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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
28 September 2017 (28.09.2017)

WIPO | PCT

(10) International Publication Number
WO 2017/165034 A3

(51) International Patent Classification:
G02B 6/12 (2006.01) *H04B 10/50* (2013.01)

(21) International Application Number:
PCT/US2017/018592

(22) International Filing Date:
20 February 2017 (20.02.2017)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
15/081,813 25 March 2016 (25.03.2016) US

(71) Applicant: **INTEL CORPORATION** [US/US]; 2200 Mission College Boulevard, Santa Clara, California 95054 (US).

(72) Inventors: **KIM, Woosung**; 1935 Rock St., Apt #3, Mountain View, California 94043 (US). **YIM, Myung Jin**; 1765 Via Cortina, San Jose, California 95120 (US).

(74) Agent: **LEE, Katherine D.** et al.; 1211 SW 5th Avenue, Suite 1500-1900, Portland, Oregon 97204 (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, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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,

(54) Title: DYNAMIC BEAM STEERING OPTOELECTRONIC PACKAGES

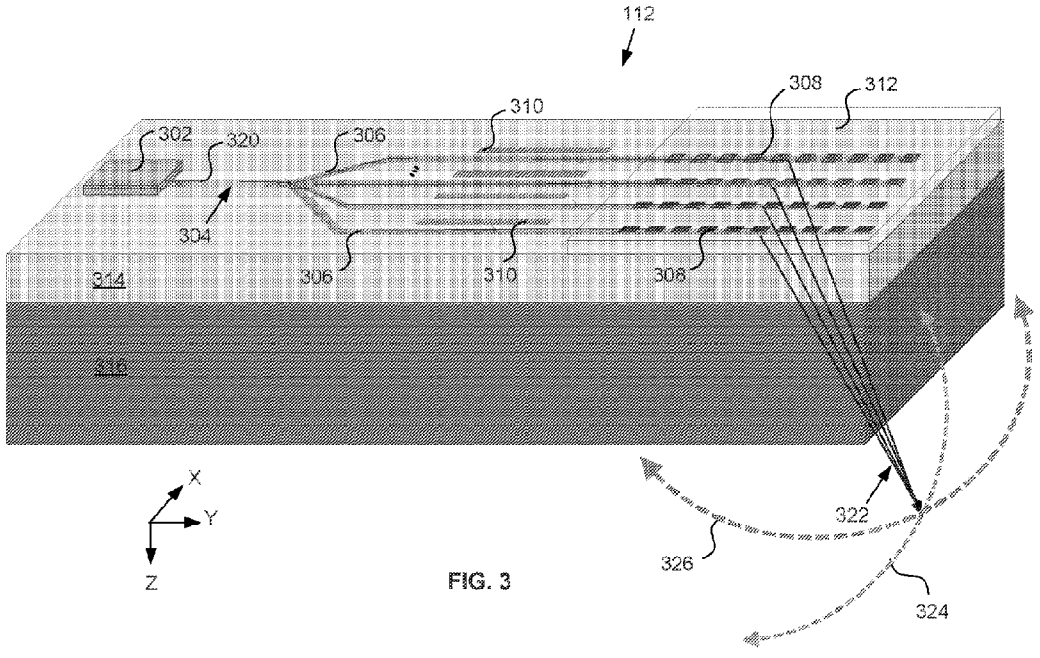

FIG. 3

(57) Abstract: Apparatuses including integrated circuit (IC) optical assemblies and processes for operation of IC optical assemblies are disclosed herein. In some embodiments, the IC optical assemblies include a transmitter component to provide light output having a particular beam direction, and a transmitter driver component. The transmitter component includes a light source optically coupled to a plurality of waveguides, a plurality of gratings, and a plurality of phase tuners. The transmitter driver component causes a light provided by the light source to be centered at a particular wavelength and a particular phase to be induced by each phase tuner of the plurality of phase tuners on a respective waveguide of the plurality of waveguides, in accordance with a feedback signal, to generate the light output having the particular beam direction.

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[Continued on next page]

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, KM, ML, MR, NE, SN, TD, TG).

Published:

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

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

26 July 2018 (26.07.2018)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2017/018592

A. CLASSIFICATION OF SUBJECT MATTER

G02B 6/12(2006.01)i, H04B 10/50(2013.01)i

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)
G02B 6/12; H04J 14/02; G02B 6/34; H01L 31/18; G01D 5/34; G02F 1/01; G01B 9/02; H04B 10/50

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean utility models and applications for utility models
Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS(KIPO internal) & Keywords: optical transmitter, particular beam direction, feedback signal, wavelength, phase, refractive of index, tuning

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2006-0091305 A1 (GRUNNET-JEPSEN et al.) 04 May 2006 See paragraph [0014] and figure 1.	1-20
A	US 2012-0087613 A1 (RASRAS) 12 April 2012 See paragraphs [0019], [0028] and figures 1-2.	1-20
A	KR 10-0380924 B1 (TELEFONAKTIEBOLAGET LM ERICSSON(PUBL)) 26 April 2003 See claims 1, 5 and figures 1-2.	1-20
A	US 2004-0067006 A1 (WELCH et al.) 08 April 2004 See claim 1 and figure 7A.	1-20
A	KR 10-2000-0053301 A (BOOKHAM TECHNOLOGY PLC) 25 August 2000 See claim 1 and figure 4.	1-20

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
15 May 2017 (15.05.2017)	**15 May 2017 (15.05.2017)**

Name and mailing address of the ISA/KR
International Application Division
Korean Intellectual Property Office
189 Cheongsa-ro, Seo-gu, Daejeon, 35208, Republic of Korea
Facsimile No. +82-42-481-8578

Authorized officer
KANG, Sung Chul
Telephone No. +82-42-481-8405

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