AN EXTENDED DEPTH OF FOCUS (EDOF) LENS TO INCREASE PSEUDO-ACCOMODATION BY UTILIZING PUPIL DYNAMICS

Abstract

In one aspect, the present invention provides an ophthalmic lens (e.g., an IOL) that includes an optic having an anterior surface and a posterior surface disposed about an optical axis. At least one of the surfaces (e.g., the anterior surface) has a profile characterized by superposition of a base profile and an auxiliary profile. The auxiliary profile can include an inner region, an outer region and a transition region between the inner and the outer regions, where an optical path difference across the transition region (i.e., the optical path difference between the inner and the outer radial boundaries of the transition region) corresponds to a non-integer fraction (e.g., ½) of a design wavelength (e.g., a wavelength of about 550 nm).

Fig. 1A