

Diffraction on periodic surface microrelief grating with positive or negative optical anisotropy

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Keywords: Diffraction, optical elements, DOE.

Abstract: Diffraction optical elements (DOE) are important elements of systems for images displaying and processing. The DOE materials with both positive and negative birefringence enhance performances and functionality of such systems. We have calculated the diffraction of rays passing through optically anisotropic grating with surface microrelief by using our original Exedee software. At the first time the diffraction parameters for both transmitted and reflected TE- and TM-waves are calculated for materials with both positive and negative optical anisotropy. The simulation results are to be used to create DOE for the visible, UV, IR and THz ranges.

This article published in: Diffraction on periodic surface microrelief grating with positive or negative optical anisotropy / V. V. Belyaev [and others] //Appl. Opt. – 2020. – T. 59. – № 27. – P. 8443-8449. – <https://doi.org/10.1364/AO.397133>.

Internet link to this article:

<https://www.osapublishing.org/ao/abstract.cfm?uri=ao-59-27-8443>.