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(54) **Active matrix EL display device**

(57) An EL display device capable of producing a vivid multi-gradation color display, and an electronic device having the EL display device. An electric current supplied to an EL element 110 is controlled by providing a resistor 109 between a current control TFT 108 and the EL element 110 formed in a pixel 104, the resistor

109 having a resistance higher than the on-resistance of the current control TFT 108. The gradation display is executed by a time-division drive system which controls the emission and non-emission of light of the EL element 110 by time, preventing the effect caused by a dispersion in the characteristics of the current control TFT 108.

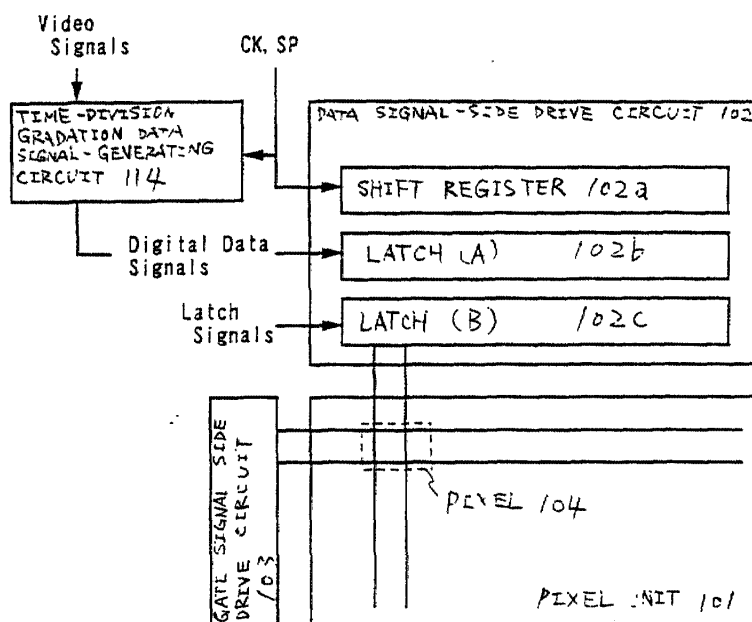


Fig. 1(A)

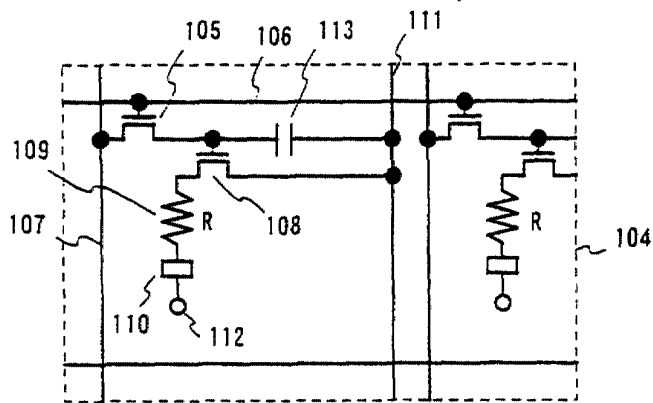


Fig. 1(B)



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 00 11 3394

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E	US 6 147 451 A (HAMADA YUJI ET AL) 14 November 2000 (2000-11-14) * abstract * * column 3, line 51 - column 4, line 41 * * column 9, line 17 - column 11, line 4 * * figures 1-4,10,11 *	1,7,13, 19,25,31	
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The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 2 May 2002	Examiner Farricella, L
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 03/82 (P04C01)



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 11 3394

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 2 May 2002	Examiner Farricella, L
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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Application Number
EP 00 11 3394

DOCUMENTS CONSIDERED TO BE RELEVANT			
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A	FORTUNATO G: "Polycrystalline silicon thin-film transistors: A continuous evolving technology" THIN SOLID FILMS, ELSEVIER-SEQUOIA S.A. LAUSANNE, CH, vol. 296, no. 1-2, 1 March 1997 (1997-03-01), pages 82-90, XP004111555 ISSN: 0040-6090 * page 82, left-hand column, paragraph 1 * * page 82, right-hand column, paragraph 2 - page 83, left-hand column, paragraph 1 * -----	4,5,10, 11,16, 17,22, 23,28, 29,34,35	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
MUNICH		2 May 2002	Farricella, L
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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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 11 3394

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专利名称(译)	有源矩阵EL显示器件		
公开(公告)号	EP1063630A3	公开(公告)日	2002-07-10
申请号	EP2000113394	申请日	2000-06-23
[标]申请(专利权)人(译)	株式会社半导体能源研究所		
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[标]发明人	KOYAMA JUN		
发明人	KOYAMA, JUN		
IPC分类号	G09G3/30 G02F1/136 G09F9/30 G09G3/20 G09G3/32 H01L27/15 H01L27/32 H01L51/50 H05B33/12 H05B33/14		
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优先权	1999176521 1999-06-23 JP		
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摘要(译)

一种能够产生鲜明的多灰度彩色显示的EL显示装置，以及具有该EL显示装置的电子装置。通过在电流控制TFT 108和形成在像素104中的EL元件110之间提供电阻器109来控制提供给EL元件110的电流，电阻器109的电阻高于电流控制TFT的导通电阻。通过时分驱动系统执行灰度显示，该时分驱动系统随时间控制EL元件110的光的发射和不发射，防止由电流控制TFT108的特性的色散引起的影响。

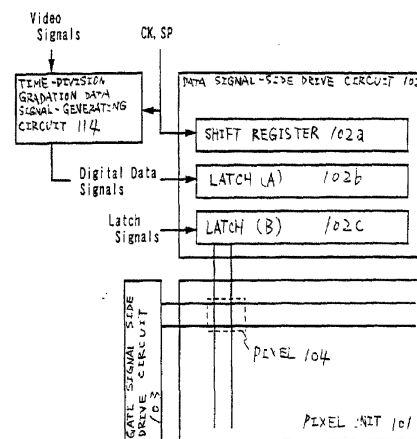


Fig. 1(A)