cdot\sin\left(2\cdot\frac{\pi}{\lambda 1}\cdot D\cdot n2\cdot\cos\left(2\,\frac{\pi}{360}\cdot\theta\right)\right)^2} \qquad IIT(\theta) := \frac{1}{1 + g^2\cdot\sin\left(2\cdot\frac{\pi}{\lambda 2}\cdot D\cdot n2\cdot\cos\left(2\,\frac{\pi}{360}\cdot\theta\right)\right)}$$

$$D \equiv .01 \qquad r \equiv .9 \quad \lambda 1 \equiv .0005 \qquad \theta \equiv 0, .01 .. 40$$

$$\lambda 2 \equiv .0005025$$

Graph for transmission depending on angle for fixed ratio of D/λ



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