

(19)



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European Patent Office
Office européen des brevets



(11)

EP 1 286 397 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
25.10.2006 Bulletin 2006/43

(51) Int Cl.:
H01L 27/00 (2006.01)

(43) Date of publication A2:
26.02.2003 Bulletin 2003/09

(21) Application number: **02018705.0**

(22) Date of filing: **21.08.2002**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
IE IT LI LU MC NL PT SE SK TR**
Designated Extension States:
AL LT LV MK RO SI

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(30) Priority: **21.08.2001 KR 2001050324**

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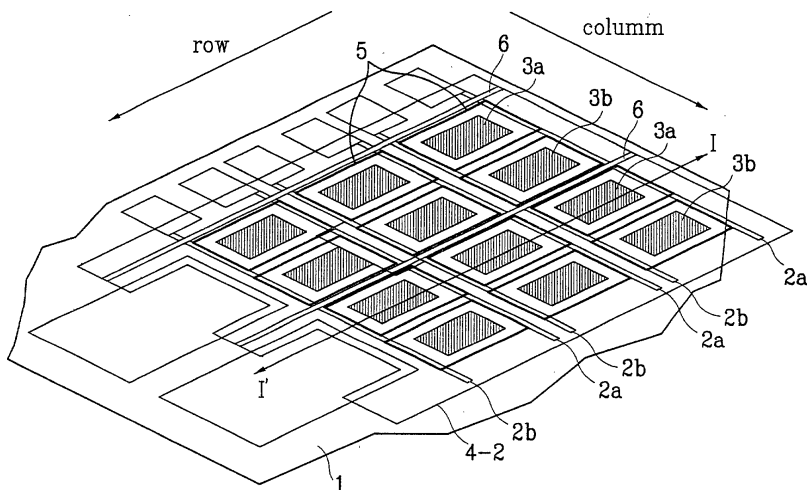
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(54) Organic electroluminescence display panel and fabrication method thereof

(57) Disclosed are an organic EL(electroluminescence) display panel and a fabrication method thereof. The auxiliary electrode is formed to alternate but be overlapped with the pattern of the first electrode with a predetermined area so as to increase the pixel area as much as the overlapped area. Therefore, the present invention improves an opening ratio of the organic EL device. And, the present invention requires no additional step of forming an insulating layer for increasing an opening ratio,

thereby saving a product cost for the fabrication of the organic EL device as well as being advantageous in fabrication efficiency. The present invention includes a transparent substrate, a first electrode formed on the transparent substrate, an auxiliary electrode overlapped with the first electrode in part so as to be connected to the first electrode, an organic light-emitting layer formed on the first electrode at the pixel, and a second electrode formed on the organic light-emitting layer so as to cross with the first electrode.

FIG.4



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EUROPEAN SEARCH REPORT

Application Number
EP 02 01 8705

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	EP 0 888 035 A (IDEMITSU KOSAN COMPANY LIMITED) 30 December 1998 (1998-12-30) * page 9, line 58 - page 10, lines 1-8; figures 8a,9,10 * * sentences 1-24; figures 14,15 *	1-5	INV. H01L27/00
Y	-----	1-5	
X	US 5 399 936 A (NAMIKI ET AL) 21 March 1995 (1995-03-21) * column 4, lines 3-20; figures 6b,6d * * column 5, lines 49-63 - column 6, lines 32-35; figures 11b,13 *	1,4,5	
X	US 6 140 765 A (KIM ET AL) 31 October 2000 (2000-10-31) * column 6, lines 31-39,57-67; figures 5-1a,5-1b *	1	
Y	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 25, 12 April 2001 (2001-04-12) -& JP 2001 217081 A (SHARP CORP), 10 August 2001 (2001-08-10) * abstract; figures 2,5 *	1-5	
A	EP 1 107 335 A (TDK CORPORATION) 13 June 2001 (2001-06-13) * paragraphs [0037], [0038]; figures 1,2 * -----	1-5	TECHNICAL FIELDS SEARCHED (IPC) H01L
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 14 September 2006	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			

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EPO FORM 1503 03.92 (P04C01)

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

EP 02 01 8705

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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14-09-2006

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0888035	A	30-12-1998	DE 69732903 D1	04-05-2005
			DE 69732903 T2	02-02-2006
			WO 9734447 A1	18-09-1997
			JP 3162407 B2	25-04-2001
			US 6157127 A	05-12-2000

US 5399936	A	21-03-1995	NONE	

US 6140765	A	31-10-2000	KR 2000009005 A	15-02-2000

JP 2001217081	A	10-08-2001	NONE	

EP 1107335	A	13-06-2001	JP 2001155867 A	08-06-2001
			TW 471241 B	01-01-2002

专利名称(译)	有机电致发光显示面板及其制造方法		
公开(公告)号	EP1286397A3	公开(公告)日	2006-10-25
申请号	EP2002018705	申请日	2002-08-21
申请(专利权)人(译)	LG电子株式会社.		
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IPC分类号	H01L27/00 H05B33/26 H01L27/32 H01L51/50 H01L51/52		
CPC分类号	H01L27/3288 H01L51/5212		
优先权	1020010050324 2001-08-21 KR		
其他公开文献	EP1286397A2		
外部链接	Espacenet		

摘要(译)

公开了一种有机EL (电致发光) 显示面板及其制造方法。辅助电极形成于交替但与第一电极的图案重叠并具有预定区域, 以便增加与重叠区域一样多的像素区域。因此, 本发明改善了有机EL器件的开口率。并且, 本发明不需要形成用于增加开口率的绝缘层的附加步骤, 从而节省了制造有机EL器件的产品成本以及有利于制造效率。本发明包括透明基板, 形成在透明基板上的第一电极, 与第一电极重叠的辅助电极, 以便连接到第一电极, 在第一电极上形成的有机发光层, 像素和形成在有机发光层上的第二电极, 以与第一电极交叉。

FIG. 4

