

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
30 November 2023 (30.11.2023)



(10) International Publication Number
WO 2023/229520 A1

(51) International Patent Classification:

G02F 1/295 (2006.01) G01S 7/481 (2006.01)
G02B 6/12 (2006.01)

(21) International Application Number:

PCT/SG2022/050355

(22) International Filing Date:

26 May 2022 (26.05.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(71) Applicant: **ADVANCED MICRO FOUNDRY PTE. LTD.** [SG/SG]; 11 Science Park Road, Singapore 117685 (SG).

(72) Inventors: **TAN, You Sian James**; 11 Science Park Road Singapore 117685, Singapore (SG). **LUO, Xianshu**; 11 Science Park Road Singapore 117685, Singapore (SG).

(74) Agent: **AMIGA LAW LLC**; 77 Robinson Road, #22-01, Robinson 77, Singapore 068896 (SG).

(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, IQ, IR, IS, IT, JM, JO, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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, SC, 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, 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))

(54) Title: OPTICAL PHASED ARRAY

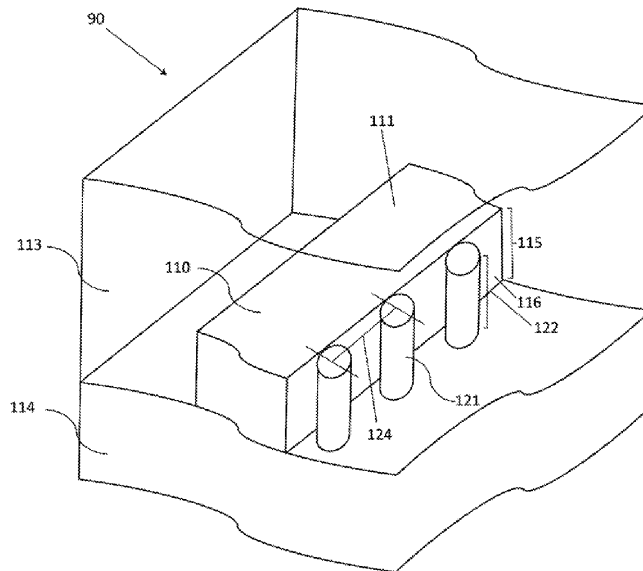


Fig. 1

(57) Abstract: An optical phased array comprises photonic components for on-chip beam forming and steering, and is adapted to use an input optical field of a beam having a wavelength which ranges from visible light to a short-wavelength infrared region. The photonic component comprises at least a waveguide and a plurality of scatterers, with each scatterer having a diagonal which is at most about one-tenth the wavelength of the input optical field.



WO 2023/229520 A1