



(43) International Publication Date
24 September 2009 (24.09.2009)

(10) International Publication Number
WO 2009/117506 A3

(51) International Patent Classification:
G02C 7/00 (2006.01)

(21) International Application Number:
PCT/US2009/037544

(22) International Filing Date:
18 March 2009 (18.03.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/037,351 18 March 2008 (18.03.2008) US
61/060,291 10 June 2008 (10.06.2008) US

(71) Applicant (for all designated States except US): **PIX-ELOPTICS, INC.** [US/US]; 5241 Valleypark Drive, Roanoke, VA 24019 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BLUM, Ronald, D.** [US/US]; 5320 Silver Fox Road, Roanoke, VA 24018 (US). **HADDOCK, Joshua, N.** [US/US]; 17 Church Avenue SW, Apt. 202, Roanoke, VA 24011 (US).

KOKONASKI, William [US/US]; 1807 44th Street Court, NW, Gig Harbor, WA 98335 (US). **GUPTA, Amitava** [US/US]; 5322 Fox Den Road, Roanoke, VA 24018 (US).

(74) Agents: **KAMLAY, Aaron, S.** et al.; Townsend and Townsend and Crew, LLP, Two Embarcadero Center, Eighth Floor, San Francisco, CA 94111 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: ADVANCED ELECTRO-ACTIVE OPTIC DEVICE

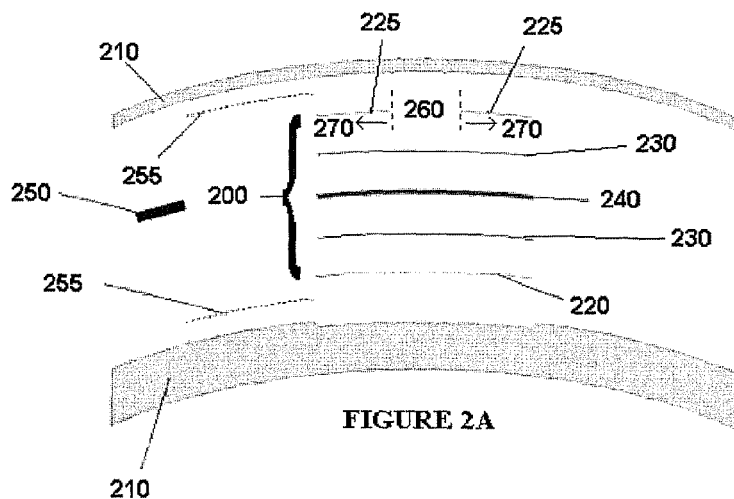


FIGURE 2A

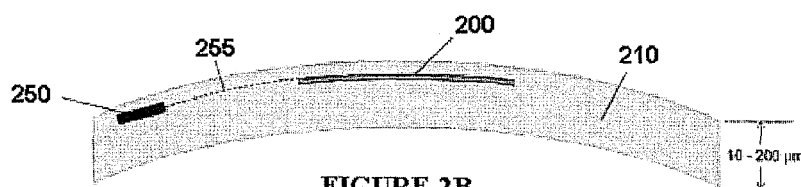


FIGURE 2B

(57) Abstract: Optical devices having a dynamic aperture and/or an apodization mask are provided. The aperture and/or mask may be provided by one or more electro-active elements, and may be used in an ophthalmic device that is spaced apart from but in optical communication with an intraocular lens, a corneal inlay, a corneal onlay, or a spectacle lens that provide an optical power.



ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

(88) Date of publication of the international search report:

7 January 2010