

ABSTRACT

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Optimized Posterior Surface for Toric Contact Lenses

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A method for improving a reference set of soft toric contact lenses, an improved set of toric contact lenses and an improved toric lens are provided. The method involves identifying geometric characteristics of the reference lenses including at least a target sphere power, a radius of curvature of the posterior surface of the peripheral zone, a lens center thickness, a lens material refractive index, the optic zone diameter and an outer diameter of said transition zone; identifying a reference meridian of the reference set of toric lenses; reducing slope deviations along the reference meridian by adjusting a sag and the radius of curvature of the peripheral zone, and/or increasing the outer diameter of the transitional zone; and creating the improved set of lenses by applying the adjusted sag and radius of curvature, and/or increased outer diameter of the transition zone to all lenses within the improved set of lenses.