

DIFFRACTIVE LENS AND OPTICAL DEVICE USING THE SAME

ABSTRACT OF THE DISCLOSURE

An object of the present application is to thin a thick lens used in an automobile headlamp optical system and a projector lighting optical system while maintaining the optical properties of the lens. A diffractive lens (101) includes, on at least one surface, an optical surface (103, 104) with a plurality of areas defined by a plurality of steps. A blaze wavelength of the diffractive lens (101) is within a wavelength spectral range of a light source (102) used. An optical path difference between adjacent areas at the blaze wavelength is larger than a coherence length of the light source (102). The diffractive lens (101) substantially acts as a Fresnel lens at a wavelength other than the blaze wavelength.

FIG.1