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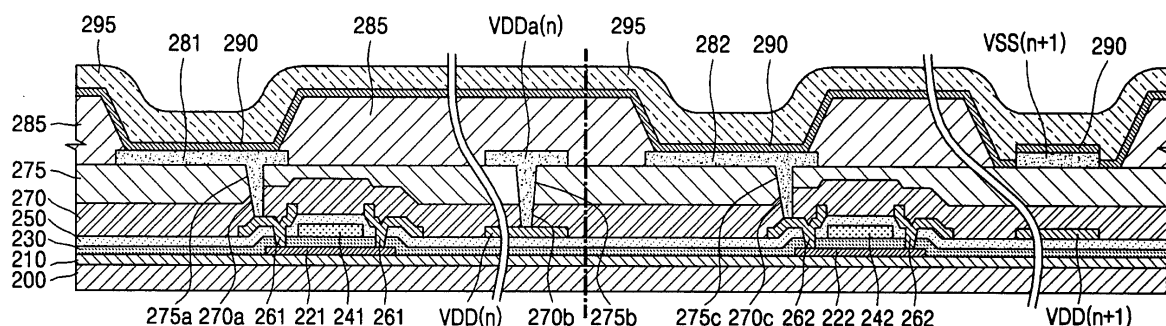
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(54) **Organic electro-luminescent display device and method of manufacturing the same**

(57) An organic electroluminescence device which includes a power line formed on the same layer as source and drain electrodes of a thin film transistor (TFT) and formed on a substrate on which the TFT is formed, a first insulating layer formed on the TFT, a lower electrode that electrically connected to one of the source and drain electrodes of the TFT and disposed on the first insulating

layer, a first auxiliary power line and a second auxiliary power line formed on the same layer as the lower electrode in the second insulating layer, a second insulating layer formed on an edge portion of the lower electrode and not formed on the second auxiliary power line, where-in an opening that exposes a portion of the lower electrode is formed, an organic film formed on a substrate; and an upper electrode formed on the substrate.

FIG. 3





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EUROPEAN SEARCH REPORT

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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 2002/158835 A1 (KOBAYASHI MICHIO [JP] ET AL) 31 October 2002 (2002-10-31)	1,16,17	INV. H01L51/20 H01L27/15 G09G3/32
Y	* paragraph [0040] - paragraph [0086] * * figure 3 *	2	
X	JP 2002 318556 A (TOKYO SHIBAURA ELECTRIC CO) 31 October 2002 (2002-10-31)	1,16,17	
Y	* abstract; figure 3 *	2	
Y	EP 1 109 224 A (SEMICONDUCTOR ENERGY LAB [JP]) 20 June 2001 (2001-06-20) * paragraph [0024] - paragraph [0036]; figure 3 *	2	
A	US 2003/151355 A1 (HOSOKAWA CHISHIO [JP]) 14 August 2003 (2003-08-14) * figures 1,2 *	1-31	
			TECHNICAL FIELDS SEARCHED (IPC)
			H01L G02F
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 15 April 2008	Examiner Bernabé Prieto, A
CATEGORY OF CITED DOCUMENTS		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	
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			

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

EP 05 09 0025

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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15-04-2008

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2002158835	A1	31-10-2002	KR 20020082138 A	30-10-2002
			TW 257496 B	01-07-2006

JP 2002318556	A	31-10-2002	NONE	

EP 1109224	A	20-06-2001	CN 1300104 A	20-06-2001
			CN 1662107 A	31-08-2005
			CN 1921138 A	28-02-2007
			KR 20010062339 A	07-07-2001
			TW 465122 B	21-11-2001
			US 2001015618 A1	23-08-2001

US 2003151355	A1	14-08-2003	NONE	

一种有机电致发光器件，包括形成在与薄膜晶体管（TFT）的源极和漏极相同的层上并形成在其上形成有TFT的基板上的电源线，形成在TFT上的第一绝缘层，下部电连接到TFT的源极和漏极之一并设置在第一绝缘层上的电极，第一辅助电源线和第二辅助电源线形成在与第二绝缘层中的下电极相同的层上，第二绝缘层形成在下电极的边缘部分上而不形成在第二辅助电源线上，其中形成暴露下电极的一部分的开口，形成在基板上的有机膜；以及形成在基板上的上电极。