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(54) **Transflective liquid crystal panel based on ADS display mode and display device**

(57) The invention discloses a transflective liquid crystal panel based on fringe field switching (advanced super dimension switch - ADS) display mode. Each pixel unit is provided with a transmissive region and a reflective region, wherein the thickness of the liquid crystal layer in the transmissive region is larger than in the reflective

region. Moreover, an optical retardation film (12) and a reflection layer (7) are disposed in the reflective region; wherein the optical retardation (12) film is adapted for compensating the optical retardation caused by the difference in the thicknesses of the liquid crystal layer in the transmissive and reflective regions.

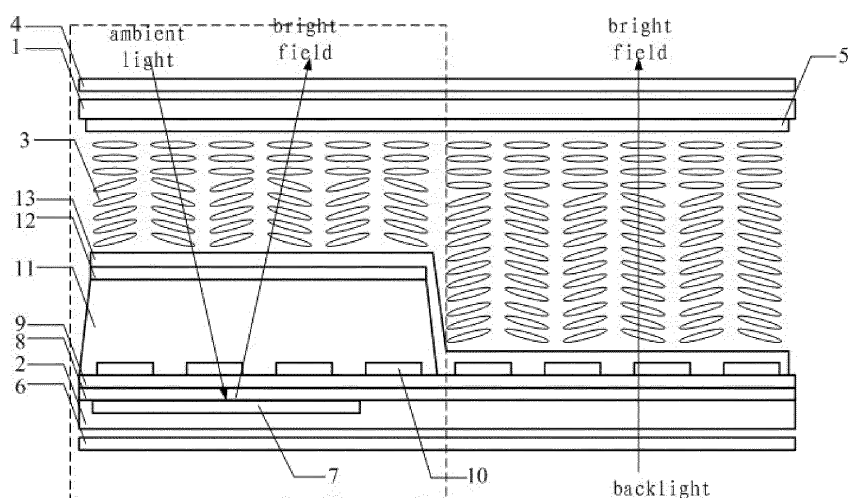


Fig. 3a



EUROPEAN SEARCH REPORT

Application Number
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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 A	US 2010/225855 A1 (LU RUIBO [US]) 9 September 2010 (2010-09-09) * abstract * * paragraph [0083] - paragraph [0096] * * paragraph [0101] * * figures 2A, 2B * * table 2 * -----	1-3,6, 8-12 4,7	INV. G02F1/1335 G02F1/1343 ADD. G02F1/1333 G02F1/13363
X	JP 2008 009155 A (CASIO COMPUTER CO LTD) 17 January 2008 (2008-01-17) * paragraph [0021] - paragraph [0046] * * figures 1-3 * -----	1-4,6-12	
			TECHNICAL FIELDS SEARCHED (IPC)
			G02F
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 14 February 2014	Examiner Hauser, Markus
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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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:

1-4, 6-12

☐ 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
EP 13 19 1858

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: 1-4, 6-12

Transflective display panel comprising a patterned quarter-wave plate and/or wherein the pixels' strip electrodes and the gate lines form an angle between 70° and 89°.

1.1. claim: 7

Transflective display panel wherein the pixels' strip electrodes and the gate lines form an angle between 70° and 89°.

2. claim: 5

Transflective display panel comprising a retarder made from a perpendicularly aligned macromolecular polymer.

Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.

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

EP 13 19 1858

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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 The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

14-02-2014

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2010225855 A1	09-09-2010	CN 102422206 A	18-04-2012
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		KR 20110126171 A	22-11-2011
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JP 2008009155 A	17-01-2008	NONE	

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

专利名称(译)	基于ADS显示模式和显示装置的半透半反液晶面板		
公开(公告)号	EP2733526A3	公开(公告)日	2014-08-13
申请号	EP2013191858	申请日	2013-11-07
[标]申请(专利权)人(译)	北京京东方光电科技有限公司		
申请(专利权)人(译)	北京京东方光电科技有限公司.LTD.		
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发明人	GUO, RENWEI WANG, QIAN XIE, HUIJIE		
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CPC分类号	G02F1/1335 G02F1/133371 G02F1/133555 G02F1/13363 G02F1/134309 G02F2001/133631 G02F2001/133638 G02F2001/134372 G02F2413/01		
审查员(译)	HAUSER , MARKUS		
优先权	201210466950.4 2012-11-16 CN 201210500809.1 2012-11-29 CN		
其他公开文献	EP2733526A2		
外部链接	Espacenet		

摘要(译)

本发明公开了一种基于条纹场切换（高级超大尺寸开关 - ADS）显示模式的半透半反液晶面板。每个像素单元设置有透射区域和反射区域，其中透射区域中的液晶层的厚度大于反射区域中的液晶层的厚度。此外，光学延迟膜（12）和反射层（7）设置在反射区域中；其中，光学延迟（12）膜适于补偿由透射和反射区域中的液晶层的厚度差异引起的光学延迟。

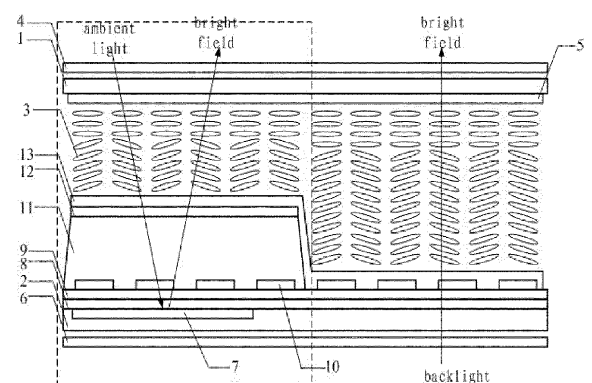


Fig. 3a