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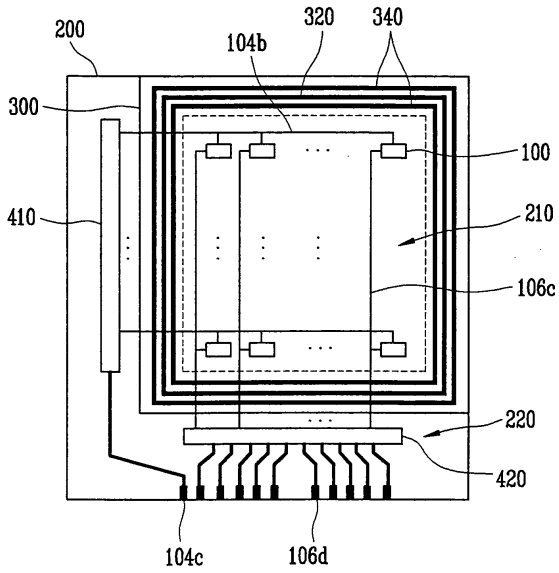
(54) Organic light emitting display device

(57) An organic light-emitting display device comprising: a pixel region (210) wherein an organic light-emitting device comprised of a first electrode , an organic thin film layer and a second electrode is formed; a first substrate (200) comprising a non-pixel region (220) encompassing the pixel region (210); a second substrate (300) disposed on the upper of the first substrate to be overlapped with the pixel region and a portion of the non-pixel region; and a plurality of frits (320,340) provided between the first substrate and the second substrate and formed in parallel at spaced intervals along the peripheral portion of the pixel region, wherein the first substrate is bonded to the second substrate by the plurality of frits. Even in the case that a portion of the frit is delaminated due to a partial defect thereof, its encapsulation state can be maintained as it is encapsulated with a multi frit structure and even in the case that a substrate with a large diameter is used, the width and height of the frit do not need to increase.

FIG. 3A



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EUROPEAN SEARCH REPORT

Application Number
EP 07 25 0336

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	WO 2005/050751 A2 (DU PONT [US]; TREMEL JAMES DANIEL [US]; HUBERT MATTHEW DEWEY [US]) 2 June 2005 (2005-06-02)	1-24	INV. H01L51/52
Y	* page 12, line 11 - line 26 * * page 13, line 8 - line 17 * * page 17, line 21 - page 18, line 7 * * page 19, line 28 - page 20, line 39 * * page 25, line 21 - page 26, line 32 *	25,26	
Y	US 2003/127976 A1 (KIM KWAN-SOO [KR] ET AL) 10 July 2003 (2003-07-10) * paragraphs [0014], [0015], [0020], [0031], [0036], [0038]; figures 4,5 *	1-26	
Y	US 2004/207314 A1 (AITKEN BRUCE G [US] ET AL AITKEN BRUCE G [US] ET AL) 21 October 2004 (2004-10-21) * paragraphs [0011], [0012], [0031] - [0037], [0088] * * tables 1-4 *	1-26	
Y	US 2005/248270 A1 (GHOSH AMALKUMAR P [US] ET AL) 10 November 2005 (2005-11-10) * paragraphs [0077], [0079] *	25,26	TECHNICAL FIELDS SEARCHED (IPC) H01L H05B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	17 February 2011	De Laere, Ann

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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& : member of the same patent family, corresponding document

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 07 25 0336

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2005050751 A2	02-06-2005	EP 1683209 A2	26-07-2006
		JP 2007516611 T	21-06-2007
		KR 20060113710 A	02-11-2006
US 2003127976 A1	10-07-2003	KR 20030057053 A	04-07-2003
US 2004207314 A1	21-10-2004	CA 2522425 A1	04-11-2004
		CN 1798710 A	05-07-2006
		CN 101312234 A	26-11-2008
		EP 1620369 A2	01-02-2006
		JP 4540669 B2	08-09-2010
		JP 2006524419 T	26-10-2006
		KR 20060005369 A	17-01-2006
		US 2006009109 A1	12-01-2006
		US 2005001545 A1	06-01-2005
		WO 2004095597 A2	04-11-2004
US 2005248270 A1	10-11-2005	WO 2005119803 A2	15-12-2005

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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)	有机发光显示装置		
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[标]申请(专利权)人(译)	三星斯笛爱股份有限公司		
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外部链接	Espacenet		

摘要(译)

一种有机发光显示装置，包括：像素区域（210），其中形成由第一电极，有机薄膜层和第二电极组成的有机发光装置;第一基板（200），包括包围像素区域（210）的非像素区域（220）;第二基板（300），设置在第一基板的上部，与像素区域和非像素区域的一部分重叠;多个玻璃料（320,340）设置在第一基板和第二基板之间，并沿着像素区域的周边部分以间隔的间隔平行地形成，其中第一基板通过多个玻璃料结合到第二基板。即使在玻璃料的一部分由于其部分缺陷而分层的情况下，也可以保持其封装状态，因为其用多玻璃料结构封装，并且即使在使用具有大直径的基板的情况下，玻璃料的宽度和高度不需要增加。

FIG. 3A