

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
24 June 2021 (24.06.2021)



(10) International Publication Number
WO 2021/120974 A1

(51) International Patent Classification:
G02F 1/1368 (2006.01) *G02F 1/1333* (2006.01)
H01L 27/32 (2006.01)

(21) International Application Number:
PCT/CN2020/130152

(22) International Filing Date:
19 November 2020 (19.11.2020)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
16/718,076 17 December 2019 (17.12.2019) US

(72) Inventor; and

(71) Applicant: TSENG, Shih-Hsien [CN/CN]; 12F., No. 26,
Ln. 28, Sec. 1, Tiedao Rd., East Dist., Hsinchu City, Taiwan
300 (CN).

(74) Agent: BEIJING SANYOU INTELLECTUAL PROP-
ERTY AGENCY LTD.; 16th Fl., Block A, Corporate
Square, No. 35 Jinrong Street, Beijing 100033 (CN).

(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, IT, 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, SD, SL, ST, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,

(54) Title: DISPLAY APPARATUS, PIXEL ARRAY AND MANUFACTURING METHOD THEREOF

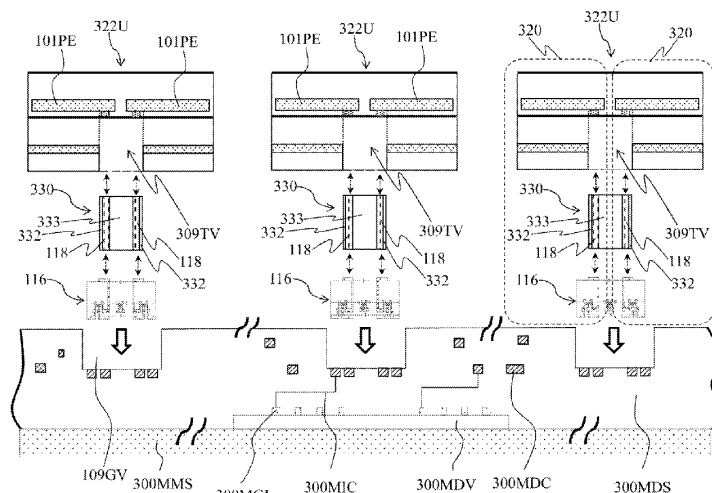


FIG. 17

(57) Abstract: A pixel array (322PAU) includes a display medium module (322U), an active switching element (116), and a connecting module (330). Each display medium module (322U) includes two pairs of electrodes (310) and a display medium (105). Each pair of electrodes (310) has a first electrode (101PE) and a second electrode (102RE). The display medium (105) is disposed between first electrodes (101PE) and second electrodes (102RE). The active switching element (116) is electrically connected to the first electrodes (101PE) for allowing the first electrodes (101PE) and the second electrodes (102RE) to change a state of the display medium (105). The connecting module (330) is integrated with the display medium module (322U) to electrically connect the active switching element (116) to the first electrodes (101PE) via conductors (118) of the connecting module (330).

[Continued on next page]

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))*