12 DEC 2002

G00002

OPTICAL LENS, AND OPTICAL PICKUP AND OPTICAL DISC APPARATUS USING SUCH LENS

ABSTRACT OF THE DISCLOSURE

An optical lens composed of a transparent material, wherein one surface thereof on a light source side is a convex aspherical surface of rotation symmetry defined by a function relative to the radial distance from an optical axis. The aspherical surface is shaped to be a curved one without any stepped region with regard to the radial direction in the defined area, and has a portion where the derivatives of the function are discontinuous at a predetermined radial position. Although not equipped with an iris diaphragm, this optical lens is capable of eliminating an incident light beam outside the optical effective surface thereof without deteriorating the optical characteristics.

FIGURE 2

162162