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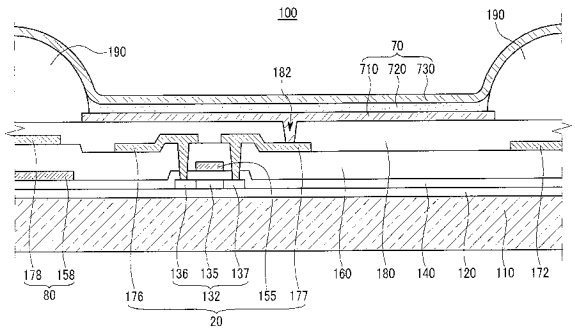
(54) Organic light emitting diode display

(57) An organic light emitting diode display (100) includes a substrate (110), a thin film transistor (20), a planarization layer (180), a pixel electrode (710), and a pixel defining layer (190). The thin film transistor (20) is formed on the substrate (110) and includes a gate electrode (155), a source electrode (136), and a drain electrode (137). The planarization layer (180) is formed on the thin film transistor (20) and has a contact hole (182) that exposes a predetermined part of the drain electrode (137). The pixel electrode (710) is formed on the planarization layer (180) and is connected to a drain electrode (137) of the thin film transistor (20) through the contact hole (182). The pixel defining layer (190) is formed on the planarization layer (180) and has an opening that exposes the pixel electrode (710). The pixel defining layer (190) and the planarization layer (180) have different colours.

FIG. 2



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EUROPEAN SEARCH REPORT

Application Number
EP 09 16 6961

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 1 557 891 A2 (LG ELECTRONICS INC [KR]) 27 July 2005 (2005-07-27) * paragraphs [0101] - [0115]; figure 9 *	1-3,6,7	INV. H01L51/52
X	US 2007/238218 A1 (TENG TE-HUA [TW] ET AL) 11 October 2007 (2007-10-11) * paragraphs [0049] - [0053]; figure 3 *	1,2,7	
X	US 2006/152151 A1 (SEO SEONG-MOH [KR]) 13 July 2006 (2006-07-13) * paragraphs [0028] - [0046]; figure 4 *	1,2,7	
A	JP 2004 103334 A (SEIKO EPSON CORP) 2 April 2004 (2004-04-02) * paragraphs [0063] - [0071]; figure 4 *	1-7	

TECHNICAL FIELDS SEARCHED (IPC)

H01L

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	31 May 2012	Bakos, Tamás

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1557891 A2	27-07-2005	CN 1645978 A	27-07-2005
		EP 1557891 A2	27-07-2005
		JP 2005209651 A	04-08-2005
		US 2005179368 A1	18-08-2005
US 2007238218 A1	11-10-2007	US 2007238218 A1	11-10-2007
		US 2009033217 A1	05-02-2009
US 2006152151 A1	13-07-2006	CN 1787226 A	14-06-2006
		JP 2006171739 A	29-06-2006
		KR 20060065366 A	14-06-2006
		US 2006152151 A1	13-07-2006
JP 2004103334 A	02-04-2004	NONE	

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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)	有机发光二极管显示器		
公开(公告)号	EP2149925A3	公开(公告)日	2012-07-11
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[标]申请(专利权)人(译)	三星显示有限公司		
申请(专利权)人(译)	三星移动显示器有限公司.		
当前申请(专利权)人(译)	三星DISPLAY CO.，LTD.		
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外部链接	Espacenet		

摘要(译)

有机发光二极管显示器（100）包括基板（110），薄膜晶体管（20），平坦化层（180），像素电极（710）和像素限定层（190）。薄膜晶体管（20）形成在基板（110）上，并包括栅电极（155），源电极（136）和漏电极（137）。平坦化层（180）形成在薄膜晶体管（20）上并具有暴露漏电极（137）的预定部分的接触孔（182）。像素电极（710）形成在平坦化层（180）上，并通过接触孔（182）连接到薄膜晶体管（20）的漏电极（137）。像素限定层（190）形成在平坦化层（180）上并具有暴露像素电极（710）的开口。像素限定层（190）和平坦化层（180）具有不同的颜色。

FIG. 2