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(71) Applicant: **LG Display Co., Ltd.**
SEOUL, 07336 (KR)

(72) Inventors:

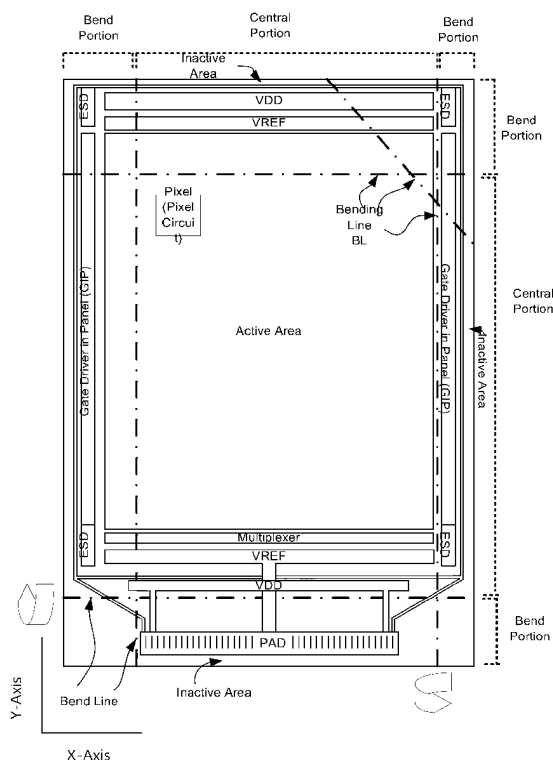
- **SON, Hae Joon**
10845 Paju-si, Gyeonggi-do (KR)
- **RYU, Joung Ho**
10845 Paju-si, Gyeonggi-do (KR)
- **CHOI, Sie Hyug**
10845 Paju-si, Gyeonggi-do (KR)

(74) Representative: **Viering, Jentschura & Partner mbB**
Patent- und Rechtsanwälte
Am Brauhaus 8
01099 Dresden (DE)

(54) **DISPLAY APPARATUS**

(57) There is provided a flexible display having a plurality of innovations configured to allow bending of a portion or portions to reduce apparent boarder size and/or utilize the side surface of an assembled flexible display. A display apparatus, comprises a base layer having a bend allowance section between a first portion and a second portion of the base layer, a plurality of organic light-emitting diode (OLED) elements disposed on the first portion of the base layer, an encapsulation over the OLED elements, a printed circuit film attached to the second portion of the base layer, and a micro-coating layer disposed over the bend allowance section of the base layer.

[Fig. 1a]
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EUROPEAN SEARCH REPORT

Application Number
EP 21 16 0459

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| | | | TECHNICAL FIELDS SEARCHED (IPC) |
| | | | H01L |
| <p>The present search report has been drawn up for all claims</p> | | | |
| Place of search | | Date of completion of the search | Examiner |
| The Hague | | 31 March 2021 | Franssen, Gijs |
| <p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p> | | | |

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Application Number

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1-7

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



LACK OF UNITY OF INVENTION
SHEET B

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-7

Different thin-film transistor types and configurations in the pixel and driving circuits in order to optimise electrical performance of the display apparatus in terms of frame rate, stability, threshold voltage shift, size and leakage.

2. claims: 8-11

A geometrical configuration with wire traces between pixel circuit and driving circuit having a strain-reducing trace design in order to prevent or minimize severance of interconnections.

3. claims: 12, 13

A touch sensor layer to identify/assess the location and/or pressure of user inputs.

4. claims: 14, 15

OLED elements provided in the bend allowance section and on the second portion of the base layer in order to enlarge the active area for extending device functionalities to provide further images and/or texts such a graphical user interface, buttons, text messages, and the like.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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