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10-2004-0039934
2004 05 12

(21)

10-2002-0068183

(22)

2002 11 05

(71)

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20

(72)

3 1494-6302

(74)

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(54)

10

1 .

2 .

3 2 가 .

4 3 .

[illegible]

(Cathode Ray Tube) (Liquid Crystal Display : 'LCD'), (Field Emission Display : FED), (Plasma Display Panel : 'PDP') (Electro-luminescence Device : 'EL')

PDP 가 (Thin Film Transistor : 'TFT')가 LCD 가

1 EL (14) (4), EL (6), (8), EL (10), (12) (

(14) (2) 가 , (2) (4)
(6) (8) , (14) (12)
(10) (8) , (6) (10)
(14)

2 EL (GL) (DL) (GL) (20) (24) , (22) (22) , EL (PE) (20) EL (20) , EL (DL) (28) .

(PE) (GL) (DL)

(28) (22) (GCS) (24)

(GL) (22) (28) (GCS), (SP)

(DL) (24) (28) (PE) (24) (DL) (22)

1 (VDD) (22) (OLED) , (GL) (OLED) (PE) 3 (26) (VDD) (Thin Film Transistor ; , 'TFT')(T1) ; 1 TFT(T1) 2 TFT(T2) , (DL) (GL) (GL) (VDD) 2 TFT(T2) ; 3 TFT(T3) 2 TFT(T2) , (GL) 3 TFT(T3) 4 TFT(T4); 1 TFT(T1) 2 TFT(T2) (VDD) (Cst) . 1 4 TFT(T1 T4) P MOS-FET

3 4 TFT(T3,T4) 4 (GL) - (GL) (

Threshold Voltage : Vth) (DL) (Vd) 3 4 TFT(T3,T4) 3 4 TFT(T3,T4) 1 T FT(T1) 가 , 1 2 TFT(T1,T2) (Vd) 1 TFT(T1) 가 2 TFT(T1, T2)

1 TFT(T1) (Vd) (OLED)

2 TFT(T2) 1 TFT(T1) 1 TFT(T1)

(Cst) (Vd) (VDD) 1 TFT(T1)
가 (OLED) 가
EL (20) 가 가
(24) 가 , EL 5
5 , EL
(DL) 1 (28A) 2 (28B)
1 2 (28A,28B) 가 (28A,28B)
(DL) (GND) 1 (n1) 1 TFT(S1) , 1 TFT(S1)
2 TFT(S2) , 2 (n2) 1 (n1) (GND) 3 TFT(S3)
, 2 (n2) (Cd) , (DL) 1 (n1) 4 TF
T(S4) . 1 4 TFT(S1 S4) N MOS-FET
4 TFT(S4) 가 가 , 1 2 (2
8A,28B) (PE) , 1 (28A) 가 (2
mpling) 2 (28B) (PE) 2 (28B) 가 (sa
sampling) 1 (28A) (PE)
1 TFT(S1) 가 가 - (24) (DL)
가 1 (n1) 2 TFT(S2) 1 TFT(S1) 가
가 1 (n1) 2 (n2)
(Cd) 2 (n2) 3 TFT(S3)
(DL) (PE)
4 (S4) - (DL) 3 TFT(S3)
6 5
6 , A B 가 가 1 2 (28A,28B)가
, A1,A2,A3 , 가 (DL)
7 5 , 8a 7
1 , 8b 7
7 8b , 1 2 TFT(S1,S2) -
(32) (28)
1 가 가

[1]

S1	ON	OFF
S2	ON	OFF
S4	OFF	ON

, 1 2 TFT(S1,S2) , 4 TFT(S4) ,
 8a 가 (24) ,
 가 3 TFT(S3) , 3 TFT(S3) (Cd) 3 TFT(S3)

, 1 2 TFT(S1,S2) , 4 TFT(S4) ,
 8b 가 8a (Cd) ,
 가 3 TFT(S3) , (Idata)가 (DL) (PE)

, EL 가

가

(VDD) (OLED) (OLED)
 1 2 3 1 2
 , 1 2 3 4 (Cst)
 1 2 (VDD)

가

1 1 1 가 2 1 2
 2 1 1 2

1 2
 ; , 1 1
 ,
 2 2
 .
 1 , 2 5 , 5
 1 , 5
 2 3 ; 2 , 2
 6 , 6 2 4
 2 , 6
 .
 1 3
 2 4
 .

(MOSFET, Metal-Oxide Semiconductor Field Effect Transistor) ;
 N (MOSFET) P

1 5 P MOSFET
 6 N MOSFET
 1 5 N MOSFET
 6 P MOSFET

- ,
 1 1 2 1
 , 2 2
 3 ,
 2 1 , 1
 1 가 , 1 2
 .
 3 2 , 2
 1 가 , 1 2
 , 3
 3 가 ,
 ,
 .
 1 3 2 4 가
 .
 , 9 13 .

9 EL , 10 9

9 10 , EL (GL)
(DL) (PE) EL (40) , EL (40) ((GL)
GL) (44) , EL (40) (DL) (46) ,
(46) EL (40) EL (40) (DL) 가 (48)
(42) (48) , (44), (46) (48)

(PE) (GL) (DL)

(42) (44) (GCS) (46)
(42) (48)

(44) (42) (GCS),
(GL)

(46) (42) (42)
(48) (DL) (PE) , (46)
(44) (GL) 1 (DL)

(48) (46)
가 , (48) (c
omplementary metal-oxide semiconductor, CMOS) (Poly-Si) EL
(40) (48) 10 1 (48A) 2
(48B) (DL) EL (40)

EL (40) (PE) 3 (VDD) (OLED) ,
(OLED) (26) (DL) (DL) ((GL)
GL) (26) (VDD) (OLED) (VDD) ((GL)
OLED) 1 TFT(T1) ; 1 TFT(T1) (GL) 3 TFT(T3)
2 TFT(T2) ; 2 TFT(T2), (DL) (GL) (Cst)
3 TFT(T3) ; 3 TFT(T3) 2 TFT(T2) ,
4 TFT(T4); 1 TFT(T1) 2 TFT(T2)
1 4 TFT(T1 T4) P MOS-FET

3 4 TFT(T3,T4) 4 (GL) -
(GL) (

Threshold Voltage : V_{th} 3 4 TFT(T3,T4) 1 T
(DL) (Vd) , 1 2 TFT(T1,T2) 2 TFT(T1,
FT(T1) 가 , (Vd) 1 TFT(T1) 가
T2) 가

1 TFT(T1) (Vd) (OLED)
(Vd)

2 TFT(T2) 1 TFT(T1) 1 TFT(T1)
(Cst) (Vd) (VDD) 1 TFT(T1)
가 (OLED) 가

11 1 EL .

11 EL , EL (46), (48)
) 2 EL (40) , 1 2 (48A,48B) (48) 1 (48A)
 (52) .

(46) (VDD) 가 (PE)
 (VDD) TFT() , TFT (M) , (46)
 (PE) TFT (M) , TFT (DL) TFT
 (M) () , (46) TFT (M) ,
 TFT (M) TFT (M) N MOS-FET .

(52) (42) 1 (48A)
 (52A) , 2 (48B) (52B)
 (52) (46) 1 (48A) 1 (SW1) 1
 (48A) 2 (48B) 2 (SW2) , (52B)
 1 (52A) (GL) - 가 가 (52B)
 (48A) 2 (48B) - 가

1 (48A) (VDD) 2 (48B) 1 TFT(S1) , 1 TFT(S1)
 (48B) (VDD) 3 (SW3) 1 (Cd1) , 1 TFT(S1) 2
 , 1 TFT(S1) P MOS-FET .

2 (48B) 1 (48A) (GND) 2 TFT(S2) , 2 TFT(
 S2) (48A) (GND) 2 (Cd2) , 2 TFT(S1) 1
 (48A) 4 (SW4) , 2 TFT(S2) N MOS-FET

EL (40) 3 가 .

EL
 (46) N MOS-FET , 1
 (48A) (46) (48B) 1 (48A) P MOS-FET , N MOS-FE
 T , 2 EL (40) P MOS-FET (OLED)

12 11 (GLn-1) (On) 가 가 , 1 3 (GLn-1)
 (52A) (SW1,SW3) 1 TFT(S1) , 1 (46) (SW1,SW3) 1 3
 (S1) (Cd1) 1 TFT

(GLn-1) 2 4 (S
 W2,SW4) (52B) - (48A)
 2 4 (SW2,SW4) 2 TFT(S2) , 2
 (Cd2) 2 TFT(S2) (52B) -
 (GLn-1) (GLn)

, EL (40) 가 EL (40) 3
 4 TFT(T3,T4) . 3 4 TFT(T3,T4) 2 (48B)
 (Cst) (Cst) 1 TFT(T1)
 (VDD)

(OLED) .

11 13 EL

S-FET (46) TFT TFT (M) N MOS-FET P MO

(48A) 1 TFT(S1) P MOS-FET N MOS-FET

(48B) 2 TFT(S2) N MOS-FET P MOS-FET

EL (40) 4 TFT(T1 T4) N TFT .

EL

가

(57)

1.

2.

1

3.

2

(VDD)

(OLED)

(OLED)

1

1

(VDD)

2

2

3 ,
2 3 , 3 4 ,
1 2 (VDD) (Cst) .

4.
3 ,
 ,
가 .

5.
4 ,
 ,
1 , 1
2 1 가
 , 2 가
 , 1 1
 , 1 2 1
1 2 1 .

6.
5 ,
1 2 ;
 ,
1 1
 , 2 2 .

7.
6 ,
1 ,
2 5 ,
5 1 ,
5 2 3

2 ,
2 6 ,
6 2 ,
6 2 4

8.
7 ,
1 3

9.
7 ,
2 4

10.
7 ,

(MOSFET,Metal-Oxide Semiconductor Fi

eld Effect Transistor) ;

(MOSFET) P N

11.
10 ,
1 5 P MOSFET

12.
11 ,
6 N MOSFET

13.
10 ,
1 5 N MOSFET

14.
13 ,
6 P MOSFET

15.
-

1 ,

2 1 1 1 ,

3 2 , 2

3 .

16.

15 ,
2 1 ,
1 ,
1 가 ,
1 2 .

17.

15 ,
3 2 ,
2 1 ,
1 2 가 ,
2 3 .

18.

15 ,
3 가 ,
3 ,
.

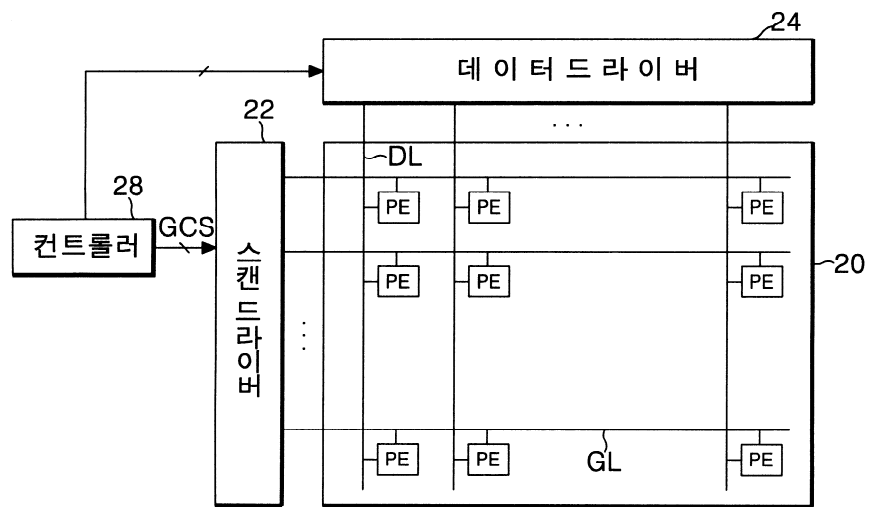
19.

15 ,
1 3 2 4 가 .

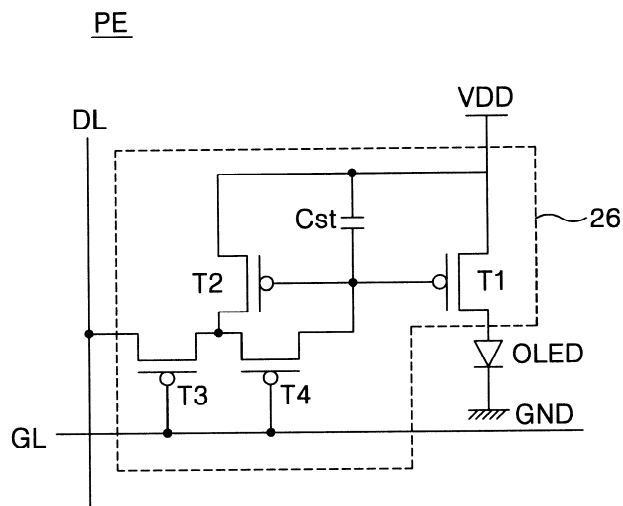
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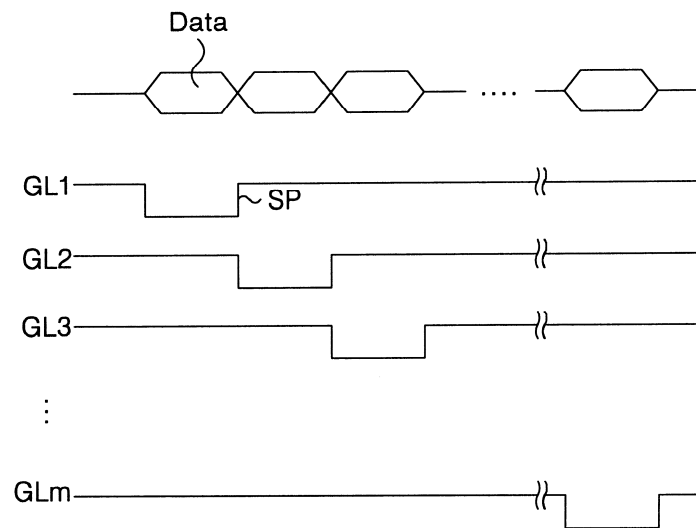
2



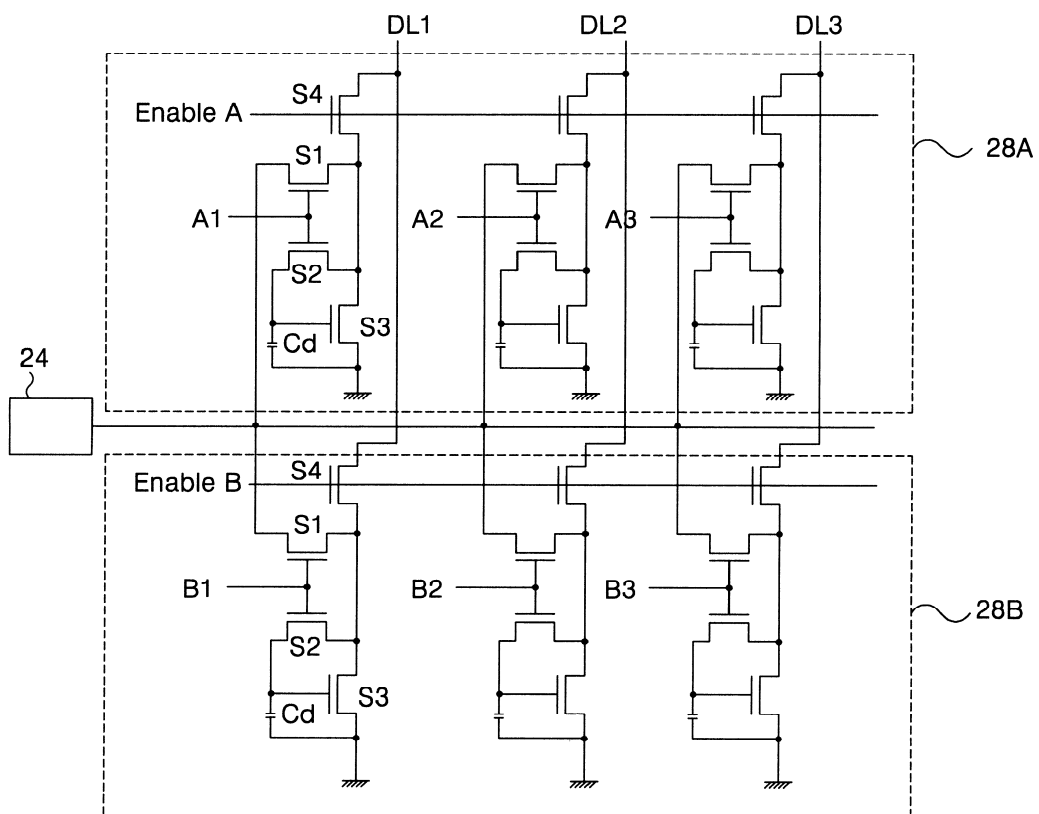
3



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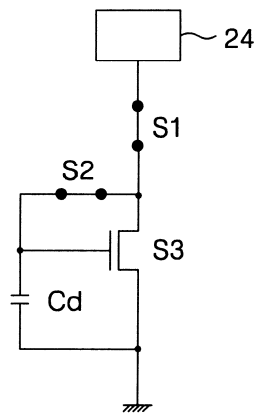


5

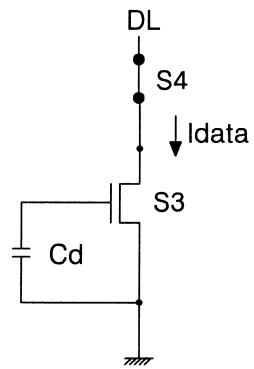




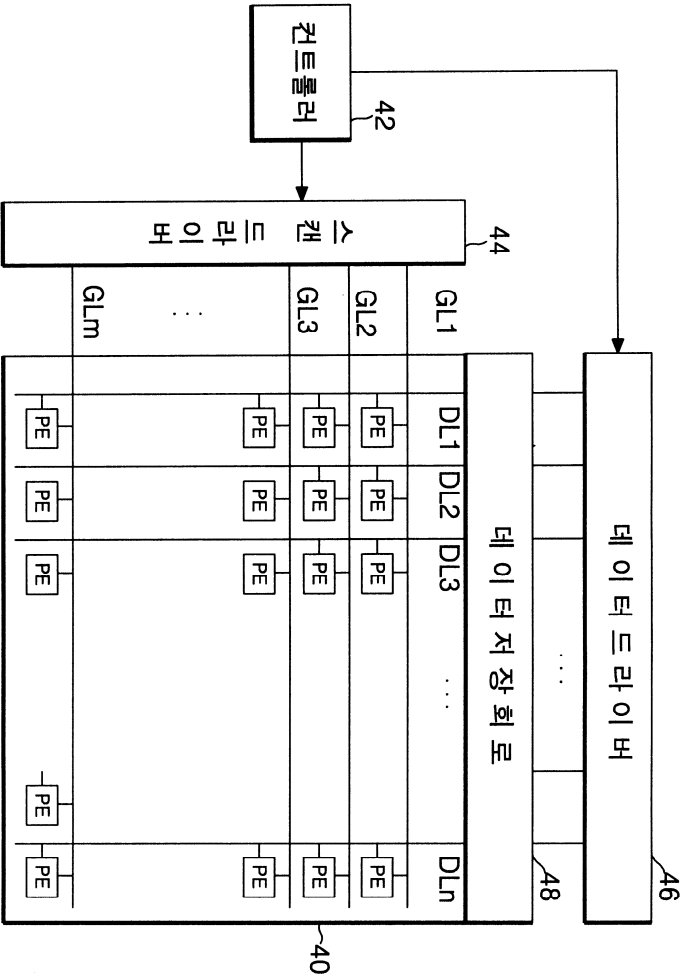
8a



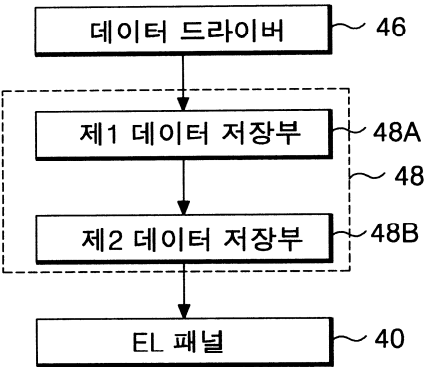
8b

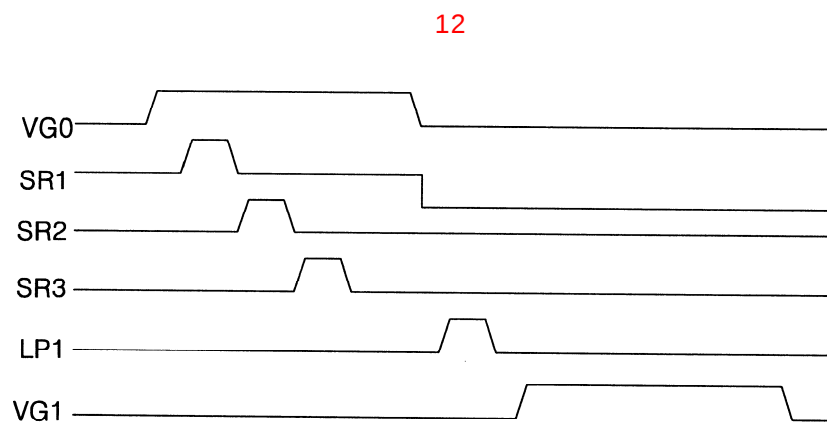
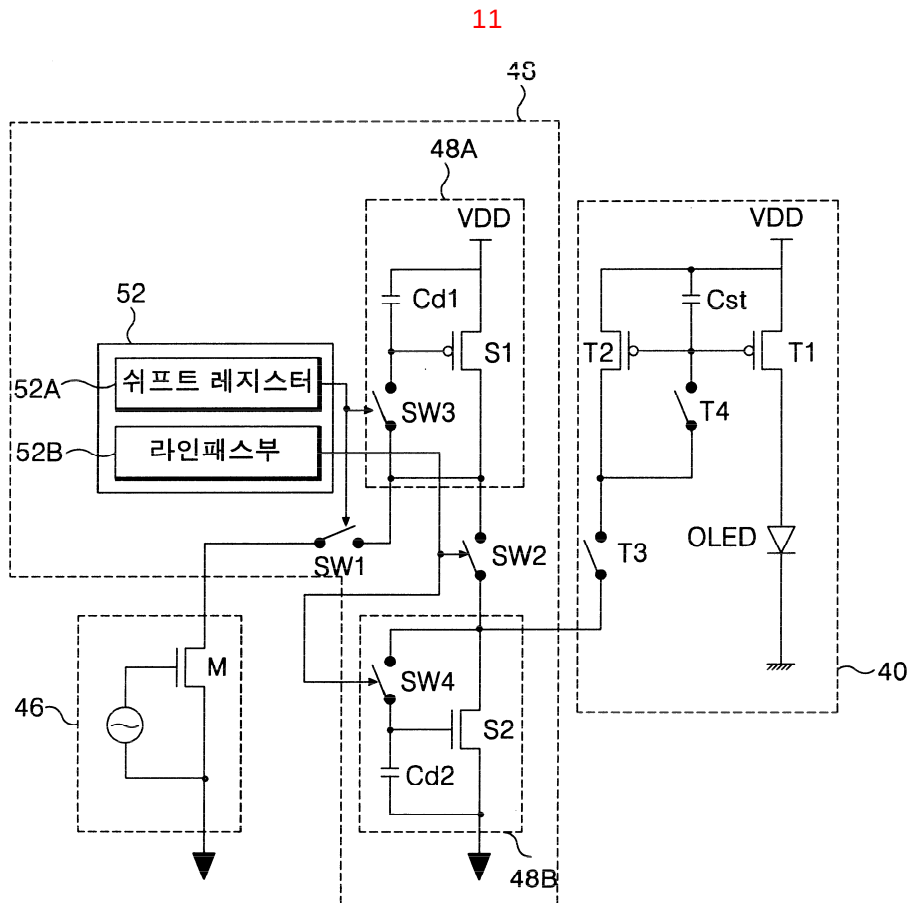


9

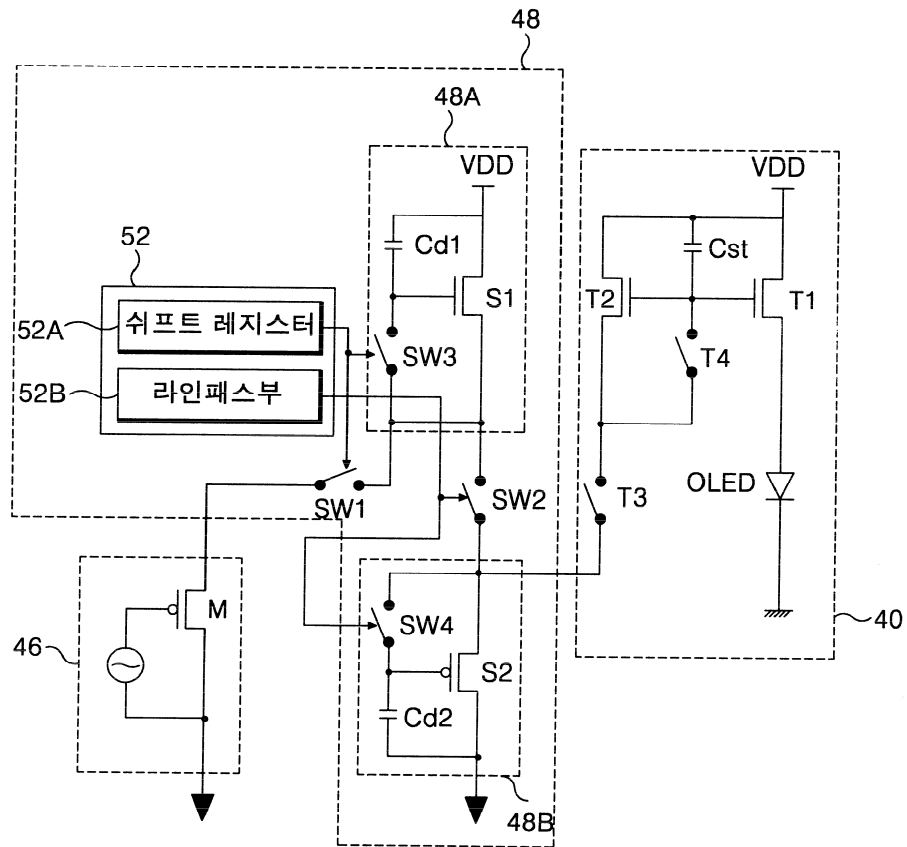


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专利名称(译)	有机电致发光显示板的数据驱动装置和方法		
公开(公告)号	KR1020040039934A	公开(公告)日	2004-05-12
申请号	KR1020020068183	申请日	2002-11-05
[标]申请(专利权)人(译)	乐金显示有限公司		
申请(专利权)人(译)	LG显示器有限公司		
当前申请(专利权)人(译)	LG显示器有限公司		
[标]发明人	YOO JUHNSUK 유준석		
发明人	유준석		
IPC分类号	G09G3/30 G09G3/32		
CPC分类号	G09G2300/0842 G09G2300/0809 G09G3/3241 G09G2320/0233 G09G3/3283		
代理人(译)	KIM , YOUNG HO		
其他公开文献	KR100476368B1		
外部链接	Espacenet		

摘要(译)

本发明涉及有机电致发光显示器的数据传输装置，提高了图像质量，减少了开关元件的数量。根据本发明的用于有机电致发光显示器的数据传输的装置包括：有机电致发光显示器，其指示输入电流信号的图像和数据驱动器，用于基于恒定电流向有机电致发光显示器提供数据。数据存储模块用于集成在有机电致发光显示器上，并响应来自数据驱动器的数据对恒定电流充电，并控制数据并将数据提供给有机电致发光显示器。根据该配置，根据本发明的数据驱动和有机电致发光显示器的方法在与数据驱动器连接的显示面板中组织数据嵌入电路。由此，数据驱动器数据嵌入电路的直接驱动电路的数量被累积在面板内，可以减少来自数据驱动器的驱动信号被连续地传送到面板。

