

POLARIZATION-RELATED PECULIARITIES  
OF LIGHT ABSORPTION SPECTRA  
IN DIRECT-GAP SEMICONDUCTORS  
WITH SCREW DISLOCATIONS  
NEAR THE FUNDAMENTAL  
ABSORPTION EDGE

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S u m m a r y

The spectrum of interband absorption of light in direct-gap semiconductors with randomly distributed parallel screw dislocations is calculated in the region of the quasicontinuous spectrum of dislocation states near the fundamental absorption edge. It is shown that the mechanism of dislocational absorption is related to a local change of the gap width caused by the long-range deformation potential of dislocations. The comparison to the corresponding results for edge dislocations reveals a series of common features as well as essential distinctions. The spectral dependence of dislocational absorption was found to be different for the different polarizations of light. This presents additional possibilities for experimental investigation.