



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
17.02.2016 Bulletin 2016/07

(51) Int Cl.:
H01L 27/32 (2006.01)

(43) Date of publication A2:
03.02.2016 Bulletin 2016/05

(21) Application number: **15178791.8**

(22) Date of filing: **29.07.2015**

(84) Designated Contracting States:
AL 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 RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
MA

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(30) Priority: **01.08.2014 KR 20140098983**

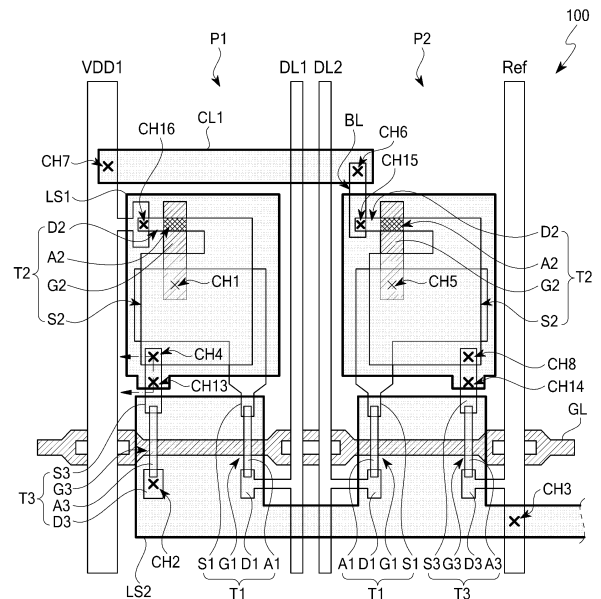
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(54) **ORGANIC LIGHT EMITTING DISPLAY DEVICE**

(57) Disclosed is an organic light emitting display device that may include a first pixel (P1) on a substrate (100); a switching transistor (T1) with a first active layer (A1) provided inside the first pixel (P1); a driving transistor (T2) with a second active layer (A2) provided inside the first pixel (P1); a first light shielding layer (LS1) overlapping the second active layer (A2); and a second light shielding layer (LS2) overlapping the first active layer (A1), wherein the first light shielding layer (LS1) is connected with the driving transistor (T2), and the second light shielding layer (LS2) is electrically insulated from the first light shielding layer (LS1).

FIG. 3A





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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	US 2007/210303 A1 (IKEDA KYOJI [JP] ET AL) 13 September 2007 (2007-09-13) * paragraphs [0023], [0028], [0041]; figures 2,3,6,8 *	1,3,4,13	INV. H01L27/32
Y	-----	9	
X	US 2006/250592 A1 (NOGUCHI YUKIHIRO [JP] ET AL) 9 November 2006 (2006-11-09) * paragraphs [0187] - [0205]; figures 40,41 *	1,3,4	TECHNICAL FIELDS SEARCHED (IPC)
Y	-----	2	
X	US 2005/082540 A1 (NISHIKAWA RYUJI [JP]) 21 April 2005 (2005-04-21) * paragraphs [0047], [0073], [0074]; figures 3,5A, 5B *	1	H01L
Y	-----	2,12	
Y	US 2014/167009 A1 (LEE JUNGHYUN [KR] ET AL) 19 June 2014 (2014-06-19) * figure 4 *	9,12	H01L
Y	-----	9,12	
A	EP 0 862 077 A2 (SEIKO EPSON CORP [JP]) 2 September 1998 (1998-09-02) * column 2, lines 35-51 * * column 3, lines 11-26 * * column 4, lines 47-54 * * column 12, lines 16-20 * * figure 6 *	1-13	H01L
A	-----	1-13	
A	US 2007/296333 A1 (KIM JUNG-CHUL [KR] ET AL) 27 December 2007 (2007-12-27) * paragraphs [0009], [0018], [0022], [0023], [0067], [0074], [0075]; figures 5,6 *	1-13	H01L
A	-----	1-13	
A	US 2010/176381 A1 (YAGI IWA0 [JP] ET AL) 15 July 2010 (2010-07-15) * figures 8,11,14,15,17 * * paragraphs [0005] - [0008], [0108] - [0113] *	1-13	H01L
A	-----	1-13	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 12 January 2016	Examiner Faou, Marylène
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	

EPO FORM 1503 03.02 (P04C01)

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

EP 15 17 8791

5

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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35

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2007210303 A1	13-09-2007	CN 1949543 A	18-04-2007
		JP 2007109868 A	26-04-2007
		KR 20070041347 A	18-04-2007
		US 2007210303 A1	13-09-2007

US 2006250592 A1	09-11-2006	JP 4942341 B2	30-05-2012
		JP 2006227586 A	31-08-2006
		KR 20060073513 A	28-06-2006
		TW I393260 B	11-04-2013
		US 2006250592 A1	09-11-2006

US 2005082540 A1	21-04-2005	JP 2001109404 A	20-04-2001
		KR 20010050803 A	25-06-2001
		TW 508974 B	01-11-2002
		US 6958740 B1	25-10-2005
		US 2005082540 A1	21-04-2005

US 2014167009 A1	19-06-2014	CN 103872080 A	18-06-2014
		KR 20140077002 A	23-06-2014
		US 2014167009 A1	19-06-2014

EP 0862077 A2	02-09-1998	CN 1195786 A	14-10-1998
		CN 1515929 A	28-07-2004
		CN 1900801 A	24-01-2007
		DE 69818536 D1	06-11-2003
		DE 69818536 T2	05-08-2004
		DE 69829509 D1	28-04-2005
		DE 69829509 T2	17-11-2005
		EP 0862077 A2	02-09-1998
		EP 1132765 A2	12-09-2001
		JP 3716580 B2	16-11-2005
		JP H10301100 A	13-11-1998
		US 6330044 B1	11-12-2001
		US 2001019384 A1	06-09-2001
		US 2001030722 A1	18-10-2001

US 2007296333 A1	27-12-2007	CN 101093851 A	26-12-2007
		KR 20070121376 A	27-12-2007
		US 2007296333 A1	27-12-2007

US 2010176381 A1	15-07-2010	CN 101595567 A	02-12-2009
		JP 4591451 B2	01-12-2010
		JP 2008171907 A	24-07-2008
		KR 20090101225 A	24-09-2009
		TW 200843117 A	01-11-2008
		US 2010176381 A1	15-07-2010

EPO FORM P0459

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

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

EP 15 17 8791

5

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.

12-01-2016

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2008084697 A1 17-07-2008			

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EPO FORM P0459

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

专利名称(译)	有机发光显示装置		
公开(公告)号	EP2980853A3	公开(公告)日	2016-02-17
申请号	EP2015178791	申请日	2015-07-29
[标]申请(专利权)人(译)	乐金显示有限公司		
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IPC分类号	H01L27/32		
CPC分类号	H01L27/3223 H01L27/3262 H01L27/3272 H01L27/3276 H01L27/0248 H01L51/5221		
优先权	1020140098983 2014-08-01 KR		
其他公开文献	EP2980853B1 EP2980853A2		
外部链接	Espacenet		

摘要(译)

公开了一种有机发光显示装置，其可包括在基板（100）上的第一像素（P1）；开关晶体管（T1），具有设置在第一像素（P1）内部的第一有源层（A1）；驱动晶体管（T2），其中第二有源层（A2）设置在第一像素（P1）内；第一遮光层（LS1）与第二有源层（A2）重叠；与第一有源层（A1）重叠的第二遮光层（LS2），其中第一遮光层（LS1）与驱动晶体管（T2）连接，第二遮光层（LS2）与第一遮光层（LS1）电绝缘第一遮光层（LS1）。

