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**Datasheet for the decision
of 3 March 2016**

Case Number: T 1285/12 - 3.4.02

Application Number: 06256599.9

Publication Number: 1804092

IPC: G02B5/20, H01L27/32

Language of the proceedings: EN

Title of invention:

Colour filter, colour filter array and organic light-emitting display device using the same

Applicant:

Samsung Display Co., Ltd.

Headword:

Relevant legal provisions:

EPC Art. 123(2)

Keyword:

Amendments - added subject-matter (yes)



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Case Number: T 1285/12 - 3.4.02

D E C I S I O N
of Technical Board of Appeal 3.4.02
of 3 March 2016

Appellant: Samsung Display Co., Ltd.
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted on 28 December
2011 refusing European patent application No.
06256599.9 pursuant to Article 97(2) EPC.

Composition of the Board:

Chairman F. J. Narganes-Quijano
Members: A. Hornung
B. Müller

Summary of Facts and Submissions

- I. The applicant appealed against the decision of the examining division refusing European patent application No. 06256599.9 on the basis of Article 56 EPC (main request). The sole auxiliary request then on file was not admitted into the proceedings under Rule 137(3) EPC.
- II. The applicant requested that the appealed decision be set aside and a patent be granted on the basis of the claims according to a main request or one of the first to fourth auxiliary requests, all requests filed with the statement setting out the grounds of appeal.
- III. In a communication annexed to the summons to oral proceedings, the board informed the applicant about its provisional and non-binding opinion according to which, *inter alia*, all requests contained subject-matter which extended beyond the application as filed (Article 123(2) EPC). In addition, the board raised objections against the claimed subject-matter under Article 84 and 54 EPC 1973.
- IV. The board's opinion concerning added subject-matter was worded as follows:
- a) Main request (see point 6.1 of the communication annexed to the summons):

"Claim 1 specifies that "full colour" is implemented from "mixed light of only blue light and red light". It is doubtful whether the application as originally filed comprises a basis for the combined features of "full colour" and "only blue light and red light" (Article 123(2) EPC). Indeed, it would appear that the implementation of "full colour" is described in the application as originally filed only in combination with a light source having a broader

spectrum comprising blue and red light but without excluding green light: see e.g. paragraphs [0001] and [0010] of the description and claim 8 as originally filed."

- b) First and second auxiliary requests (see points 7.4 and 8.2 of the communication annexed to the summons):

"According to the preliminary view of the board, the feature "a blue filter provided on at least one of the second electrode or the second surface of the substrate" has no basis in the originally filed application documents (Article 123(2) EPC). The applicant seems to refer to originally filed claim 11 as a basis for the amendment. However, the originally filed claim 11 defines that "the colour filter array [is] provided on at least one of the second electrode or the second surface of the substrate", thereby encompassing not only the blue filter but also the green and red filters."

- c) Third and fourth auxiliary requests (see point 9.2 of the communication annexed to the summons):

"[...] the board is of the preliminary view that the feature "a blue filter comprising the [same] red blocking material [as the green filter]" has no basis in the application documents as originally filed. The passages indicated by the applicant in its letter of 2 May 2012 as being the basis for the amendment, i.e. paragraphs [0057] to [0060] and figure 1, merely disclose that each of the green and the blue filters has a red blocking material. The passages referred to do not allow the conclusion that the red blocking materials in the blue and in the green filters are the same.

Therefore, it would appear that claim 1 of both auxiliary requests 3 and 4 infringes the requirement of Article 123(2) EPC."

V. In response to the summons to oral proceedings, the applicant informed the board with its letter dated 19 February 2016 that it would not be attending the oral proceedings. The applicant filed no comments concerning the board's preliminary opinion as annexed to the summons to oral proceedings.

VI. Oral proceedings were held on 3 March 2016 in the absence of the applicant. At the end of the oral proceedings the board announced its decision.

VII. Claims of the requests

a) Claim 1 according to the main request reads as follows:

"A colour filter array (160) adapted for use with a light source that emits only blue light and red light, the colour filter array (160) being adapted to implement full colour from mixed light of only blue light and red light, the colour filter array (160) comprising:

a red filter comprising a colour conversion material (162a) adapted to convert blue light into green light and red light; and a green blocking material (162b) adapted to block green light; wherein a transmittance of the green blocking material (162b) is above 50% in the wavelength range of 600nm to 780nm;

a green filter (163) comprising the colour conversion material (163a) and a red blocking material (163b) adapted to block red light; and

a blue filter comprising a red blocking material (164) adapted to block the red light."

b) Claim 1 according to the first auxiliary request reads as follows:

"An organic light-emitting display device comprising:

a substrate (100) defining first and second opposing surfaces;

a first electrode (110) provided on the first surface of the substrate;

an organic light-emitting layer (120) provided on the first electrode (110) and adapted to emit a mixed light of blue light and red light only;

a second electrode (130) provided on the organic light-emitting layer (120); and

a colour filter array (160) comprising:

a red filter comprising a colour conversion material (162a) adapted to convert blue light into green light and red light;

and a green blocking material (162b) adapted to block green light; wherein a transmittance of the green blocking material (162b) is above 50% in the wavelength range of 600nm to 780nm;

a green filter (163) comprising the colour conversion material (163a) and a red blocking material (163b) adapted to block red light; and

a blue filter comprising a red blocking material (164) adapted to block the red light provided on at least one of the second electrode (130) or the second surface of the substrate (100), the colour filter array (160) comprising at least one colour filter (162, 163, 164), the colour filter (162, 163, 164) corresponding to a pixel region and the red and light-emitting source being the organic light emitting layer."

- c) Independent claim 1 according to the second auxiliary request differs from claim 1 of the first auxiliary request only by the following wording, wherein the added wording is highlighted in bold and the deleted wording is struck through:

"... an organic light-emitting layer (120) provided on the first electrode (110) **composed of only blue and red light emitting layers** and ~~adapted~~ to emit a mixed light of blue light and red light ~~only~~ ..."

"... the colour filter (162, 163, 164) corresponding to a pixel region and the red and **blue** light-emitting source being the organic light emitting layer."

- d) Independent claim 1 according to the third auxiliary request differs from claim 1 of the main request only by the following wording, wherein the added wording is highlighted in bold and the deleted wording is struck through:

"... a blue filter comprising **the** ~~a~~ red blocking material (164) adapted to block the red light."

- e) Independent claim 1 according to the fourth auxiliary request differs from claim 1 of the second auxiliary request only by the following wording, wherein the added wording is highlighted in bold and the deleted wording is struck through:

"... an organic light-emitting layer (120) provided on the first electrode (110) composed of only blue and red emitting layers to emit a mixed light of blue light and red light **wherein colour coordinate values of the mixed light are in the range of X = 0.20 to 0.50, and Y = 0.20 to 0.43** ..."

"... a blue filter comprising **the** a red blocking material (164) adapted to block the red light ...".

Reasons for the Decision

1. In the annex to the summons to oral proceedings, the board expressed its preliminary opinion, along with the underlying reasons, that all requests on file contained subject-matter which extended beyond the content of the application as filed (Article 123(2) EPC). See point IV. above.
2. The applicant neither attempted to rebut the board's preliminary opinion, nor submitted any new requests aiming at overcoming the objections raised therein.

The board sees no reason to deviate from its preliminary opinion regarding added subject-matter, which therefore becomes final.

3. It follows that the present patent application does not meet the requirements of Article 123(2) EPC for the reasons set out in the board's preliminary opinion.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



M. Kiehl

F. J. Narganes-
Quijano

Decision electronically authenticated