$$\frac{I_A}{I_B} = \left(\frac{d_B}{d_A}\right)^2$$

$$d_B = d_A \sqrt{\frac{I_A}{I_B}}$$

$$\frac{I_A}{I_B} = 10^{\,0.4(\mathrm{m}_B - \mathrm{m}_A)}$$

$$d_B = d_A \; 10^{\,0.2(\mathrm{m}_B - \mathrm{m}_A)}$$