

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
7 June 2007 (07.06.2007)

PCT

(10) International Publication Number
WO 2007/063542 A3

(51) International Patent Classification:
H01S 5/024 (2006.01)

(74) Agent: **REINHOLD COHN AND PARTNERS**; P.O.B.
4060, 61040 Tel-aviv (IL).

(21) International Application Number:
PCT/IL2006/001378

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, 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, LV, LY, MA, MD, 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, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(22) International Filing Date:
29 November 2006 (29.11.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
172240 29 November 2005 (29.11.2005) IL

(71) Applicants (*for all designated States except US*): **ELTA SYSTEMS LTD.** [IL/IL]; 100 Sderot Itzhak Hanasia, P.O.B. 330, 77102 Ashdod (IL). **OPTIGO SYSTEMS LTD.** [IL/IL]; 10 Hamelacha Street, North Industrial Zone, 71520 Lod (IL).

(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, 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, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

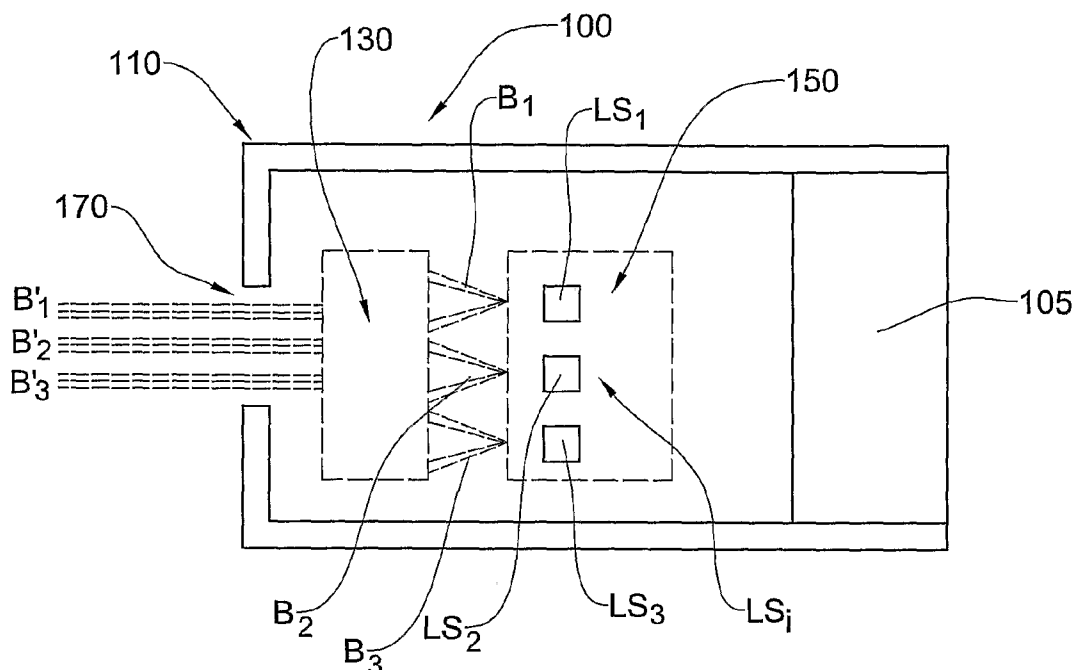
(75) Inventors/Applicants (*for US only*): **APHEK, Ori** [IL/IL]; 42 Gordon Street, 53227 Givataim (IL). **TIDHAR, Gil** [IL/IL]; 5 Izdarechet Street, Apartment 11, 71700 Modiin (IL).

Declaration under Rule 4.17:

— of inventorship (*Rule 4.17(iv)*)

[Continued on next page]

(54) Title: OPTICAL PROJECTION SYSTEM AND METHOD FOR A COOLED LIGHT SOURCE



(57) Abstract: A light projection optical system is presented. The system comprises a cooling chamber (110) containing: a light source (150) operative at a cool temperature being lower than 240K; a cooler unit (105) capable of cooling said light source to said cool temperature during the light source operation; - an optical window (170) permitting light emergence outside from the cooling chamber; and an optical unit (130) accommodated in the optical path of light emitted by said light source and enabling emergence of this light through said optical window outside from the cooling chamber.

WO 2007/063542 A3



Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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

19 July 2007