

VARIABLE OPTIC OPHTHALMIC DEVICE INCLUDING SHAPED LIQUID CRYSTAL ELEMENTS WITH NANO-SCALED DROPLETS OF LIQUID CRYSTAL

ABSTRACT

This invention discloses methods and apparatus for providing a variable optic insert into an ophthalmic lens. The variable optic insert may have surfaces within that have differing radii of curvature. A liquid crystal layer may be used to provide a variable optic function and in some embodiments, the liquid crystal layer may comprise droplets that are nano-scaled. An energy source is capable of powering the variable optic insert included within the ophthalmic lens. In some embodiments, an ophthalmic lens is cast-molded from a silicone hydrogel. The various ophthalmic lens entities may include electroactive liquid crystal layers to electrically control refractive characteristics.

Fig. 1