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**Datasheet for the decision
of 7 July 2015**

Case Number: T 2078/13 - 3.4.03

Application Number: 06007905.0

Publication Number: 1717789

IPC: G09G3/32

Language of the proceedings: EN

Title of invention:

Electro luminescence display device

Applicant:

LG Display Co., Ltd.

Headword:

Relevant legal provisions:

EPC 1973 Art. 84

EPC Art. 123(2)

Keyword:

Amendments - disclosure in drawings - added subject-matter
(no)

Claims - clarity (yes)

Remittal to the department of first instance - (yes)

Decisions cited:

Catchword:



**Beschwerdekammern
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Chambres de recours**

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Case Number: T 2078/13 - 3.4.03

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 7 July 2015

Appellant: LG Display Co., Ltd.
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 29 April 2013
refusing European patent application No.
06007905.0 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman G. Eliasson
Members: T. M. Häusser
T. Bokor

Summary of Facts and Submissions

- I. The appeal concerns the decision of the examining division refusing the European patent application No. 06 007 905 for added subject-matter (Article 123(2) EPC) and lack of clarity (Article 84 EPC 1973) in relation to the main request then on file and the first and second auxiliary requests then on file. Former third and fourth auxiliary requests were not admitted by the examining division into the proceedings (Rule 137(3) EPC).
- II. At the oral proceedings before the board the appellant (applicant) requested setting aside the decision under appeal and grant of a patent on the basis of the following documents:
Description, pages 1-8 (pages 1-9 with track changes) as filed with letter dated 4 June 2015,
Claims 1-4 of the "New Request" filed during the oral proceedings before the board,
Drawing: Figures 1a, 1b, 2a, 2b, 3-6 (Sheets 1/8-8/8) as originally filed.
- III. The wording of independent claims 1 and 3 of the sole request is as follows:
- "1. An electro luminescence display device comprising:
a pixel circuit (22) comprising a plurality of pixels (P) on a substrate;
an outer circuit (25) located outside the substrate at an upper side of the pixel circuit (22);
a data driver (23) formed on the substrate and formed at the upper side of the pixel circuit (22) between the pixel circuit (22) and the outer circuit (25) for supplying a data signal to the plurality of pixels;

first and second scan drivers (24a, 24b) formed on the substrate and formed at the upper side of the pixel circuit (22) between the pixel circuit (22) and the outer circuit (25) for supplying a scan signal to the plurality of pixels; wherein the data driver (23) is located between the first and second scan drivers (24a, 24b) along the direction of the upper side of the pixel circuit (22); and

a ground line GND (27) and a power supply line VDD (26) both of which are formed on the substrate and are connected to the outer circuit (25), wherein the ground line GND (27) and the power supply line VDD (26) are separated from each other, so that the power supply line VDD (26) is placed at outer left side and a portion of outer left lower side of the first scan driver (24a), and outer left side of the pixel circuit (22), and so that the ground line GND (27) is placed at outer right side and a portion of outer right lower side of the second scan driver (24b), and outer right side of the pixel circuit (22), wherein the right and left sides of the pixel circuit (22) are perpendicular to the upper side of the pixel circuit (22), wherein the pixel circuit (22), the data driver (23) and the first and second scan drivers (24a, 24b) are located between the ground line GND (27) and the power supply line VDD (26)."

"3. An electro luminescence display device comprising:

a pixel circuit (32) comprising a plurality of pixels (P) on a substrate;

an outer circuit (35) located outside the substrate at an upper side of the pixel circuit (32);

a data driver (33) formed on the substrate and formed at the upper side of the pixel circuit (32) between the pixel circuit (32) and the outer circuit (35) for supplying a data signal to the plurality of

pixels;

first and second scan drivers (34a, 34b) formed on the substrate and formed side by side along a lower side of the pixel circuit (32) opposite the upper side of the pixel circuit (32), and for supplying a scan signal to the plurality of pixels; and

a ground line GND (37) and a power line VDD (36) both of which are formed on the substrate and are connected to the outer circuit (35), wherein the ground line GND (37) and the power supply line VDD (36) are separated from each other, so that the power supply line VDD (36) is placed at outer left side of the data driver (33), and at outer left side and a portion of outer left upper side of the pixel circuit (32), and so that the ground line GND (37) is placed at outer right side of the data driver (33), and at outer right side and a portion of outer right upper side of the pixel circuit (32), wherein the right and left sides of the pixel circuit (32) are perpendicular to the upper and lower sides of the pixel circuit (32), wherein each of the pixel circuit (32) and the data driver (33) extends between the ground line GND (37) and the power supply line VDD (36)."

IV. The appellant argued essentially as follows:

a) Amendments

The objections of the examining division concerning added subject-matter had been overcome by way of amendment. The amendments effected in relation to claims 1 and 3 could be clearly and unambiguously derived from Figures 2a and 3, respectively.

b) Clarity

The clarity objections of the examining division had been overcome by way of amendment. Claims 1 and 3 were clearly teaching the arrangements as disclosed in Figures 2a and 3, respectively.

Reasons for the Decision

1. Amendments

1.1 In the decision under appeal the examining division held that the subject-matter of the claims according to the requests then on file extended beyond the content of the application as filed. In particular, it was held that various intermediate generalizations could be identified.

1.2 The board is satisfied that the objections of the examining division have been overcome by way of amendment, namely by claiming the subject-matter to be protected more narrowly. In particular, by specifying

- in claims 1 and 3 that the data and scan drivers are "formed on the substrate", and
- in claims 1 and 3 the specific arrangements of the ground line GND and the power supply line VDD derivable from Figures 2a and 3, respectively, and
- in claim 1 that the data driver is located between the first and second scan drivers "along the direction of the upper side of the pixel circuit", and
- in claim 3 that the first and second scan drivers are "formed side by side along a lower side of the pixel circuit",

it has been excluded that claims 1 and 3 could be read more broadly than warranted by the original disclosure.

- 1.3 Regarding claim 1 the features of the display device related to the pixel circuit, outer circuit, data driver, and first and second scan drivers are based on claim 1 as originally filed and on the description and drawings as originally filed (page 4, lines 9-19; Figure 2a).
- 1.3.1 It remains to be considered whether the feature of claim 1 relating to the ground line GND and power supply line VDD has a basis in the application as filed.
- 1.3.2 The present invention is concerned with minimizing the so called "Bezel area", i. e. the area between the edge of the pixel area and the edge of the substrate. This is to be achieved by effective alignment of the relevant components of the display device (see the description, page 2, lines 6-7 and page 3, lines 1-2). The ground line GND and the power supply line VDD belong to these components to be aligned. This is reflected in original claims 2 and 5, in which the position of these lines in relation to the other relevant components is specified. In particular, it is stated that the GND and VDD lines are located on the outer sides of the scan drivers and on a portion of the perimeter of the pixel circuit. It is noted that original claim 5 depends on original claim 3, which in turn depends on original claim 2. Original claim 3 defines the electro-luminescence device to comprise an organic luminescence layer. It is immediately evident to the skilled person reading the application as filed that the features of claim 5 as filed, relating to the specific arrangement of the GND and VDD lines, are equally applicable to any electro-luminescence device.

1.3.3 The skilled person would therefore understand that the location of the ground line GND and the power supply line VDD in relation to the other components of the display device shown in Figure 2a is not fortuitous, but significant for achieving the object of the invention. The skilled person would thus regard the location of the GND and VDD lines as belonging to the teaching of the invention, in particular their arrangement in relation to the scan drivers and the pixel circuit.

1.3.4 Moreover, it is stated on page 4, lines 27-29, that the location of the power supply line and the ground line shown in Figure 2a is only an example of an embodiment of the invention and that the location can vary depending on the design. From this it is evident for the skilled person that the precise location of the lines shown in Figure 2a is not crucial for achieving the object of the invention. In any case, since Figure 2a is a schematic drawing conventionally included in patent documents, dimensions cannot be deduced from it.

1.3.5 In view of the above it is considered to be directly and unambiguously derivable from original claims 2 and 5 and the description and drawings as originally filed (page 4, lines 22-24 and 27-29; Figure 2a) that the power supply line VDD is placed at outer left side and a portion of outer left lower side of the first scan driver and outer left side of the pixel circuit. Similarly, it is considered to be directly and unambiguously derivable from the application documents that the ground line GND is placed at outer right side and a portion of outer right lower side of the second scan driver and outer right side of the pixel circuit.

1.4 Regarding claim 3 the features of the display device related to the pixel circuit, outer circuit, data

driver, and first and second scan drivers are based on claims 1 and 6 as originally filed and on the description and drawings as originally filed (page 5, lines 3-10 and 25-28; Figure 3).

Moreover, for reasons corresponding to those above, the feature of claim 3 relating to the ground line GND and power supply line VDD is based on original claim 6 and 9 and the description and drawings as originally filed (page 4, lines 27-29; page 5, lines 3-10; Figure 3).

- 1.5 Dependent claims 2 and 4 are both based on original claim 3.

The description has been brought into conformity with the amended claims without extending beyond the content of the application as filed.

- 1.6 In view of the above the board concludes that the amendments comply with the requirements of Article 123(2) EPC.

2. Clarity

- 2.1 In the decision under appeal the examining division held that the independent claims according to the requests then on file were not clear and not supported by the description.

- 2.2 The board is satisfied that the objections of the examining division have been overcome by way of amendment. In particular, by specifying in claims 1 and 3

- "first and second scan drivers", and

- the specific arrangements of the ground line GND and the power supply line VDD derivable from Figures 2a and 3, respectively, these claims have been reformulated in such a way that they are clear and properly supported in the description, which has been amended to be in conformity with the present claims and in which embodiments no longer claimed have been properly identified.

2.3 Accordingly, the board concludes that the claims are clear and supported by the description (Article 84 EPC 1973).

3. Remittal to the department of first instance

In the decision under appeal only the requirements of Article 84 EPC 1973 and Article 123(2) EPC were dealt with. The other requirements of the Convention were not discussed. In order to allow for the examination of these requirements in two instances, remittal of the case to the department of first instance under Article 111(1) EPC 1973 is deemed appropriate.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance for further prosecution.

The Registrar:

The Chairman:



S. Sánchez Chiquero

G. Eliasson

Decision electronically authenticated