
Problems and trends in the design of aperture reproductive lens for microprojection

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Lens of lens video device for microreproduction refers to the current sector of modern photographic lenses. The appointment of lens requires it difficult to implement a combination of high values of the relative aperture, angular field and quality indicators image (resolution in the extended spectral range from the near UV - and IR - region), the level of distortion, stability light on an image field, spectral transparency of the system) when the design features of the scheme means compactness, telenaloxone, telecentrability (quasi telecentrability) run the principal rays in space images. In view of the discussed technical specifications defined classification criteria for the selection of information sources and groups lenses counterparts, on the basis of the study, which substantiated the concept of structural schemes for this class of lenses. Analysis of the level and set of technical characteristics, structural regularity and urgent corrective elements of analog - video projectors projection lenses. Discuss problems associated with the choice of optical materials with high transparency for the working spectral range and shows the perspectives of their resolution.

Keywords: *photo lens, projection lens, reversal telephoto lens, structural circuit, aberration analysis.*

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