

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
14 August 2025 (14.08.2025)



(10) International Publication Number
WO 2025/171223 A1

(51) International Patent Classification:

G02B 6/36 (2006.01) G02B 6/42 (2006.01)
G02B 6/02 (2006.01) G02B 6/12 (2006.01)
G02B 6/38 (2006.01)

(21) International Application Number:

PCT/US2025/014953

(22) International Filing Date:

07 February 2025 (07.02.2025)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/550,789 07 February 2024 (07.02.2024) US
19/046,471 05 February 2025 (05.02.2025) US

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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,

(54) Title: DENSE PHOTONIC WAVEGUIDE TO OPTICAL FIBER EDGE COUPLING

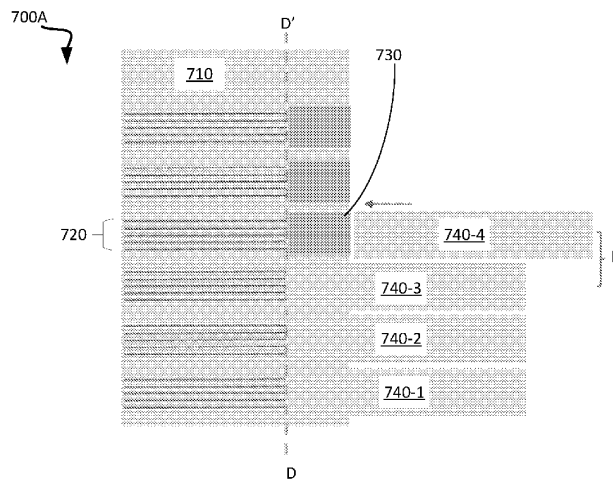


FIG. 7A

(57) Abstract: A system includes a substrate having a plurality of grooves and a plurality of sets of waveguides formed therein, wherein each groove of the plurality of grooves corresponds to a respective set of waveguides of the plurality of sets of waveguides, and at least one multicore single-mode fiber (MC-SMF) optical fiber secured within at least one respective groove of the plurality of grooves, wherein the at least one MC-SMF optical fiber includes a plurality of inner cores disposed within a cladding layer.

[Continued on next page]

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:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

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