

OPHTHALMIC LENS

ABSTRACT

An ophthalmic lens of photochromic glass having an $R_2O-Al_2O_3-B_2O_3-SiO_2$ base glass composition and a method of producing the lens. The lens contains precipitated cuprous halide crystals that are elongated and oriented, whereby the lens is capable of polarizing light when the lens is in the darkened state. If at least a portion of the crystals in at least a surface layer on the lens are reduced to copper metal, the lens exhibits a permanent dichroic behavior. The lens provides effective polarization of radiation across the entire visible wavelength region of the spectrum, has a sharp spectral cutoff for radiation below the 400 nm wavelength, thereby eliminating UV transmission, and has a transmittance not over about 40% in the darkened state.

Figure 1

