

Table of contents

Optical Radiation:

Deviation angle of ray beam after refraction (transmission) and diffraction:

$$\varsigma = \alpha + \arcsin [\sin(\varpi) \sqrt{\eta^2 - \sin^2(\alpha)} - \cos(\varpi) \sin(\alpha)] - \varpi = \alpha + \alpha_2 - \varpi \quad (1)$$

where $\varpi = \beta + \beta_2 = \text{const.}$

Minimal aberration (minimal projection error):

$$\varsigma = \varsigma_{\min} \iff$$

$$\begin{aligned} & \varsigma_{\min} \iff \\ & \frac{d}{d\alpha} \varsigma = 0 \wedge \\ & \varsigma_{\min} = 2\alpha - \varpi = 2(\alpha - \beta) \end{aligned} \quad (2)$$