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(54) Title: LIGHT EMITTING DEVICE INCLUDING LED DIE HAVING PORTIONS LOCATED IN ADJACENT PIXELS AND METHOD OF MAKING SAME

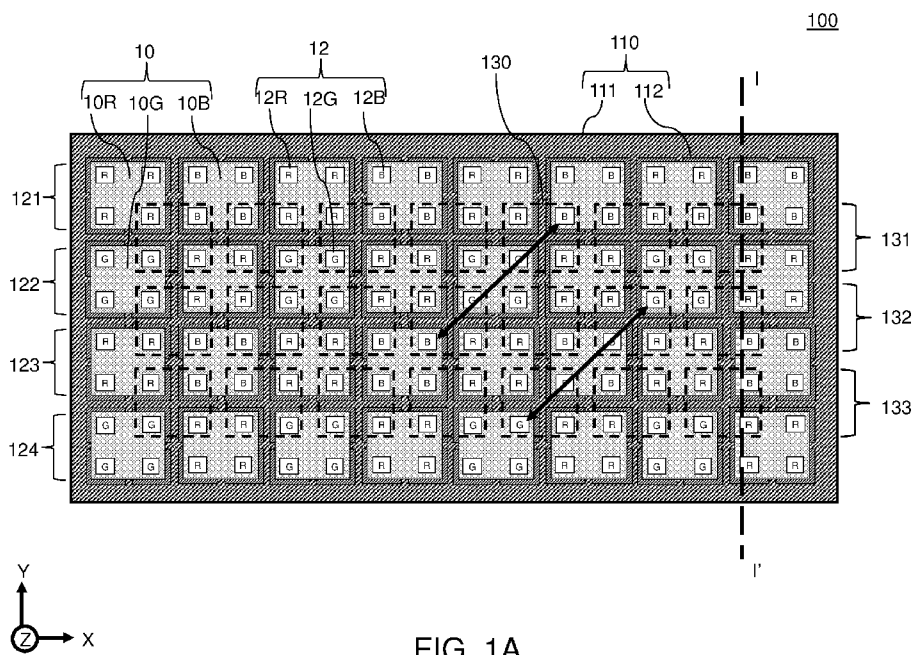


FIG. 1A

(57) Abstract: A light emitting device includes a backplane, a plurality of light emitting diode (LED) dies mounted on the backplane, such that each of the LED dies includes a plurality of LEDs, and a pixel containing adjacent micro-LEDs of the plurality of LEDs located in adjacent LED dies of the plurality of LED dies.



SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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A. CLASSIFICATION OF SUBJECT MATTER		
H01L 25/075(2006.01)i; H01L 33/62(2010.01)i; H01L 33/20(2010.01)i; H01L 33/42(2010.01)i; G09G 3/00(2006.01)i		
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B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) H01L 25/075(2006.01); G02F 1/1343(2006.01); G09G 3/32(2006.01); H01L 27/15(2006.01); H01L 33/08(2010.01); H01L 33/38(2010.01); H01L 33/62(2010.01); H01L 51/50(2006.01); H05B 33/12(2006.01); H05B 37/00(2006.01)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean utility models and applications for utility models Japanese utility models and applications for utility models		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) eKOMPASS(KIPO internal) & Keywords: light emitting device, backplane, light emitting diode (LED) die, micro-LED, pixel, adjacent LED die, subpixel, corner, redundant micro-LED		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2017-0213502 A1 (OCULUS VR, LLC) 27 July 2017 (2017-07-27) paragraphs [0070], [0093], [0103], [0112]-[0113], [0117]-[0118], [0139], [0175]; claims 11, 17-18, 23, 25; and figures 1-9	1-20
X	KR 10-2022-0131507 A (LG DISPLAY CO., LTD.) 28 September 2022 (2022-09-28) paragraphs [0066]-[0181]; and figures 3a-6	1-20
X	US 2022-0037293 A1 (FACEBOOK TECHNOLOGIES, LLC) 03 February 2022 (2022-02-03) paragraphs [0086]-[0112]; and figures 3-8	1-12, 15-20
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A	US 2012-0147314 A1 (TAKENORI YOSHIKAWA et al.) 14 June 2012 (2012-06-14) paragraphs [0065]-[0075]; and figures 1-3	1-20
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "D" document cited by the applicant in the international application "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 26 March 2024		Date of mailing of the international search report 26 March 2024
Name and mailing address of the ISA/KR Korean Intellectual Property Office 189 Cheongsa-ro, Seo-gu, Daejeon 35208, Republic of Korea Facsimile No. +82-42-481-8578		Authorized officer LEE Kang Ha Telephone No. +82-42-481-5003

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Information on patent family members

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