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 (12) (A)

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(21) 10 - 2001 - 0086355
 (22) 2001 12 27

(30) JP - P - 2000 - 00403533 2000 12 28 (JP)

(71) 가 가
 가 5 7 1

(72) 가 5 7 1 가 가

(74)

(54) , ,

가
 가 .

1

,
 2 , ,
 , EL
 EL

1

, , EL, EL

EL
EL 가 , , ,
EL 가 , , ,
EL 가 , , ,
EL (11 - 143429).
6 EL (100) (100) 6 EL
7 . 6 . 8 . 6 .

6 , EL (100) EL E11, E
 12, E13, ..., E1n, E21, E22, E23, ..., E2n, E31, E32, E33, ..., E3n, E41, E42, E43, ..., E4n, ..., Em1, Em2,
 Em3, ..., Emn , EL E11, E12, ..., Emn
 R1, R2, R3, R4, ..., Rm EL E11, E12, ..., Emn
 C1, C2, C3, C4, ..., Cn EL
 , R1, R2, R3, R4, ..., Rm (change - over switch)
 11, 12, 13, 14, ..., 1m, C1, C2, C3, C4, ..., Cn (driving source) 21,
 22, 23, ..., 2n, C1, C2, C3, C4, ..., Cn 31, 32, 33, ..., 3n,
 31, 32, 33, .., 3n (4), 1 (5) 2 (6)

6 EL (100) (R), (G) (B) 3 가
 EL E11, E12, ..., Emn , 3 가
 EL E11, E12, ..., Emn .
 L , , , E

L EL E11, E12, ..., Emn DE CE , EL E1
 EL E11, E12, ..., Emn C1, C2, C3, ..., Cn ,
 1, E12, ..., Emn R1, R2, R3, ..., Rm .

R1, R2, R3, ..., Rm , " 11, 12, 13, 14, ..., 1m , "
 C1, C2, C3, ..., Cn 가 , , 11, 12, ..., 1m ()
 11, 12, ..., 1m
 R1, R2, ..., Rm 2 (6) p FET()
) n FET . 21, 22, 23, ..., 2n
 , C1, C2, C3, ..., Cn
 . 31, 32, ..., 3n R1, R2, R3, ..., Rm ,
 (4) EL E11, E12, ..., Emn . (4)
 (ZD) EL E11, E12, ..., Emn EL E11, E12, ..., Emn
 가 () CH , 31, 32, ..., 3n 가
 (on) EL E11, E12, ..., Emn . (DH)
 VH . 1 (5) V1 가 . 2
 (6) 11, 12, ..., 1m V2 가 .

EL (100) 6, 7 8

6 1 R1 2 R2 R2 가
 (12) . , C2 가 R2 . , (22) 1 (5)
 , C2 R2 EL E22() ,

DE , , CE

21, 23, ..., 2n EL (, ") C1, C3,..., Cn
 .) EL , R2 가
 . EL 가 1 (5)
 . , 2 (6) EL 가 EL
 가 R1, R2,..., Rm EL 가 EL
 . . , . . , EL
 CE

7	가	3	R3						31, 32,
33,...,	3n	(on)	R2가		12	2	(6)	,	R3
		13		.	,			C1, C2, C3,..., Cn	
31, 32, 33.., 3n			,			(4)		.	,
			EL	,	,		EL		
		(4)			VH	.		VH	
가	EL	가		,	,			R3	E

, R3 , 가 C2 , EL E
 32 , , EL E32 , , R3 , , CE C1, C3,..., Cn , EL .
 , 가 . , EL E32 , , CE , EL
 E31, E33,..., E3n . , EL E32 , , CE 가
 (4) , , EL E32 , , CE .
 , , EL E32 .

6, 7, 8
EL 가 ,
(100)
(4)
가 .

CE ,
EL (100) 가 . ,
2 (6) (4)
가 가 . .

,
EL EL EL .

1

2 , 가
 , 가

, , 2 가

, , , 2 1 가

, , 2 가

2 1 가

, 가
가

가;

, 가 ; 가 ;

, , 가

, EL , EL ,
EL , 2 EL , 2 E
L CE . ,
EL CE 가 ,
EL (scaling - down) .

EL
가 2 (floating state)

1 . EL . . 2 1 . EL
EL . . 3 1 . EL
EL . 4 . EL
EL . 5 . EL

1 , EL EL E11,
E12,..., Emn , EL E11, E12, ..., Emn

R1, R2, R3, R4, ..., Rm C1, C2, C3, C4, ..., Cn	EL	E11, E12, ..., Emn EL
, A, 14A, ..., 1mA, 31, 32, 33, .., 3n	R1, R2,..., Rm C1, C2,..., Cn C1, C2, C3, C4, ..., Cn	(change - over switch) 11A, 12A, 13 (driving source) 21, 22, 23, ..., 2n, 31, 32, 33, .., 3n, (4), 1 (5) 2 (6)

1 3 3 , (R), (G)	EL EL (B)	6 E11, E12, ..., Emn 가 EL	(R), (G) (短冊狀) EL E11, E12, ..., Emn E11, E12, ..., Emn	(B)
,		EL	.	.

, 3,.., 3n,	EL (4), 1 (5)	E11, E12, ..., Emn, 2 (6)	21, 22, 23, ..., 2n, . .	31, 32, 3
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R1, R2,..., Rm 11A, 12A, 13A,...,1mA 11A, 12A,...,1mA A가 n FET	EL 11A, 12A, ...,1mA R1, R2, R3, R4,..., Rm가 2 (6)	, ," , , ,	C1, C2,..., Cn EL E11A, E12A,..., Emn R1, R2,.., Rm p FET
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, 1 , 1 (12A)	EL E22 3, 4, 5 6	EL R1 R2 (4 1).	1 2 4 31, 32,.., 3n . .	, 4
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, L	R2 가 E22(EL 1 (5)) DE	, C2 R2 ,	C2가 E CE
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, R2 21, 23, ..., 2n	EL	C1, C3,..., Cn	EL	,
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, 2 (6) 11A, 12A, 13A, 14A,...,1mA
 2 (6) EL 가 R1 , 1 (5) EL 가 V2
 CE , R1 EL . , EL DE 가
 13A, 14A,...,1mA HiZ , R3, R4,..., Rm
 EL . , CE , R3, R4,..., Rm
 EL .
 .

2 R2 (4) (, 2 31, 32,.., 3n (on)
 C3,..., Cn E22 VH , EL E22 (off) (, 4 (B)
 E22 (4)).
 , C1, C2,
 , EL

2 R2 , 1 11A 가 , 2 12A 2 (6) , 3 R3 , 2
 13A 가 (, 4 4 (6)). , (HiZ) 11A , R2 가
 R1 2 (6) V2 2 (6) V2 (4) VH 가 , E
 가, 4 (C) DE 가 L , EL (, 7 5). R3 VH
 ,
 , 3 31, 32, 33,.., 3n 22
 3 R3 EL E32 ,
 6, 7 8).
 (, 4 31, 32, 33,.., 3n 2 R2 12A
 13A 9) , 2 EL E32 , 3 R3 R3
 4 (6) V2 C2 EL 14A (4) 11)
 ,
 ,
 , 2 EL (6) EL
 CE EL ,
 CE ,
 . , 가
 , EL

EL	5	.
5	EL	E
L E11R, E11G, E11B,..., E1nR, E1nG, E1nB, E21R, E21G, E21B,..., E2nR, E2nG, E2nB, E31R, E31G, E31B,..., E3nR, E3nG, E3nB, E41R, E41G, E41B,..., E4nR, E4nG, E4nB, Em1R, Em1G, Em1B,..., EmnR, EmnG, EmnB가	EL E11R, E11G, E11B,..., EmnR, EmnG, EmnB	R1, R2, R3, R4, ..., Rm EL E11R, E11G, E11B,..., C1R, C1G, C1B...,CnR, CnG, CnB
E11G, E11B,..., EmnR, EmnG, EmnB	R1, R2,..., Rm	C1R, C1G, C1B...,CnR,
CnG, CnB EL (change - over switch) 11A, 12A, 13A, 14A, ..., 1mA, CnG, CnB (driving source) 21R, 21G, 21B,..., 2nR, 2nG, 2nB, 1G, C1B...,CnR, CnG, CnB	R1, R2,..., Rm	C1R, C1G, C1B...,CnR, C1R, C 31R, 31G, 31B,..., 3nR, 3nG, 3nB, 31 31R, 31G, 31B,..., 3nR, 3nG, 3nB, (4R, 4B, 4G), 1 (5) 2
R, 31G, 31B,..., 3nR, 3nG, 3nB		
(6)		

"R" EL , "G" EL
 EL , "B" EL
 , R, G B EL E11R, E11G, E11B,..., EmnR, EmnG, EmnB
 EL . , EL EL
 , EL EL , 가 100µm 300µm (短
 冊狀)가 EL , 가 300µm

" R" , " B"
 " G" ,
 21R, 21G, 21B,..., 2nR, 2nG, 2nB
 C1R,..., CnR, C1G,..., CnG C1B,..., CnB
 . 31R,..., 3nR, 31G,..., 3nG, 31B,..., 3nB 21R,...,3nR,
 21G,...,3nG 21B,...,3nB (4R,
 4B, 4G) EL ,

1.

,
2
,

2.

1 ,

3.

1 ,

4.

1 ,

5.

1 , 2
가

6.

1 , 2
1 가

7.

,
,

1

,
,

,
2
,

8.

7 , 2
가

9.

7 , 2 1 가

10.

1

11.

10 ,

12.

10 ,

13.

10 ,

14.

10 , 2 가
가

15.

10 , 2 1 가

16.

1

2

가

17.

16

, 2

가

가

18.

16

, 2

1

가

19.

,

가

가

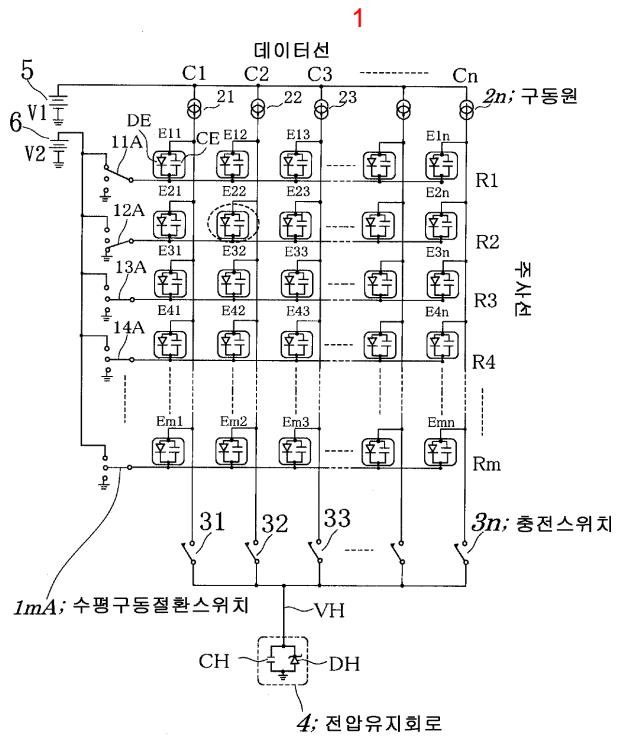
, 가 ;

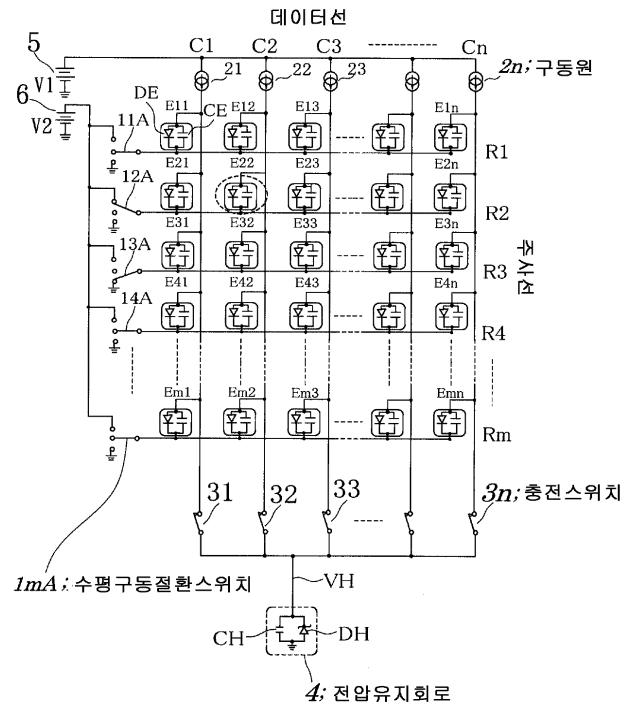
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가

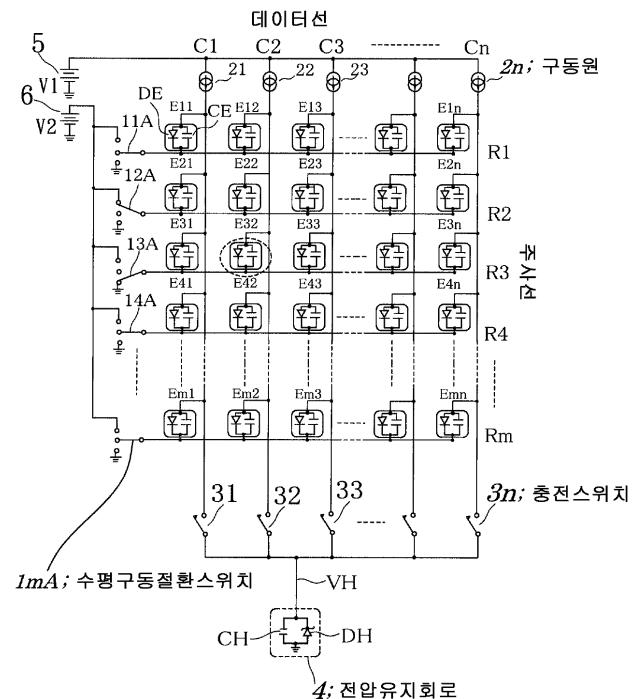
가

가

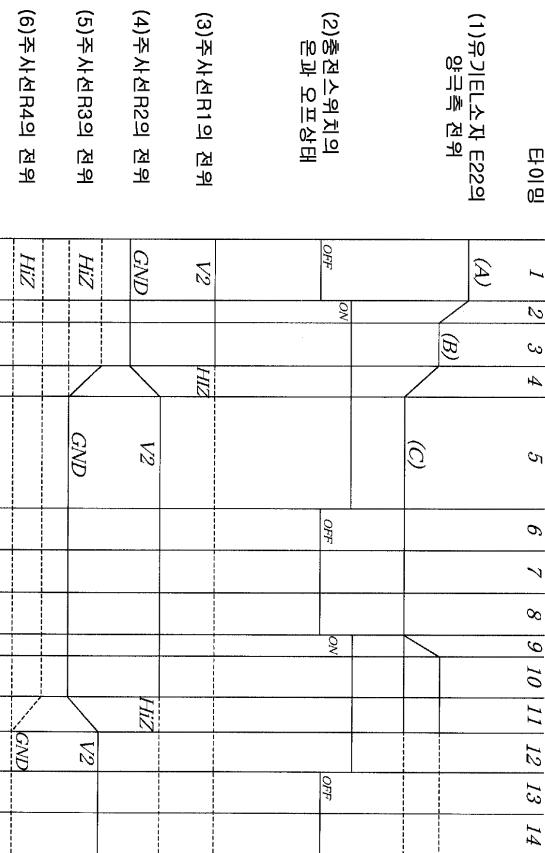


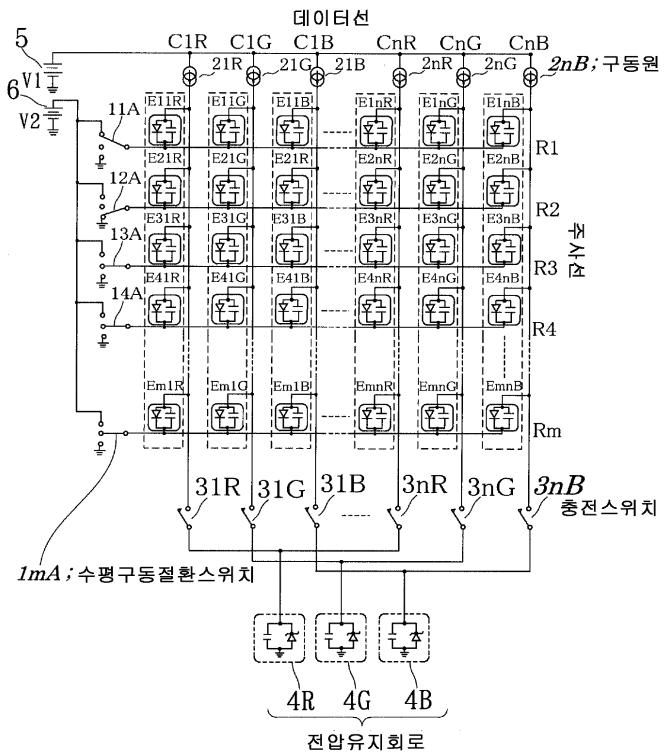


3

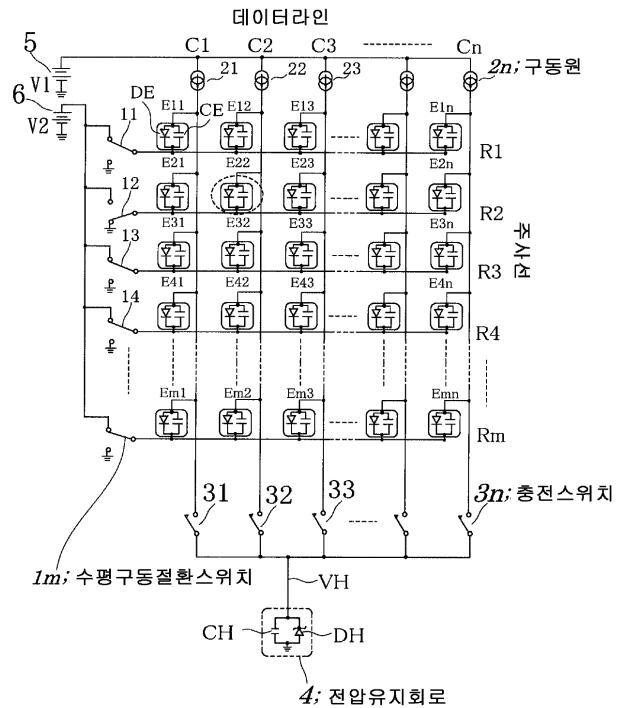


4

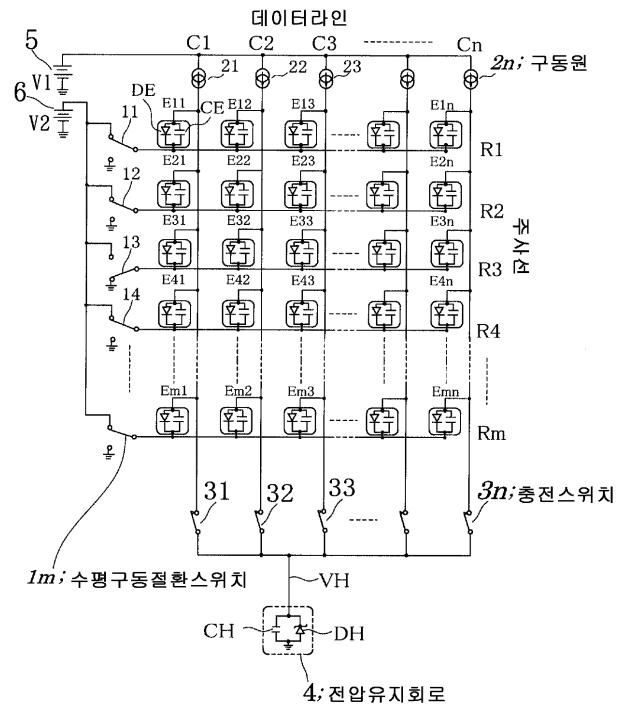




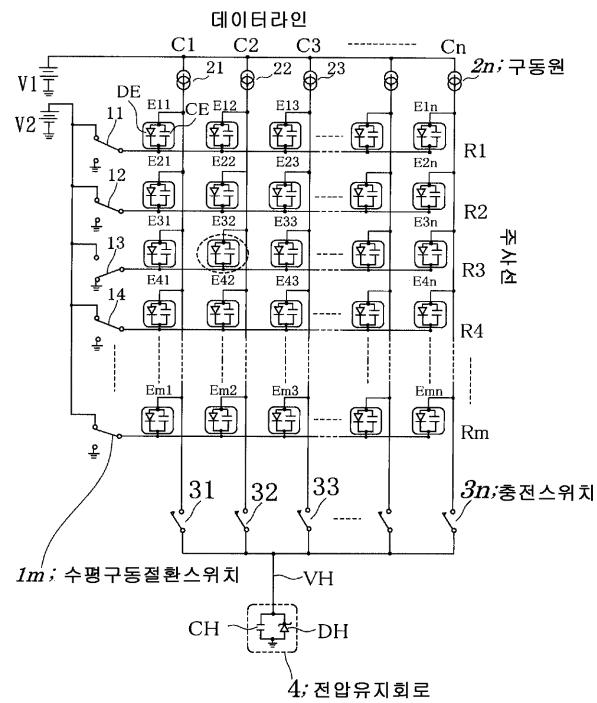
100; 수동 매트릭스 유기EL
디스플레이장치



100; 수동 매트릭스 유기EL
디스플레이장치



100 ; 수동 매트릭스 유기EL
디스플레이장치



专利名称(译)	有机电致发光驱动电路，无源矩阵有机电致发光显示装置和有机电致发光驱动方法		
公开(公告)号	KR1020020055428A	公开(公告)日	2002-07-08
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申请(专利权)人(译)	三星SD眼有限公司		
当前申请(专利权)人(译)	三星SD眼有限公司		
[标]发明人	KAWASHIMA SHINGO		
发明人	KAWASHIMA,SHINGO		
IPC分类号	G09G3/30 H01L51/50 G09G3/32 G09G3/20 H05B33/12 H05B33/08		
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优先权	2000403533 2000-12-28 JP		
其他公开文献	KR100635043B1		
外部链接	Espacenet		

摘要(译)

目的：为了使无源有机EL显示器件处于未选择状态的扫描线的有机EL元件，减小用于转变为反向偏置状态的电流。组成：对于无源矩阵有机EL显示面板，其有机EL元件沿行和列排列成矩阵，所公开的有机EL驱动电路配备有多个驱动源21,22,23, ..., 2n，其供应从第一电源5到为每次扫描选择的数据线的驱动电流，多个放电开关31,32,33, ..., 3n，其在扫描定时开始时将所有数据线连接到电压保持电路4电压保持电路4，其将每条数据线保持在特定电压，以及水平驱动转换开关11A, 12A, 13A, 14A ..., 1mA，它们由各行的扫描线提供并切换以保持未选择通过将所选择的扫描线接地或连接到第二电源6，扫描处于高阻抗状态的线。

