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US005220359A

United States Patent [19] [11] **Patent Number: 5,220,359**

Roffman [45] **Date of Patent: * Jun. 15, 1993**

[54] **LENS DESIGN METHOD AND RESULTING ASPHERIC LENS**

[75] **Inventor:** Jeffrey H. Roffman, Jacksonville, Fla.

[73] **Assignee:** Johnson & Johnson Vision Products, Inc., Jacksonville, Fla.

[*] **Notice:** The portion of the term of this patent subsequent to Sep. 24, 2008 has been disclaimed.

[21] **Appl. No.:** 728,421

[22] **Filed:** Jul. 11, 1991

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 557,261, Jul. 24, 1990, Pat. No. 5,050,981.

[51] **Int. Cl.⁵** G02C 7/04

[52] **U.S. Cl.** 351/177; 351/160 R; 351/161

[58] **Field of Search** 351/177, 160 R, 160 H, 351/161, 162

[56] **References Cited**
U.S. PATENT DOCUMENTS

3,482,906	12/1969	Volk	351/160 R
4,199,231	4/1980	Evans	351/160 H
5,050,981	9/1991	Roffman	351/177

Primary Examiner—Scott J. Sugarman
Attorney, Agent, or Firm—Joel R. Petrow

[57] **ABSTRACT**

An aspheric lens for providing improved vision and a method for generating such a lens is described. The lens provides a sharp image focus while minimizing image aberrations. The method utilizes ray tracing techniques in conjunction with Modulation Transfer functions to accurately account for the total corrective lens-eye system. The lens may be in the form of a contact lens, an intraocular lens, a natural lens or a spectacle lens, and is suitable for correcting myopia, presbyopia, astigmatism and other focusing problems. The lens is characterized by a hyperbolic or parabolic surface which functions to reduce spherical aberrations and minimize the retinal image spot size.

5 Claims, 9 Drawing Sheets

Záložky

- Bibliography
- Abstract
- Drawings
- Description
- Claims



US005220359A

United States Patent [19] [11] **Patent Number:** **5,220,359**
Roffman [45] **Date of Patent:** * **Jun. 15, 1993**

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 [75] **Inventor:** Jeffrey H. Roffman, Jacksonville, Fla.
 [73] **Assignee:** Johnson & Johnson Vision Products, Inc., Jacksonville, Fla.
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 [58] **Field of Search:** 351/177, 160 R, 160 H, 351/161, 162

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 4,199,231 4/1980 Evans 351/160 H
 5,050,981 9/1991 Roffman 351/177

Primary Examiner—Scott J. Sugarman
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