

(43) International Publication Date
5 April 2012 (05.04.2012)(10) International Publication Number
WO 2012/041776 A1

(51) International Patent Classification:

H01S 5/0625 (2006.01) *H01S 5/40* (2006.01)
H01S 5/12 (2006.01)

(21) International Application Number:

PCT/EP2011/066586

(22) International Filing Date:

23 September 2011 (23.09.2011)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10290509.8 27 September 2010 (27.09.2010) EP

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

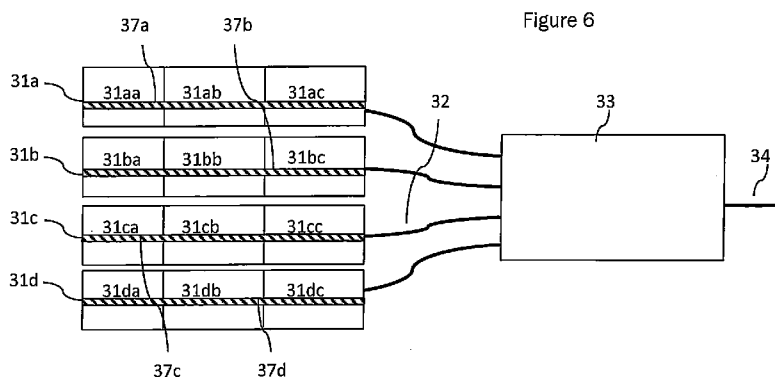
AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, 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, 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).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) Title: PHOTONIC INTEGRATED CIRCUIT FOR WAVELENGTH DIVISION MULTIPLEXING



(57) **Abstract:** The present document relates to a photonic integrated circuit (PIC) for multiplexing optical signals in a wavelength division multiplexing (WDM) system. In particular, the document relates to a method and system for reducing the size of a PIC for multiplexing optical signals in a WDM system. An optical transmitter configured to generate a plurality of optical signals at a corresponding plurality of different wavelengths multiplexed onto an output waveguide (34) is described. The transmitter comprises a first (31aa) and second (31ab) converter comprising different first and second active materials configured to emit light at a first and a different second wavelength, respectively. Furthermore, the transmitter comprises a first converter waveguide (37a) traversing the first and second material of the first (31aa) and second (31ab) converter, the second material being at an output end of the first converter waveguide (37a) and the first material being at an input end (or rear end), upstream of the output end, of the first converter waveguide (37); wherein the second active material is transparent to the light at the first wavelength; wherein the output end of the first converter waveguide (37a) leads to the output waveguide (34).