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(54) Title: **QUADAXIAL GRADIENT INDEX LENS**

(57) Abstract

An axial-based lens is provided, comprising two biaxial elements (66, 68), each having entrance and exit surfaces (18, 20), which are perpendicular to the index of refraction gradient. The exit surface (20) of one of the elements (66) is joined to the entrance surface of the other element (68), with one of the elements rotated at an angle with respect to the other. In a preferred embodiment, the angle of rotation is 90°. The axially-based lens element has the ability to gather and focus light to a spot with a minimum of spherical aberration and with a substantially uniform distribution of light intensity from center to periphery of the spot. In a preferred embodiment, the lens element generates a square spot size.

