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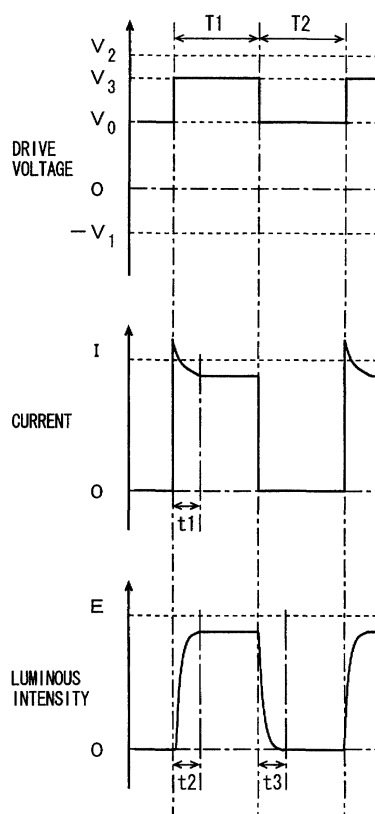
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(54) **Driving method and drive for organic electroluminescence element and display employing the same**

(57) A drive pulse application circuit applies a drive pulse alternately changing between a first voltage higher than a luminescence starting voltage and a second voltage higher than 0 V and not more than the luminescence starting voltage across a hole injection electrode and an electron injection electrode of an organic EL element.

F I G. 3





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EUROPEAN SEARCH REPORT

Application Number
EP 00 30 7755

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)
X	PATENT ABSTRACTS OF JAPAN vol. 1995, no. 11, 26 December 1995 (1995-12-26) -& JP 07 230880 A (RICOH CO LTD), 29 August 1995 (1995-08-29) * abstract *	1,3,5,7, 9-11,13	G09G3/32
Y	* the whole document *	2,4,6,8, 12,14	
X	--- PATENT ABSTRACTS OF JAPAN vol. 1997, no. 12, 25 December 1997 (1997-12-25) -& JP 09 218664 A (TDK CORP;SEMICONDUCTOR ENERGY LAB CO LTD), 19 August 1997 (1997-08-19) * abstract * * the whole document * -& US 5 982 345 A (ARAI MICHIO ET AL) 9 November 1999 (1999-11-09) * the whole document *	1,5,9-11	
Y	--- PATENT ABSTRACTS OF JAPAN vol. 1999, no. 09, 30 July 1999 (1999-07-30) -& JP 11 095723 A (NEC CORP), 9 April 1999 (1999-04-09) * abstract * * the whole document * -& US 6 201 520 B1 ((NEC CORP)) 13 March 2001 (2001-03-13) * the whole document * *assumed translation of JP11095723*	2,6,12	
Y	--- DE 197 22 190 A (FUJI ELECTRIC CO LTD) 4 December 1997 (1997-12-04) * the whole document * --- -/--	2,4,6,8, 12,14	TECHNICAL FIELDS SEARCHED (Int.Cl.7) G09G
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 5 June 2002	Examiner Harke, M
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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EUROPEAN SEARCH REPORT

Application Number
EP 00 30 7755

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)
Y	US 5 757 139 A (FORREST STEPHEN R ET AL) 26 May 1998 (1998-05-26) * the whole document *	2,6,12	
Y	WO 96 36959 A (PHILIPS ELECTRONICS NV ;PHILIPS NORDEN AB (SE)) 21 November 1996 (1996-11-21) * the whole document *	4,8,14	
Y	WO 99 42983 A (BURROUGHS JEREMY HENLEY ;CAMBRIDGE DISPLAY TECH (GB); FRIEND RICH) 26 August 1999 (1999-08-26) * the whole document *	4,8,14	
A,D	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 04, 30 April 1999 (1999-04-30) -& JP 11 008064 A (STANLEY ELECTRIC CO LTD), 12 January 1999 (1999-01-12) * abstract * * the whole document *		
A,D	EP 0 884 718 A (CANON KK) 16 December 1998 (1998-12-16) * the whole document *		
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
Place of search MUNICH		Date of completion of the search 5 June 2002	Examiner Harke, M
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 30 7755

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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05-06-2002

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
JP 07230880	A	29-08-1995	NONE	
JP 09218664	A	19-08-1997	US 5982345 A	09-11-1999
JP 11095723	A	09-04-1999	JP 2993475 B2	20-12-1999
			US 6201520 B1	13-03-2001
DE 19722190	A	04-12-1997	DE 19722190 A1	04-12-1997
			JP 10055154 A	24-02-1998
			US 6104363 A	15-08-2000
US 5757139	A	26-05-1998	AU 6249598 A	25-08-1998
			CN 1246268 T	01-03-2000
			EP 0995341 A1	26-04-2000
			JP 2002513503 T	08-05-2002
			WO 9834439 A1	06-08-1998
WO 9636959	A	21-11-1996	EP 0771459 A2	07-05-1997
			WO 9636959 A2	21-11-1996
			US 6014119 A	11-01-2000
WO 9942983	A	26-08-1999	AU 2529099 A	06-09-1999
			CN 1291321 T	11-04-2001
			EP 1057167 A1	06-12-2000
			WO 9942983 A1	26-08-1999
			JP 2002504717 T	12-02-2002
JP 11008064	A	12-01-1999	NONE	
EP 0884718	A	16-12-1998	JP 3236243 B2	10-12-2001
			JP 11003060 A	06-01-1999
			EP 0884718 A1	16-12-1998
			US 6016037 A	18-01-2000

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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)	有机电致发光元件的驱动方法和驱动器以及使用该元件的显示器		
公开(公告)号	EP1085496A3	公开(公告)日	2002-08-07
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[标]申请(专利权)人(译)	三洋电机株式会社		
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IPC分类号	G09G3/20 G09G3/30 G09G3/32 H01L51/50 H05B33/08 H05B33/12 H05B33/14		
CPC分类号	G09G3/3216 G09G3/3233 G09G2310/0256 G09G2310/06 G09G2320/0233 G09G2320/043		
优先权	1999258898 1999-09-13 JP		
其他公开文献	EP1085496A2		
外部链接	Espacenet		

摘要(译)

驱动脉冲施加电路施加驱动脉冲，该驱动脉冲在高于发光起始电压的第一电压和高于0V的第二电压之间交替变化，并且不超过空穴注入电极和有机电子注入电极上的发光起始电压。EL元素。

