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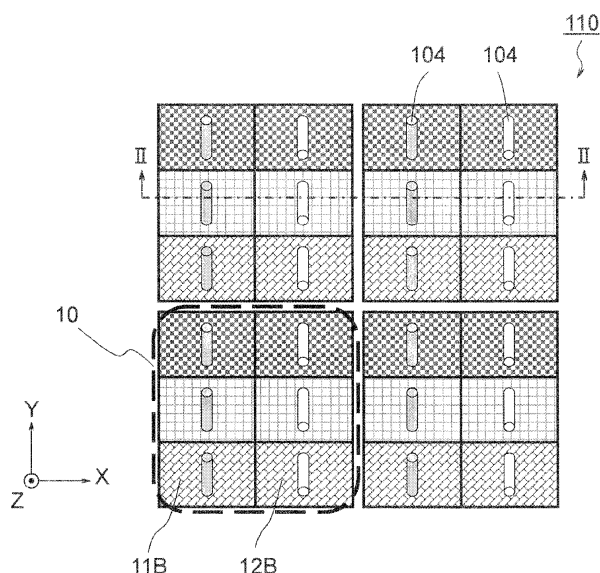
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(54) **Liquid crystal display device**

(57) To provide a vertical alignment liquid crystal display device capable of achieving a high-definition image display. Tilt directions of liquid crystal molecules when a voltage is applied are within a plane that is in parallel to a border between a first pixel and a second pixel, and are different by 180 degrees between the first and second pixels. The first pixel is constituted with three sub-pixels for R, G, and B arranged in a direction in parallel to the

border. Similarly, the second pixel is constituted with three sub-pixels for R, G, and B. The tilt directions of the liquid crystal molecules when a voltage is applied are different by 180 degrees from each other between the sub-pixels for R of the first and second pixels, between the sub-pixels for G of the first and second pixels, and between the sub-pixels for B of the first and second pixels.

FIG. 1A



**PARTIAL EUROPEAN SEARCH REPORT**

Application Number

under Rule 62a and/or 63 of the European Patent Convention.
This report shall be considered, for the purposes of
subsequent proceedings, as the European search report

EP 12 15 3969

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2009/284702 A1 (SEO BONG-SUNG [KR] ET AL) 19 November 2009 (2009-11-19) * paragraph [0046] - paragraphs [0048], [0096] - [0097]; figures 5,11,12 *	2-8,11,13,14	INV. G02F1/1337 G02B27/22
A,D	JP 2008 261980 A (TOSHIBA MATSUSHITA DISPLAY TEC) 30 October 2008 (2008-10-30) * abstract; figures 1,2 *	2-8,11-14	
A	CN 101 893 788 A (INFOVISION OPTOELECTRONICS KUNSHAN CO LTD) 24 November 2010 (2010-11-24) * abstract; figures 1-3,7a,7b *	2-8,11-14	
A	GB 2 426 352 A (SHARP KK [JP]) 22 November 2006 (2006-11-22) * abstract; figures 8b,11a *	2-8,11-14	
			TECHNICAL FIELDS SEARCHED (IPC)
			G02F G02B
INCOMPLETE SEARCH			
The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC so that only a partial search (R.62a, 63) has been carried out. Claims searched completely : Claims searched incompletely : Claims not searched : Reason for the limitation of the search: see sheet C			
Place of search		Date of completion of the search	Examiner
Munich		13 September 2012	Queneuille, Julien
CATEGORY OF CITED DOCUMENTS 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 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			

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**INCOMPLETE SEARCH
SHEET C**

Application Number

EP 12 15 3969

Claim(s) completely searchable:
2-8, 11-14

Claim(s) not searched:
1, 9, 10, 15-18

Reason for the limitation of the search:

Claims 1, 2, 10, 15-18 are independent claims and belong to the same category. They do not fall into the exceptions set out in Rule 43(2). Following a communication under Rule 62a(1) EPC, the applicant has indicated that the search should be carried out on the basis of claim 2. Therefore independent claims 1, 10, 15-18 and dependent claim 9 have not been searched in accordance to Rule 62a EPC.

**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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13-09-2012

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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优先权	2011025474 2011-02-08 JP 2011285586 2011-12-27 JP		
其他公开文献	EP2485085A2 EP2485085B1		
外部链接	Espacenet		

摘要(译)

提供一种能够实现高清晰度图像显示的垂直取向液晶显示装置。当施加电压时液晶分子的倾斜方向在与第一像素和第二像素之间的边界平行的平面内，并且在第一和第二像素之间相差180度。第一像素由R，G和B的三个子像素构成，这三个子像素布置在与边界平行的方向上。类似地，第二像素由R，G和B的三个子像素构成。当施加电压时液晶分子的倾斜方向在用于R的子像素之间彼此相差180度。第一和第二像素，在第一和第二像素的G的子像素之间，以及在第一和第二像素的B的子像素之间。

FIG. 1A

