

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
03 October 2019 (03.10.2019)



(10) International Publication Number
WO 2019/185973 A1

(51) International Patent Classification:

G02B 27/01 (2006.01) G02B 5/18 (2006.01)
G02B 27/00 (2006.01) G02B 6/00 (2006.01)
G02B 27/42 (2006.01)

(21) International Application Number:

PCT/FI2019/050130

(22) International Filing Date:

19 February 2019 (19.02.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

20185291 28 March 2018 (28.03.2018) FI

(71) Applicant: **DISPELIX OY** [FI/FI]; Metsänneidonkuja 6,
02130 Espoo (FI).

(72) Inventors: **OLKKONEN, Juuso**; c/o Dispelix Oy, Met-
sänneidonkuja 6, 02130 Espoo (FI). **MYÖHÄNEN, Petri**;
c/o Dispelix Oy, Metsänneidonkuja 6, 02130 Espoo (FI).

(74) Agent: **SEPPO LAINE OY**; Porkkalankatu 24, 00180
Helsinki (FI).

(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, 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, 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,
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: EXIT PUPIL EXPANDER

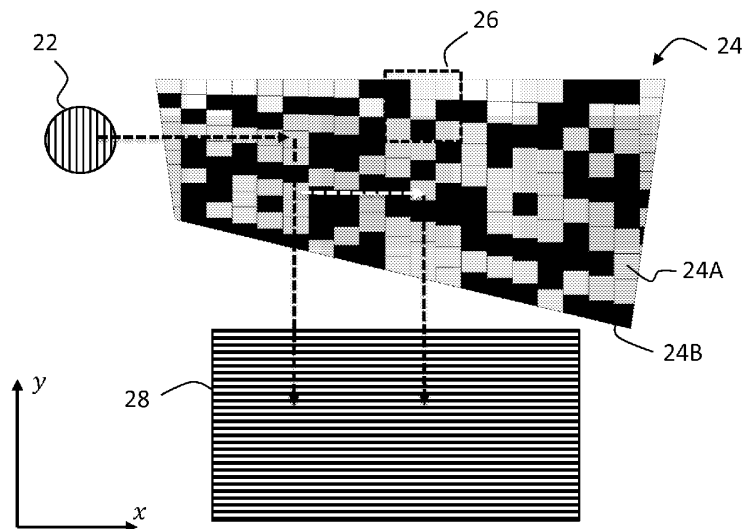


Fig. 2A

(57) Abstract: There is provided an exit pupil expander (EPE) for use in a diffractive display, the EPE comprising a plurality of diffractive zones on a waveguide and a plurality of non-diffractive zones between at least some of the diffractive zones.

WO 2019/185973 A1