

POWERLESS FIELD-CORRECTIVE LENS

Abstract

A optical lens (10) is disclosed which is capable of correcting for imaging system characteristics such as field curvature and spherical aberration. The
5 corrective lens comprises a single optic device and imparts no additional power into the optical system. In particular, the corrective lens comprises a plano-based device (either plano-concave or plano-convex) including a series of stepped zones (14) where the steps are formed to be parallel/perpendicular to the plano surface (12) of the device. The stepped profile of the corrective lens is determined to approximate a
10 lens curvature R which will impart a curvature to the wavefront passing therethrough to essentially cancel selected inherent imaging system aberrations. In particular, a corrective lens of the present invention may be utilized to correct for field curvature, spherical aberration, or both. The corrective lens of the present invention may be formed to be either transparent or reflective, depending upon system requirements.

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