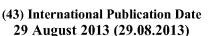
### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau







(10) International Publication Number WO 2013/126080 A3

- (51) International Patent Classification: *G02B* 27/16 (2006.01)
- (21) International Application Number:

PCT/US2012/027062

(22) International Filing Date:

29 February 2012 (29.02.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: PCT/US2012/025880

21 February 2012 (21.02.2012)

US

- (71) Applicant (for all designated States except US): E-VI-SION SMART OPTICS, INC. [US/US]; 5241 Valley-Park Drive, Roanoke, Virginia 24019 (US).
- (72) Inventor: and
- (71) Applicant: VAN HEUGTEN, Anthony [US/US]; 4107 72nd Ave. East, Sarasota, FL 34243 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): DUSTON, Dwight [US/US]; 59 Fairlane, Laguna Niguel, CA 92677 (US).
- (74) Agent: HAYNES, Michael; 1341 Huntersfield Close, Keswick, VA 22947 (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, CL, 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, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, 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, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### **Declarations under Rule 4.17:**

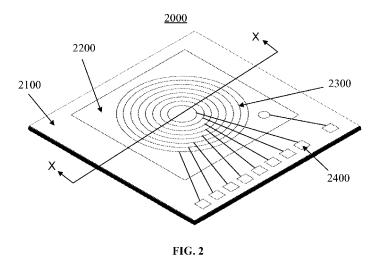
- as to the identity of the inventor (Rule 4.17(i))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

#### Published:

- with international search report (Art. 21(3))
- (88) Date of publication of the international search report:

24 April 2014

## (54) Title: SYSTEMS, DEVICES, AND/OR METHODS FOR MANAGING ABERRATIONS



(57) Abstract: Certain exemplary embodiments can provide a system, machine, device, manufacture, circuit, composition of matter, and/or user interface adapted for and/or resulting from, and/or a method and/or machine-readable medium comprising machine-implementable instructions for, activities that can comprise and/or relate to, automatically tuning one or more variable-focus tunable lenses sufficiently to substantially reduce one or more higher order optical wavefront aberrations of an optical system.



# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2012/027062

| A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - G02B 27/16 (2012.01)   |  |   |   |
|---|--|---|---|
| USPC - 359/637 According to International Patent Classification (IPC) or to both national classification and IPC  |  |   |   |
| B. FIELDS SEARCHED  |  |   |   |
| Minimum documentation searched (classification system followed by classification symbols) IPC(8) - G02B 13/18, 26/00, 26/06, 27/16 (2012.01) USPC - 359/16, 19, 637   |  |   |   |
| Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched   |  |   |   |
| Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Patbase, Google Patent, Google Scholar  |  |   |   |
| C. DOCUMENTS CONSIDERED TO BE RELEVANT  |  |   |   |
| Category*   | Citation of document, with indication, where a   | ppropriate, of the relevant passages  | Relevant to claim No.                     |
| X<br><br>Y  | US 6,771,422 B1 (CLARK) 03 August 2004 (03.08.2004) entire document  |   | 1-3, 5-17, 19-24, 26, 27<br><br>4, 18, 25 |
| Y   | US 2010/0039532 A1 (GALSTIAN et al) 18 February 2010 (18.02.2010) entire document                            |   | 4   |
| Y   | US 5,796,510 A (YAO) 18 August 1998 (18.08.1998) entire document   |   | 18, 25                                    |
| Α   | US 2008/0007693 A1 (WILLIAMS et al) 10 January 2008 (10.01.2008) Abstract, para 0045-0049, 0055, 0065, fig 1 |   | 1-27                                      |
|   |  |   |   |
| Further documents are listed in the continuation of Box C.  |  |   |   |
| "A" document defining the general state of the art which is not considered to be of particular relevance  "E" earlier application or patent but published on or after the international filing date  "L" document which may throw doubts on priority claim(s) or which is |  | <ul> <li>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</li> <li>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</li> </ul> |   |
|   |  |   |   |
| "P" document published prior to the international filing date but later than the priority date claimed  |  |   |   |
| Date of the actual completion of the international search   |  | Date of mailing of the international search report  |   |
| 13 June 2012  |  | 20 JUN 2012   |   |
| Name and mailing address of the ISA/US  Mail Stop PCT, Attn: ISA/US, Commissioner for Patents  P.O. Boy 1450, Alexandria, Virginia 22213, 1450  |  | Authorized officer: Blaine R. Copenheaver   |   |
| P.O. Box 1450, Alexandria, Virginia 22313-1450  Facsimile No. 571-273-3201  |  | PCT Helpdesk: 571-272-4300<br>PCT OSP: 571-272-7774   |   |