



(11) **EP 2 159 631 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**21.12.2011 Bulletin 2011/51**

(51) Int Cl.:  
**G02F 1/13363<sup>(2006.01)</sup> G02F 1/139<sup>(2006.01)</sup>**

(43) Date of publication A2:  
**03.03.2010 Bulletin 2010/09**

(21) Application number: **09008718.0**

(22) Date of filing: **03.07.2009**

(84) Designated Contracting States:  
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR  
HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL  
PT RO SE SI SK SM TR**  
Designated Extension States:  
**AL BA RS**

(30) Priority: **26.08.2008 KR 20080083301**

(71) Applicant: **Samsung Electronics Co., Ltd.**  
**Yeongtong-gu**  
**Suwon-city, Gyeonggi-do 442-742 (KR)**

(72) Inventors:  
• **Do, Hee-Wook**  
**Cheonan-si**  
**Chungcheongnam-do (KR)**

- **Shin, Ki-Chul**  
**Seongnam-si**  
**Gyeonggi-ko (KR)**
- **Kang, Sung-Min**  
**Yongsan-gu**  
**Seoul (KR)**
- **Lee, Seung-Hee**  
**Gangseo-gu**  
**Seoul (KR)**
- **Kim, Ji-Hoon**  
**Gimpo-si**  
**Gyeonggi-do (KR)**

(74) Representative: **Weitzel, Wolfgang**  
**Dr. Weitzel & Partner**  
**Patent- und Rechtsanwälte**  
**Friedenstrasse 10**  
**89522 Heidenheim (DE)**

(54) **Liquid crystal display and method for manufacturing the same**

(57) The present invention relates to compensation films of a vertically-aligned liquid crystal display. Upper and lower compensation films asymmetrically differ in refractive index from each other.

**EP 2 159 631 A3**



EUROPEAN SEARCH REPORT

Application Number  
EP 09 00 8718

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 2007/273816 A1 (KITAGAWA TAKEHARU [JP] ET AL) 29 November 2007 (2007-11-29) * paragraphs [0007] - [0009], [0015] - [0017], [0039] - [0048], [0059], [0060], [0114] - [0116], [0159] - [0162]; figures 1,2 *	1-36	INV. G02F1/13363 G02F1/139
X	WO 2006/132404 A1 (FUJI PHOTO FILM CO LTD [JP]; FUKAGAWA NOBUTAKA [JP]; HARUTA HIROMOTO []) 14 December 2006 (2006-12-14) * page 4 - page 8 * * page 48 * * page 112 - page 115; figure 1 *	1,2,9, 12-20, 30-36	
X	WO 2006/052108 A1 (LG CHEMICAL LTD [KR]; JANG SOO-JIN [KR]; JEON BYOUNG-KUN [KR]; BELYAEV) 18 May 2006 (2006-05-18) * paragraphs [0066] - [0075], [0090] - [0102]; figures 4,5; table 2 *	1,2,6-8, 13,15	
E	US 2009/207355 A1 (YANAI YUJIRO [JP] ET AL) 20 August 2009 (2009-08-20) * paragraphs [0074] - [0077] *	1-36	TECHNICAL FIELDS SEARCHED (IPC) G02F
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 11 November 2011	Examiner Stang, Ingo
<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                      &amp; : member of the same patent family, corresponding document</p>			

1  
EPO FORM 1503 03.82 (P04C01)

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

EP 09 00 8718

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.

11-11-2011

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2007273816 A1	29-11-2007	JP 4056552 B2	05-03-2008
		JP 2008003559 A	10-01-2008
		KR 20070113123 A	28-11-2007
		TW 200809276 A	16-02-2008
		US 2007273816 A1	29-11-2007
-----			
WO 2006132404 A1	14-12-2006	EP 1899763 A1	19-03-2008
		KR 20080012931 A	12-02-2008
		US 2009153782 A1	18-06-2009
		US 2010062361 A1	11-03-2010
		WO 2006132404 A1	14-12-2006
-----			
WO 2006052108 A1	18-05-2006	EP 1810072 A1	25-07-2007
		JP 4459229 B2	28-04-2010
		JP 2007531901 A	08-11-2007
		WO 2006052108 A1	18-05-2006
-----			
US 2009207355 A1	20-08-2009	JP 2009223279 A	01-10-2009
		US 2009207355 A1	20-08-2009
-----			