Optyka Geometryczna

$$\Phi = 683\,\frac{\mathrm{lm}}{\mathrm{W}} \int_{380\ \mathrm{nm}}^{780\ \mathrm{nm}} P(\lambda) \times V(\lambda) d\lambda \qquad \eta = \frac{\Phi}{P} \qquad I = \frac{\Phi}{\Omega}$$

$$\Omega = \frac{A}{r^2} \qquad E = \frac{\Phi}{A} \qquad E = \frac{I}{r^2}\cos\alpha \qquad L = \frac{I}{A \cdot \cos\alpha}$$

$$E \propto \frac{D^2}{f^2} = \left(\frac{D}{f}\right)^2 \qquad a = \frac{f}{D} \qquad E_\Phi = EtA \qquad I = I_0 cos^2(\alpha)$$

$$\tan\alpha = n \qquad E = h\frac{c}{\lambda} \qquad h\nu = E_k + W \qquad I = \frac{\Delta n \cdot h \cdot \nu}{\Delta t \cdot \Delta S}$$

$$\frac{1}{s} + \frac{1}{s\prime} = \frac{1}{f} \qquad f = \frac{R}{2} \qquad m = -\frac{s\prime}{s} \qquad V + V' = P$$

$$L = n \cdot S \qquad n = \frac{c}{v} \qquad sin\alpha \cdot n_1 = sin\beta \cdot n_2$$

$$d' = \frac{d}{n} \qquad \nu = \frac{n_D - 1}{n_F - n_C} \qquad n_\mathrm{p} \sin\frac{\gamma}{2} = n_0 \sin\frac{(\delta_\mathrm{min} + \gamma)}{2}$$

$$\delta_\mathrm{min} = \gamma(n-1) \qquad P_{pr.} = d \cdot P_{socz.} \qquad P = \frac{n' - n}{R} \qquad l \cdot l' = f \cdot f'$$

$$\frac{1}{s} + \frac{1}{f'} = \frac{1}{s'} \qquad V + P = V' \qquad \frac{n}{s} + P = \frac{n'}{s\prime}$$

$$\frac{f}{s} + \frac{f\prime}{s'} = 1 \qquad \frac{n_1}{f} = -\frac{n_2}{f\prime} \qquad m_l = \frac{s\prime}{s} \qquad m_\mathrm{o} = m_l^2$$

$$m = \frac{\tan\boldsymbol{\omega_2}}{\tan\boldsymbol{\omega_1}} \qquad P = (n_\mathrm{socz.} - n_\mathrm{o})\left(\frac{1}{R_1} - \frac{1}{R_2}\right) \qquad f' = \frac{l^2 - d^2}{4l}$$

$$P = P_1 + P_2 - \frac{d}{n}P_1P_2 \qquad P = \frac{P_1}{1 - \frac{d}{n} \cdot P_1} + P_2 \qquad h = \frac{d}{n} \cdot \frac{P_2}{P} \qquad h' = -\frac{d}{n} \cdot \frac{P_1}{P}$$

$$S = s - h \qquad S' = s' - h' \qquad R = \frac{D^2}{8h} + \frac{h}{2} \qquad d = \frac{1}{2}(f_1 + f_2)$$

$$ASL = f_{maks} - f_{min} \qquad AST = ASL \cdot \tan\alpha \qquad n_1 f_1 + n_2 f_2 = 0$$

$$\frac{P_1}{P_2} = -\frac{\nu_1}{\nu_2} \qquad P_1 = P\left(\frac{\nu_1}{\nu_1 - \nu_2}\right) \qquad P_2 = -P\left(\frac{\nu_2}{\nu_1 - \nu_2}\right)$$

$$g \sim \frac{f'd}{D} \qquad p = -\frac{f_{ob}}{f_{ok}} \qquad p = \frac{f_{ob}}{f_{ok}}$$

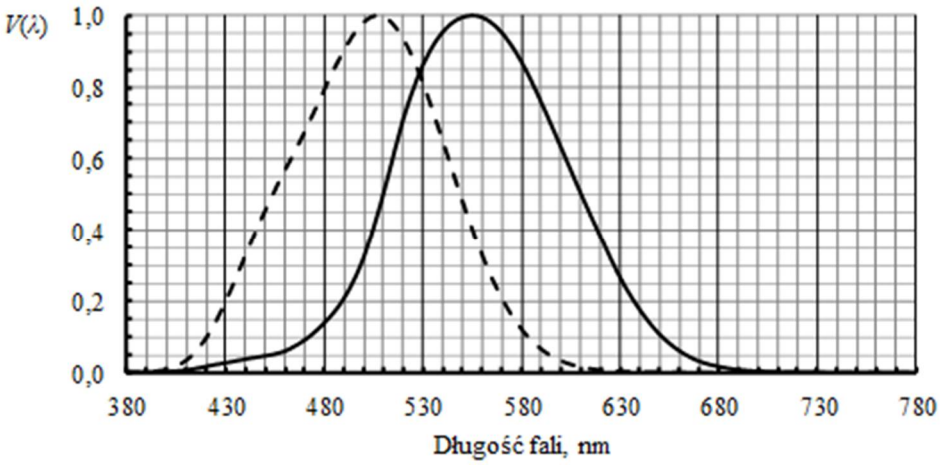
$M = \frac{P}{4} + 1$ $P_B = zP_k^2$

$R = \frac{1}{s_D}$ $A = R - \frac{1}{s_B}$ $R = D - D_{komp.}$

$P_k = \frac{R}{1 - lR}$ $z = \frac{2A}{\lambda}$ $A = n \sin u$

$p = \frac{ld}{f_{ok} \cdot f_{ob}}$ $p = p_{\text{ok.}} \cdot p_{\text{ob.}}$

Krzywe wrażliwości widmowej oka



Niektóre stałe

Odległość dobrego widzenia: 25 cm

prędkość światła w próżni: $3 \times 10^8 \frac{\text{m}}{\text{s}}$

współczynnik załamania wody 1,3333 (lub 4/3)

stała Plancka: $6{,}6 \times 10^{-34}$ J · s