

ABSTRACT**DIFFRACTIVE TRIFOCAL LENS**

A diffractive multifocal lens is disclosed, comprising an optical element having at least one diffractive surface, the surface profile comprising a plurality of annular concentric zones. The optical thickness of the surface profile changes monotonically with radius within each zone, while a distinct step in optical thickness at the junction between adjacent zones defines a ss to another periodically so as to tailor diffraction order efficiencies of the optical element. In one example of a trifocal lens, step heights alternate between two values, the even-numbered step heights being lower than the odd-numbered step heights. By plotting a topographical representation of the diffraction efficiencies resulting from such a surface profile, step heights may be optimized to direct a desired level of light power into the diffraction orders corresponding to near, intermediate, and distance vision, thereby optimizing the performance of the multifocal lens.

FIG. 4