



(51) International Patent Classification:
G02B 6/293 (2006.01) *G02F 1/225* (2006.01)
G02B 6/12 (2006.01)

(21) International Application Number:
PCT/SG2025/050028

(22) International Filing Date:
13 January 2025 (13.01.2025)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10202400344V 07 February 2024 (07.02.2024) SG

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(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, CV, 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, MG, MK, MN, MU, 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, UY, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, CV, 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, ME, 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).

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

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

(54) Title: A MULTI-STAGE LATTICE FILTER

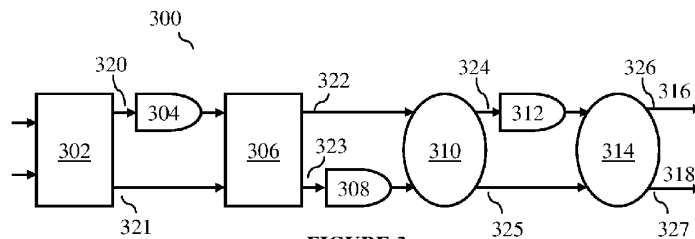


FIGURE 3

(57) Abstract: This document describes a polarization insensitive multi-stage lattice filter for receiving O-band signals for coarse wavelength division multiplexing (CWDM). Each filter stage comprises a first multimode interferometer (MMI) coupled to a second MMI with a first phase shift mechanism, the second MMI coupled to a first directional coupler (DC) with a second phase shift mechanism and the first DC coupled to a second DC with a third phase shift mechanism and wherein a phase shift introduced by the second phase-shift mechanism is twice a phase shift introduced by the first phase-shift mechanism, and a phase shift introduced by the third phase-shift mechanism is four times the phase shift introduced by the first phase-shift mechanism with an additional phase offset of π .

