

Diffraction of light (from a single aperture)

Questions

1. Is the intensity same for all fringes?
2. Is the bandwidth same for all maxima/minima?
3. For fixed distance of screen (D) and wavelength (λ) how does the width of the bright band vary with increase in slit width (d)?
4. For fixed slit width (d) and wavelength (λ) how does the width of the bright band vary with increase in distance of screen (D)?
5. For fixed slit width (d) and distance of screen (D) how does the width of the bright band vary with increase in wavelength (λ)?

Note :

Questions given above may be visualized and solved using the simulations. However, obtaining a mathematical solution is to be always treated as the final answer and obtaining such a mathematical solution implies a deeper understanding and application of the concept.

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