

(19)
(12)

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(43)

2003-0096900
2003 12 31

(21) 10-2002-0033995
(22) 2002 06 18

(71) 575

(72) 1 969-37

(74) :

(54)

EL(electro-luminescence) , 가 (pixel)
)
가 , ,
1 가 .
가 .

5

EL(electro-luminescence), , ,

1 .

2 .

3 .

4 3 .

5 4 .

6a 6c 5 4 .

7a 7d 6a 5 가 .

8a 8d 6b 5 가 .

9a 9d 6c 5 가 .

10 .

11a 11c 6a 6c 10 .

()

M1~M16 :

Cst :

OLED :

Data[n] : n

Scan1[m], Scan2[m] : m

uminescence) 가 , 가 (pixel) , EL(electro-l

(active matrix)

가 EL

L , , (OLED : organic light emitting diode) E

가 , 가 가

가 , EL

TFT : thin film transistor) ((

Id voltage) , 가 (thresho

1
1
가
가
(Scan)가 가 , (cyc
(Idat
(M1~M4
(Cst)
(Scan) 가
(OLED)
(M1) (Idata) 가
(Cst) (M2) (M3) (M4)
(M1) (M2) (M1)
(M2, M3) (M4) (M2)
(floating) (Cst)
(M1) (M1) (OLED)
(OLED) 가 가
가
mobility) 가
가
가
가 2
2
가
(cycle) 가 (Idata)
(Scan1, Scan2)가
(OLED), (current mirror) 2 (M1, M2),
(Idata) (Cst), (Idata)
(M2) (Cst) (M3, M4)
(Scan1, Scan2) (M3, M4)
(M3) (M4) 가 (M2)
(M2) (M4)
(Idata) (Cst) (M2) (fl
(M3, M4) (Cst)가
(M1) (M1)
(OLED)가
(M1) (M2) (channel wid
(M1) 가
(M2) (M2)
(parasitic capacitance) 가
on) 가 (bottom emissi

4, (Scan1, Scan2)가 가 (Idata)가 가 (M1~M4), (Cst), (OLED)가 (Scan1)가 가 1, (scan2)가 가 2, (FET : field effect transistor)가 가, NMOS, 4 PMOS, PMOS (anode) (M1) (OLED) (cathode) (Vcathode) 가, (Vdd) 가, (Cst)가 (M2) (M1, M2) (current mirror) (Vdd) 가 (M1, M2) (M4) (M4) 2 (M3) (M2) 1 (M3) (M3) (M3, M4)가 (ON) 가 가 1 2 (M3) (ON) (M4) (OFF) (M3, M4)가 (OFF) 가 4 (M3) (OFF) (M4) (ON) 가 (M2) (M3, M4)가 (ON) (M2, M3)가 가, (M2) (M2) (M2) (M4) (Cst) (M1) (Cst) (M1) 가 (M1) (OLED)가 (M3) (M4) (M4)가 (M2, M3)가 가 (Cst) 가 (M3, M4)가 (Cst) (M1) (OLED) (M3) (M4) (Cst) (M4) (M2) 2 (white balance) 2 5 9 5 m (m+3) 1 2 4 가 4 가 n 3가 2 가 1 가 가 2 가 가 3 가

가 3 .

6a 6c 5 .

6a , 6a , (Sc
 an1[m], Scan1[m+1]) m (m+1) 가 ,
 (Scan2[m], Scan2[m+1]) (Scan1[m], Scan1[m+1])
 가 '[m]' m , 'scan1'
 1 , 'Scan2' 2 .

6a , m (m+1) 1 , m (m+1)
) 1 2 . 6b , m (m+1) 1 6c
 1 , m (m+1) 2 . m
 2 (m+1) 1 1 , (Scan1)가
 1 6b 6c , 2 1 (dummy pixel)
 가 1 가 4 (M2, M3) 1

7 9 , 6a 6c , 8
 6b 7 6a , 9 6c

7a 6a , 7a (1, 2, 3) 가 7b 7
 d .

7a , 1 1 Scan1[m], Scan1[m+1] 가 ,
 2 Scan2[m] 가 1 4
 가 7b , m (M3, M4)가
 , (m+1) 7b (M7) ,
 (ldata) m (m+1) 1/2 , m
 (M4) . 4

7a 1 m
 7b , M2 M6, M3 M7 , M3 M7
 0 , M2 M2 M6 (ldata) 1/2 가
 가 1/2 M2 M1 1/2 (M1, M2) 가 (

M1, M2) 가 , , 가

가 .

7a 2 , 1 Scan1[m], Scan1[m+1] 가 , 2 S
 can2[m+1] 가 , (m+1) , (m+1) 가

7a 3 , 1 Scan1[m+2], Scan1[m+3] 가 , 2
 Scan2[m+2] 가 , (m+3) , (m+2) 3
 (ldata)가 (m+2)

가 .

8a 6b , 8a (1, 2, 3) 가 8b 8
 d , 8a , m (m+1) 1 1
 , (m+1) 2 , 8a

[illegible]

(57)

1.

1 2 가 , ; ,

가

4. 3, 1, 2 가 가 가 .

5. 4×1 가 2 가

3 6. ,

1 7. ,

2 , 1 3 ;

1 4 ; ,

4 .

8.

7 ,

.

9.

7 ,

1 4 .

10.

, 가 1 ;

2 ' ; , 1

가 , 가 ;

, 1 ,

3 ;

3 , 가 4

; ,

가 , 가 , 4 .

11.

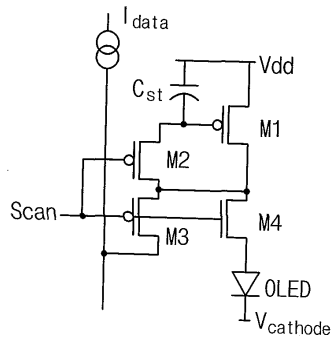
10 ,

1 2 가 2 가 , 가

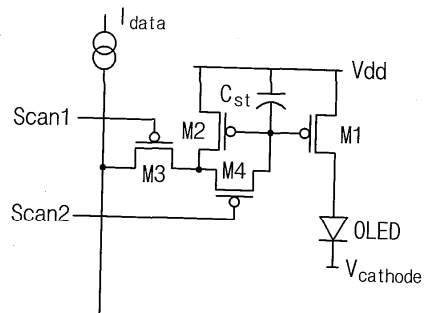
3 2 (OFF) 3 가 (ON) 가 , 2 (ON) 가

(OFF) 3 (ON) 3 가 (OFF) , 2 .

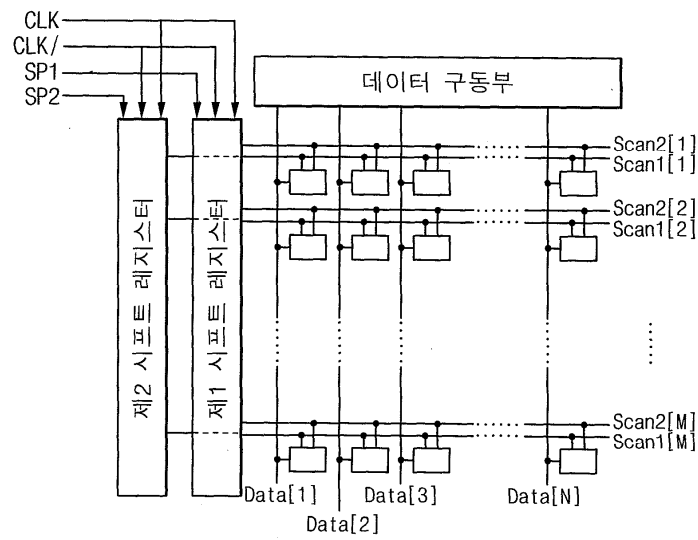
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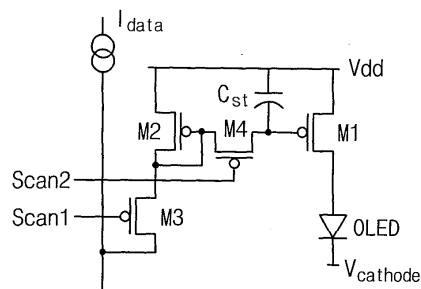
2



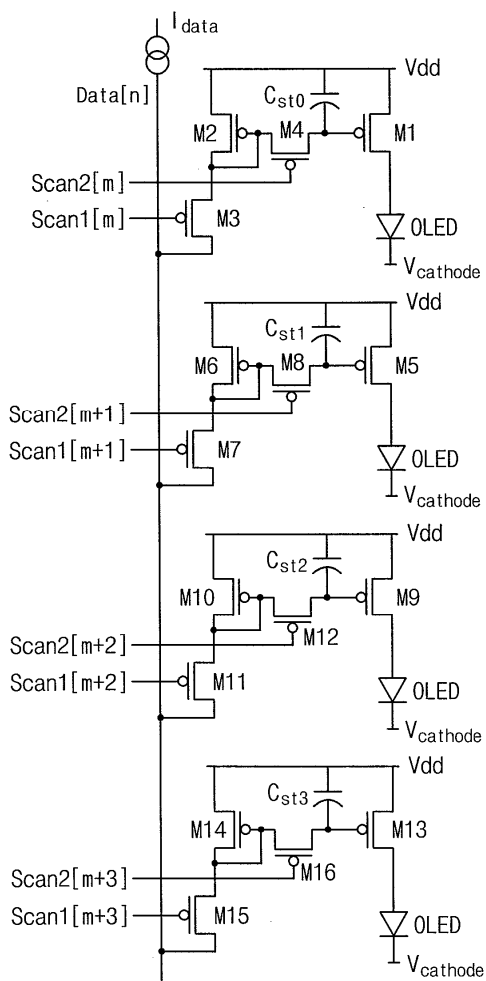
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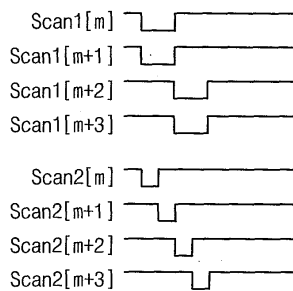
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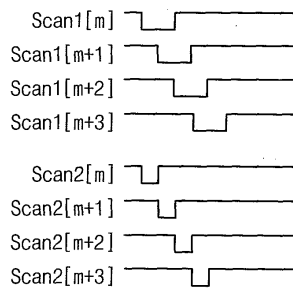
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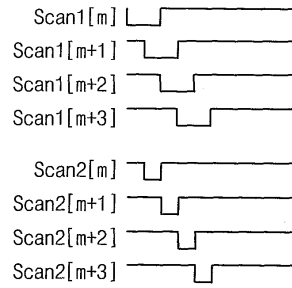
6a



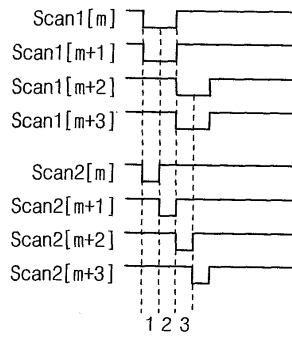
6b



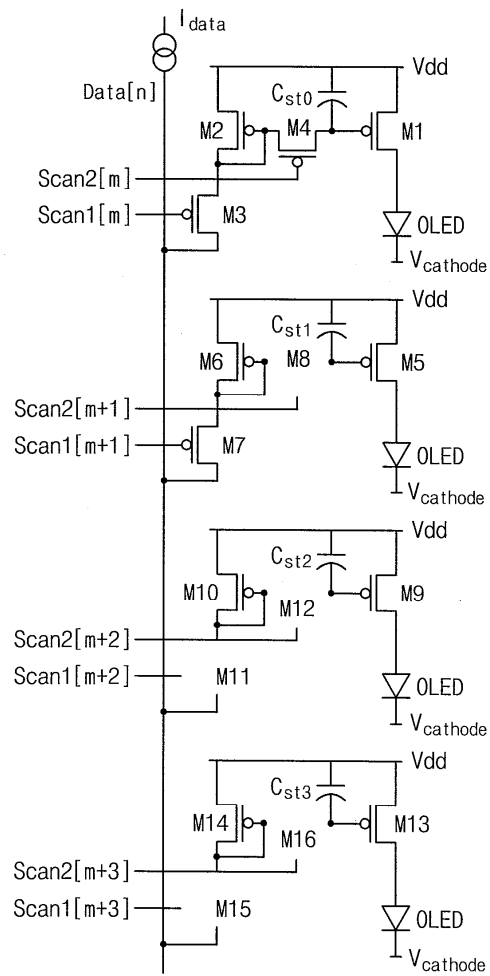
6c



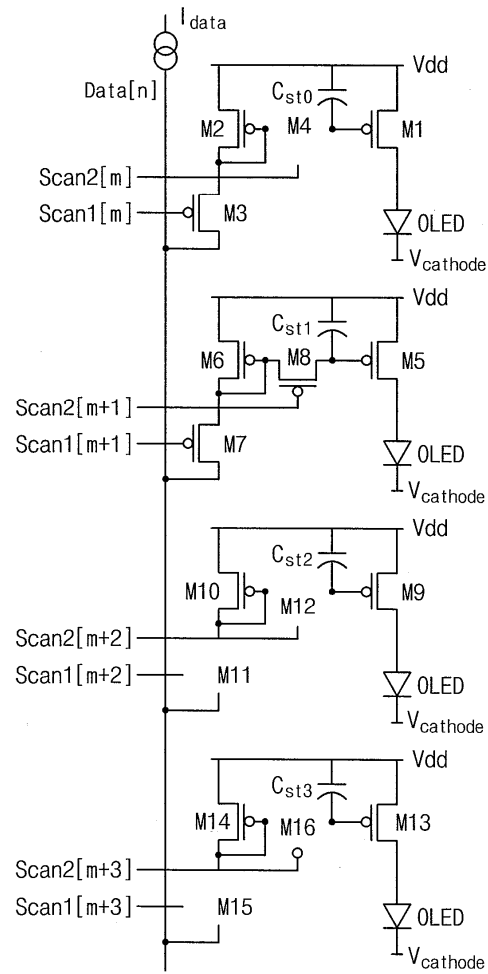
7a



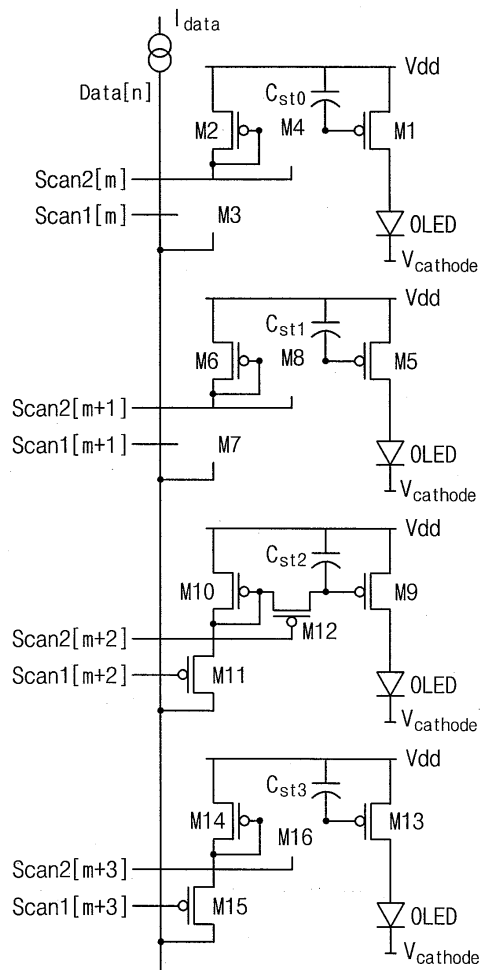
7b



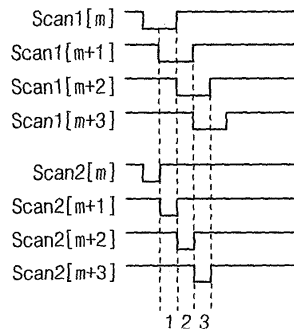
7c



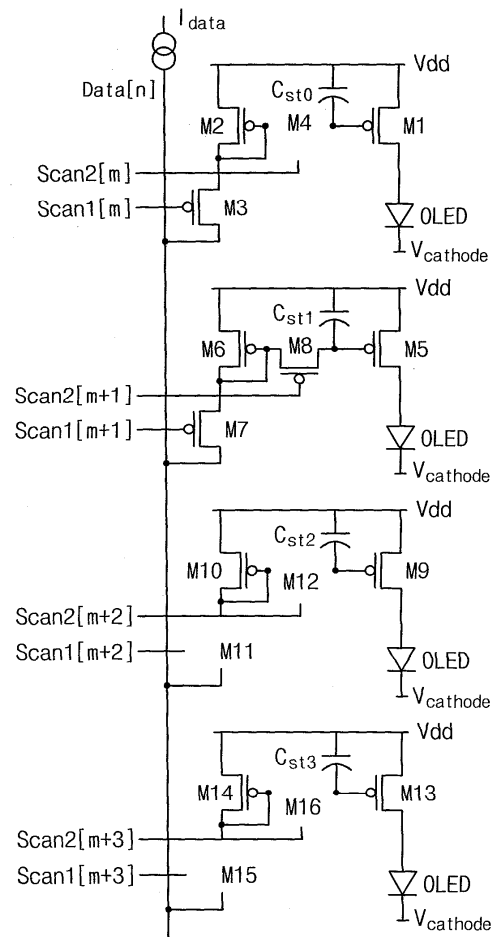
7d



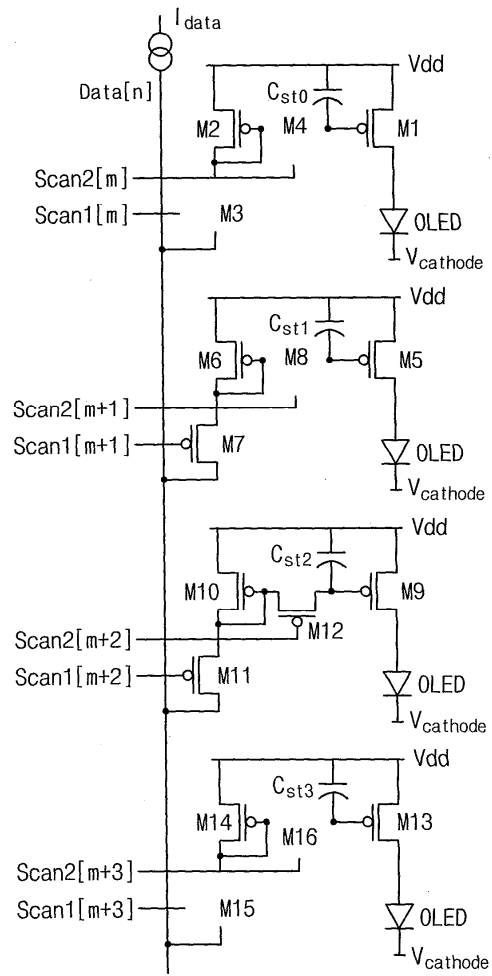
8a



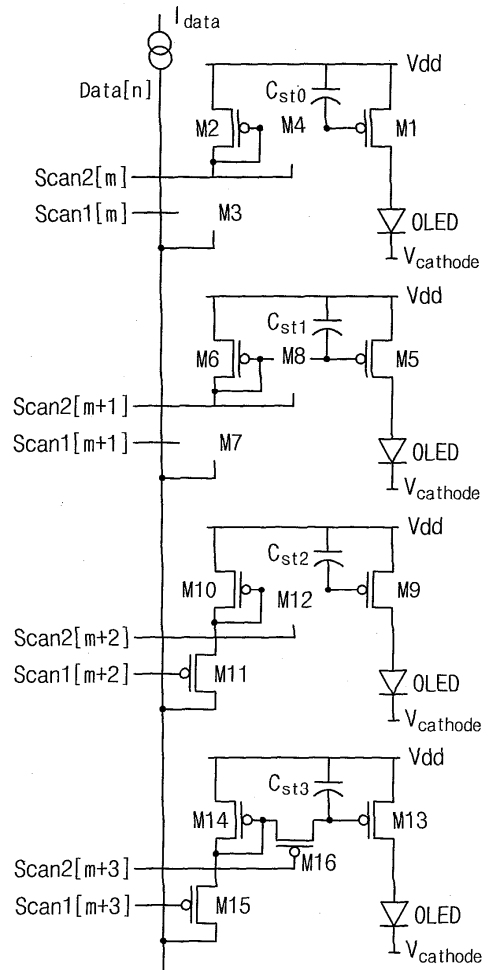
8b



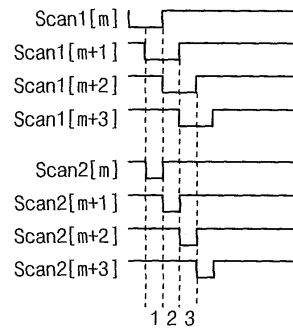
8c



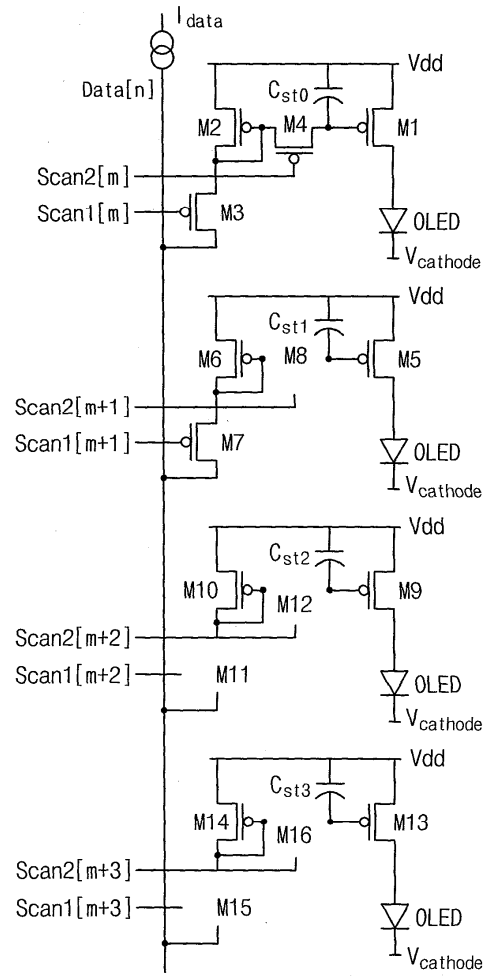
8d



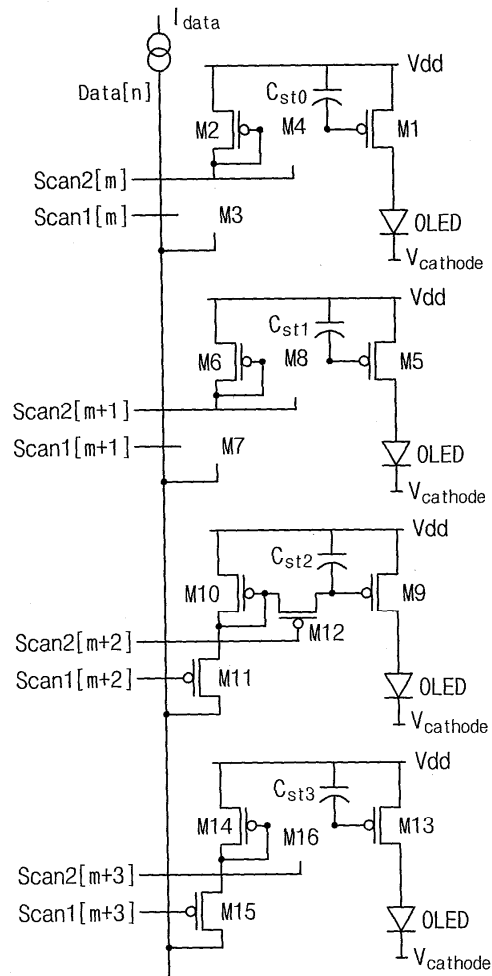
9a



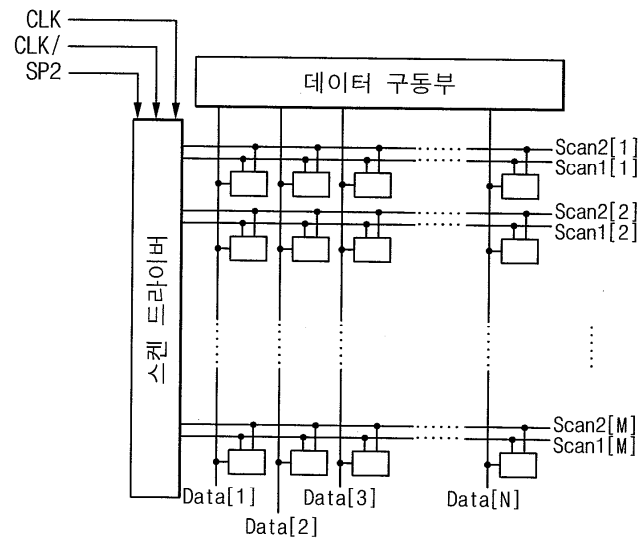
9b



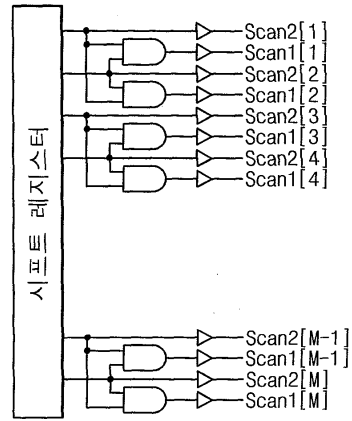
9d



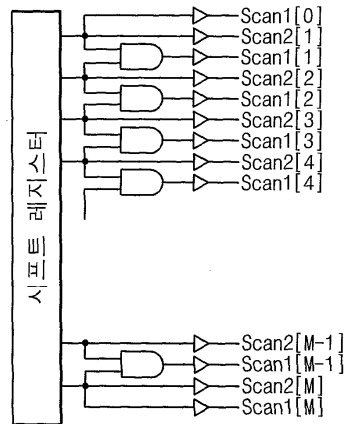
10



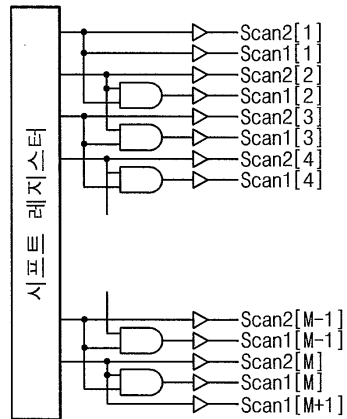
11a



11b



11c



专利名称(译)	图像显示装置		
公开(公告)号	KR1020030096900A	公开(公告)日	2003-12-31
申请号	KR1020020033995	申请日	2002-06-18
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	SHIN DONGYONG		
发明人	SHIN,DONGYONG		
IPC分类号	G09G3/30 H01L51/50 G09G3/32 G09G3/20 G09G3/22		
CPC分类号	G09G2300/0842 G09G2300/0465 G09G2310/0262 G09G3/3266 G09G3/3241 G09G2310/0205 G09G2310/0208 G09G2310/021 G09G2320/0223		
代理人(译)	您是我的专利和法律公司		
其他公开文献	KR100432651B1		
外部链接	Espacenet		

摘要(译)

本发明涉及包括发光装置的图像显示装置，其中亮度被控制为类似于有机EL（电致发光）装置等，每个像素具有电流。在根据本发明的图像显示装置中，包括电流镜的晶体管包括在像素内。并且使用具有两条扫描线的像素结构。以这种方式，一次选择多于两行的像素，并且将在数据线中施加的电流分配给用于记录标签的像素和与其相邻的像素。标签记录在所选像素中的1行像素上。通过这样做，即使在使用用于驱动数据线的电流变大时，也可以减小在像素中组织电流镜的晶体管的尺寸。因此，可以增加使用有机发光装置的图像显示装置的开口率。EL（电致发光），有机发光二极管，电流模式程序，高等级，高分辨率。

