

ELECTRO-OPTICAL CHARACTERISTICS
OF A LIQUID CRYSTAL LENS
WITH POLYMER NETWORK

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S u m m a r y

We study a tunable-focus lens in which the key element is a gradient-polymer-stabilized liquid crystal (G-PSLC) structure. In this paper, we further develop the theoretical model [?, ?] that describes the dependence of the G-PSLC lens' focal length on the applied voltage and presents a theoretical study of lens aberrations. According to Fermat's principle, we minimize the optical path of a test light beam and calculate the angles of a ray exiting from the cell. Using these results, the lateral and longitudinal aberrations are estimated. The obtained results can be used to optimize the G-PSLC lenses.