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2003 11 21

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(22) 2003 01 09

(30) JP-P-2002-00142469 2002 05 17 (JP)

(72) 1-842-1-508

가 256-11

(74)

1

(54)

4 4/4 , 1/4 , 2/4 , 4 , 3/4 1/
6) OLED (4)가 (12) (1) (16) (1)
/ , 2

1

1 OLED

2a 2b 1
3a 3b 1
4 1 1
5 2 OLED
6 2 1
7 3
8 3 1
9 4 OLED
10 4 1/4
11 4 3/4
12 4 1
13 5 OLED
14 5 1
15 6
16 1
17 2
18 2

< >

1, 22, 42 :

2, 23, 46 : TFT

3 : TFT

4, 24, 44 : OLED

5 : TFT

6, 25, 34, 47 :

7, 27, 35, 48 :

8, 28, 49 :

9, 50 :

10 :

11, 53 :

12, 29, 37, 54 :

가 가

16 18 , 2

16, 1 (, 1)
 05) EL(Organic Electro-luminescent) (204) (205)가 (2)
 (206), (207), (208) (205)
 , (207) TFT(Thin-Film-Transistor : 201) TFT(203)
 (202) , TFT(203) (202) (208)
 , TFT(203) EL (204) (206)
 (210) (207) (209)
 TFT(201), TFT(203) Si-TFT , SiO₂ (209)
 , 1
 (206) (210)가 TFT(201) TFT(203),
 (209) (207) (202) 1 TFT(203)
 (202) , EL (204) , EL (204)

1

8-241048
EL(Organic Electro-luminescent)
(OLED : Organic Light Emitting Diode)

17 18

, 1 1 가 3

Si-TFT

3

< >

1>

1 4

1

1

1

가 , , 1 TFT(3) TFT(2) OLED TFT(5) 가 / , , (7) , (7)
가 , , (1) . 1/4
2/4 , , (7) OLED OLED (4) OLED (4) 가
(4) , 가 , , OLED OLED (4) OLED (4) 가
TFT(2)

3a	3b		3/4	4/4		3a
3/4		,	1/4		1/4	
(7)				(12)가		(16)
(6)	(7)	,	,	(11)가	A, B, C, ...	,
	가	,		(16)	」	」

, 3b 4/4 (11) (9), (10)
 . , (13) , (14) (7) , (15) (14) 3b , , ,

4 , OLED , . , 4 1 , Ts ,
2 , OLED , . , 1/4
2/4 , , , 3/4
4/4 , .

6 MSB(Most Significant bit :) 5
MSB . . / 2 . ,
32 , () , . . ,

가 .
TFT . , OLED (4) , ,

2) OLED (4) 가 TFT CMOS TFT p , , , TFT(

64 (6)
 2^m
 $, (m-k)$ 가
 $m=6, k=1$

Si-TFT
LSI(Large Scale Integrated circuit)
Si-TFT

< 2>
 5 6 , 2 5 OLED
 . (25) (26), (27), (28) (25)가
 (25) , (27) TFT(21) TFT(23) (22) (28) (22)
 T(23) TFT(23) OLED (24) , (26) , (31) (29)
 (30) , (27) TFT(21), TFT(23) (29) (30), (31) (29)
 . , (31) Si-TFT ,
 , OLED , 1 1/2 , 2 , 2 2/2

1/2 (29)가
, (31) 가 . , (26)
, (30)가 TFT(21) . , (29)
(27) TFT(23) . , (22)
1 TFT(23)
OLED (24) , OLED (24) 5 32

, 2/2 , (31)가
 , (29) , (31)가
 (30)가 , TFT(21) , (26)
 (27) , TFT(23) , (31)
 OLED 1 , TFT(23) , (22)
 (24) , OLED (24) ,
 . , MSB1

·, OLED (24) 가
·, TFT(23) 가
·, 2/2 가 2 가 가 ,

6 . , 6 1 2

< 6>

15 , 6 . 15 (PDA : Personal
Digital Assistants : 100)

08) (I/F) (102) , I/F (102) I/O(Input/Output) (103) (1
(107) (108) (MPU : 104), (106),

, (106) OLED (101) (105), (109) (101) (101) (100)
OLED (101) , 1 (105) OLED (100) (101),

, I/O (103) , I/F (102) (104) (107) (100)
(104) , (107) (107)

, (106) (104) 가 OLED (101) , 가 , OLED (107)
(106) (105) (101)

, OLED (101) , 6 (109) 2 가 ,
(100) , 1 (100) 2 ,

가 가

(57)

1.

, 3

1

1

1

, 3

2.

1

,

3.

2

,

,

가

4.

1

,

,

5.

4

,

,

1

,

6.

Si-TFT

1

,

7.

m

, (m - k) , DA

k

2

7

,

8.

8

,

9.

가

10.

9

,

,

11.

10

,

가

,

가

12.

11

,

,

13.

7

,

1

2

, 2

, DA

k

1

1

 $(m - k)$

2

14.

1

,

m

,

(m - n)

,

DA

n

2

14

,

16.

14

,

1

2

, 2

, DA

n

1

1

 $(m - n)$

2

17.

1

,

0

x

x

i

, $(i = 0, 1, \dots, y-1)$

가

가

,

1

x

y

,

18.

17

,

19.

17

x y

20.

17

1

3
2

, 3

21.

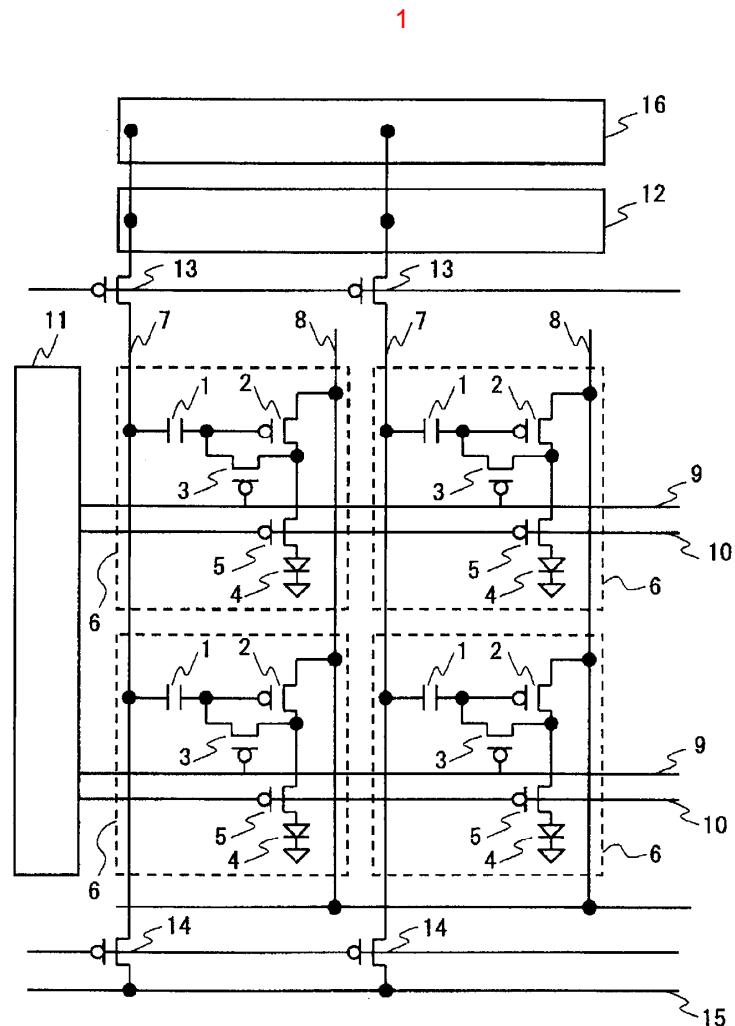
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, 3

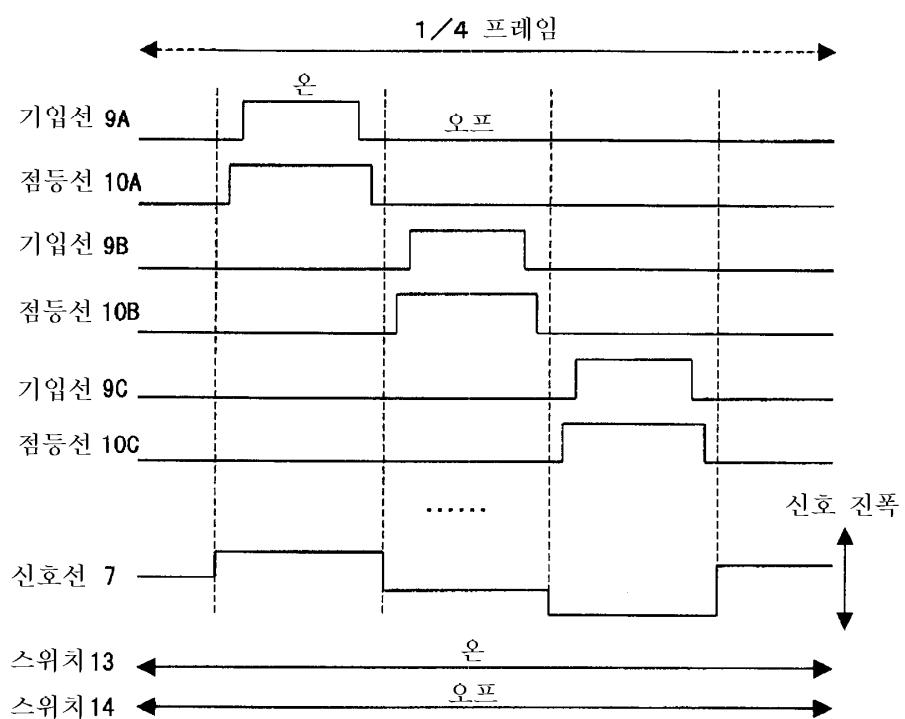
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1

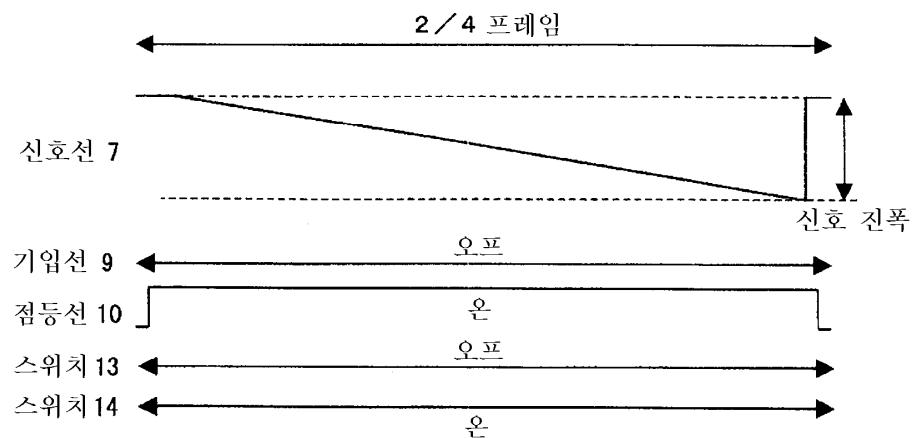
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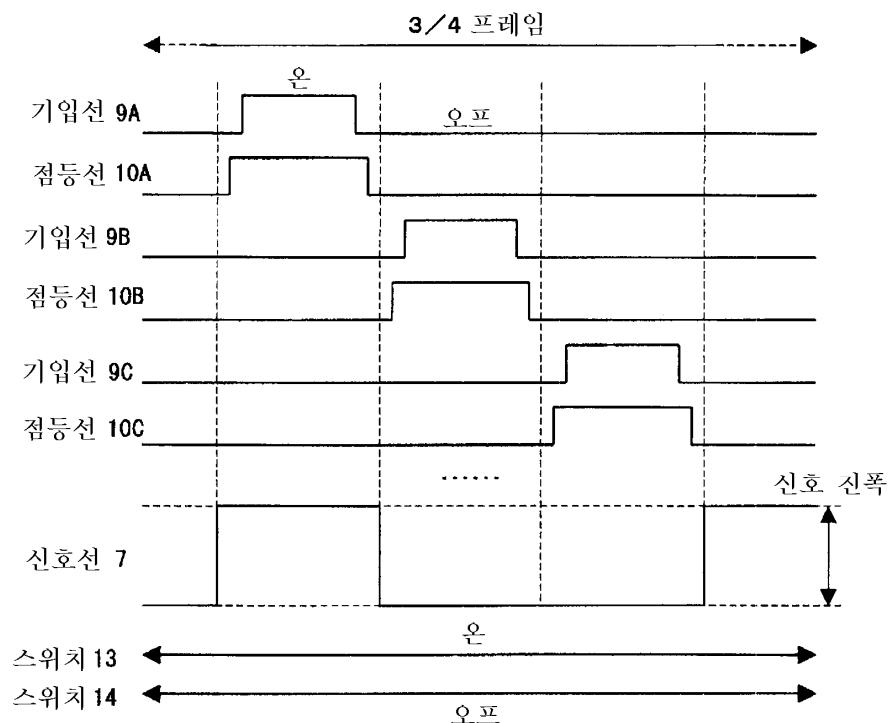
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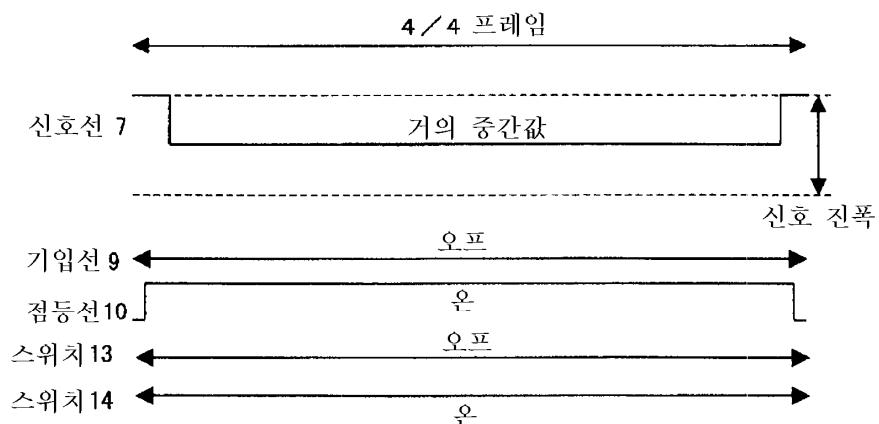
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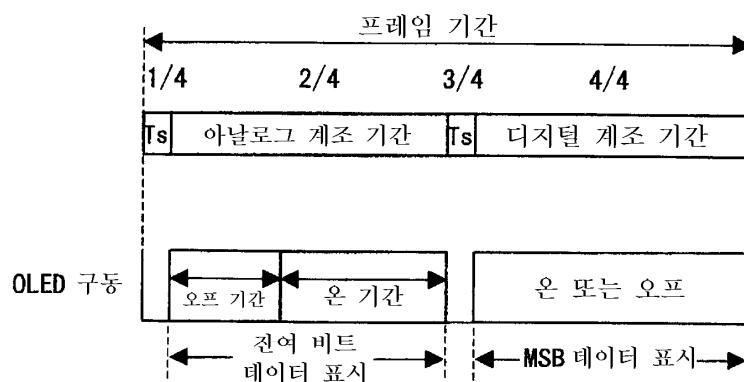
3a



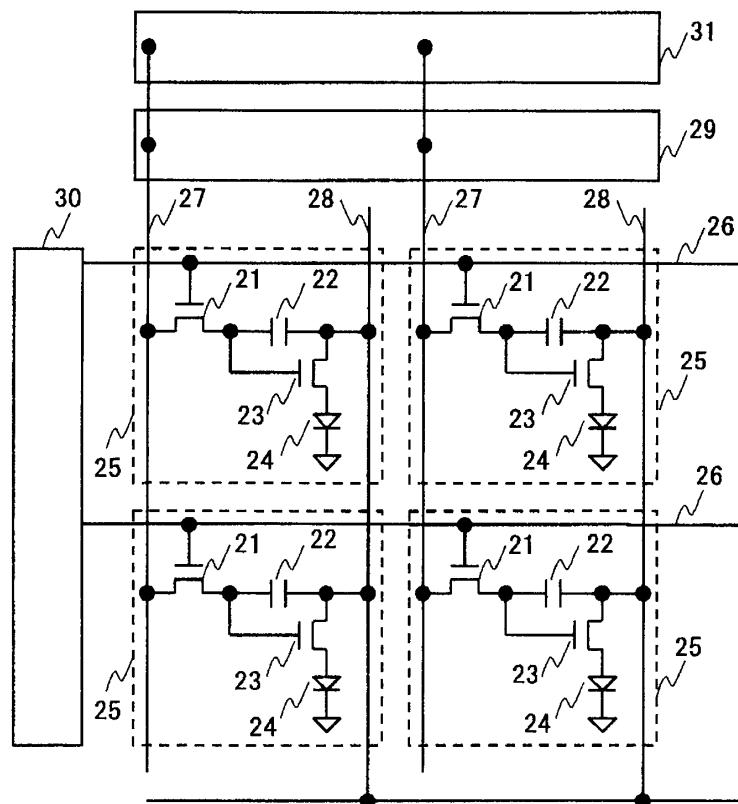
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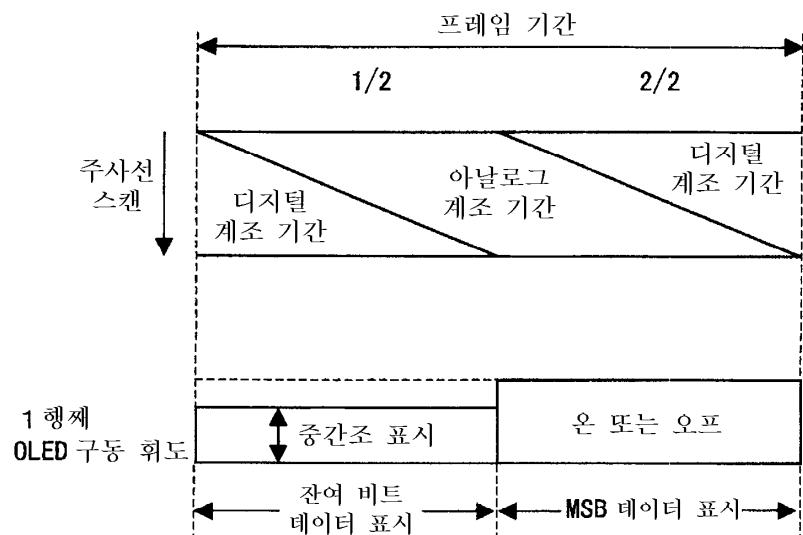
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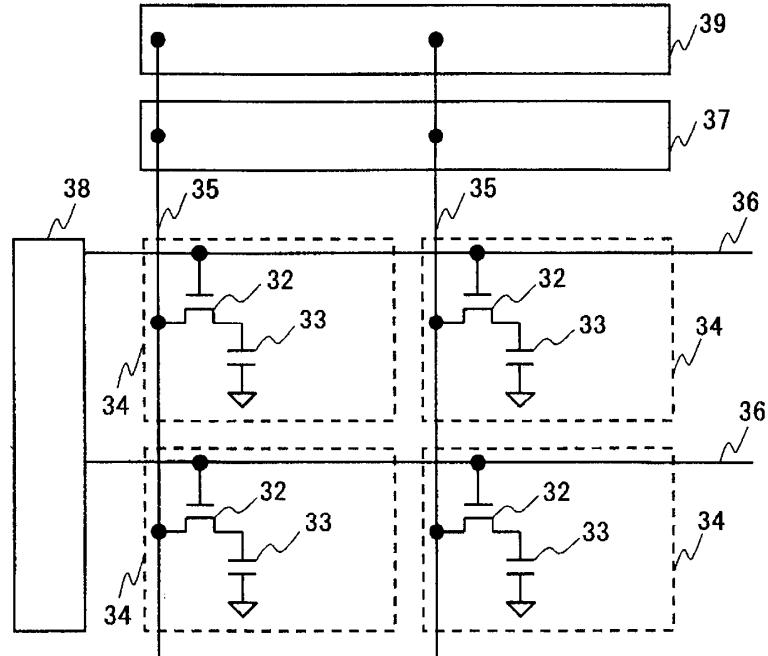
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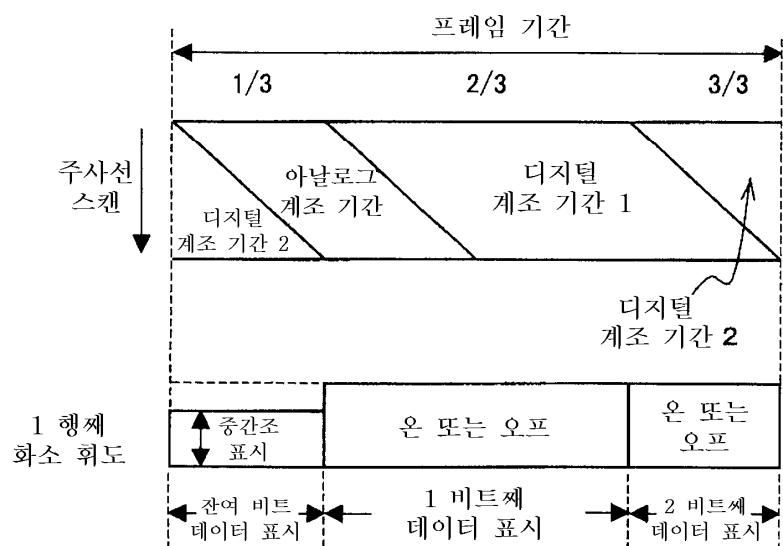
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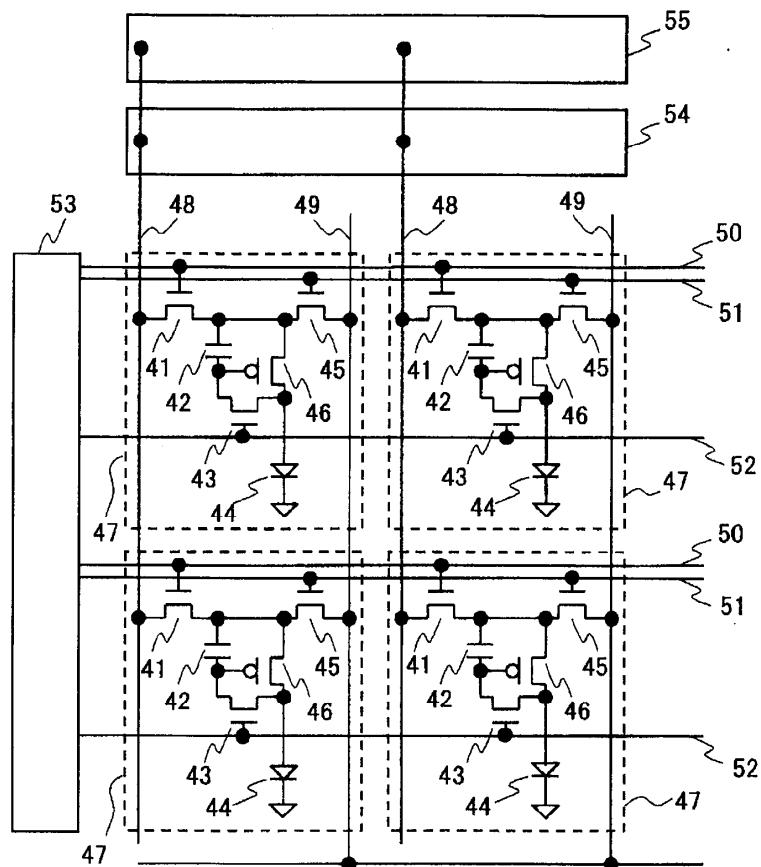


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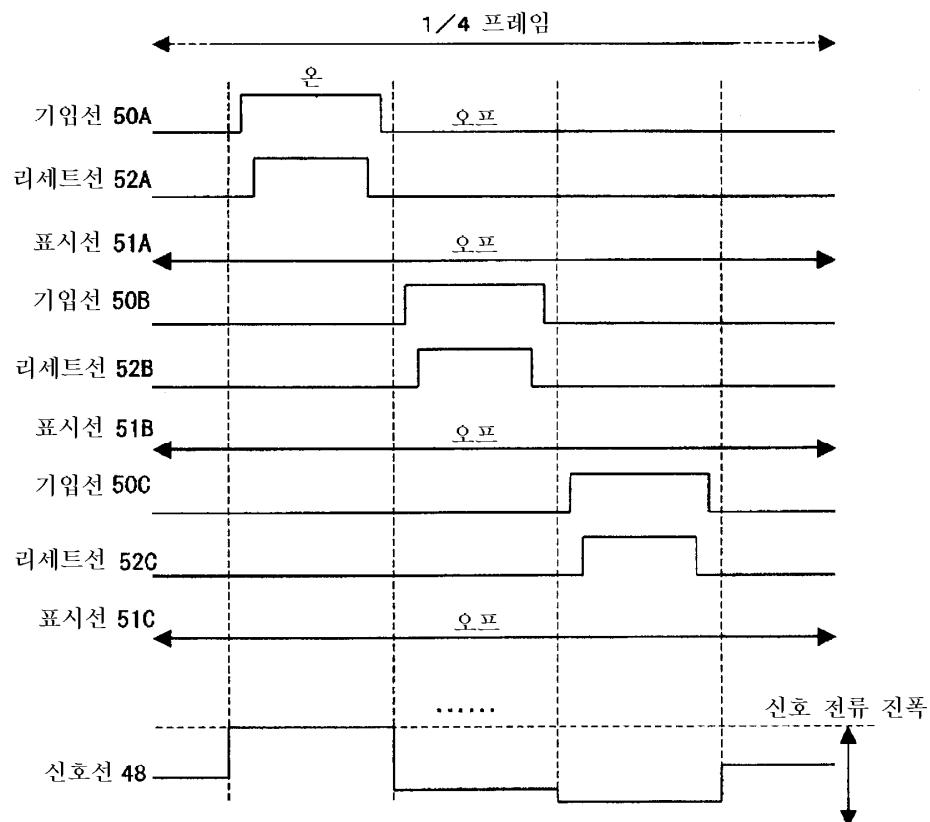


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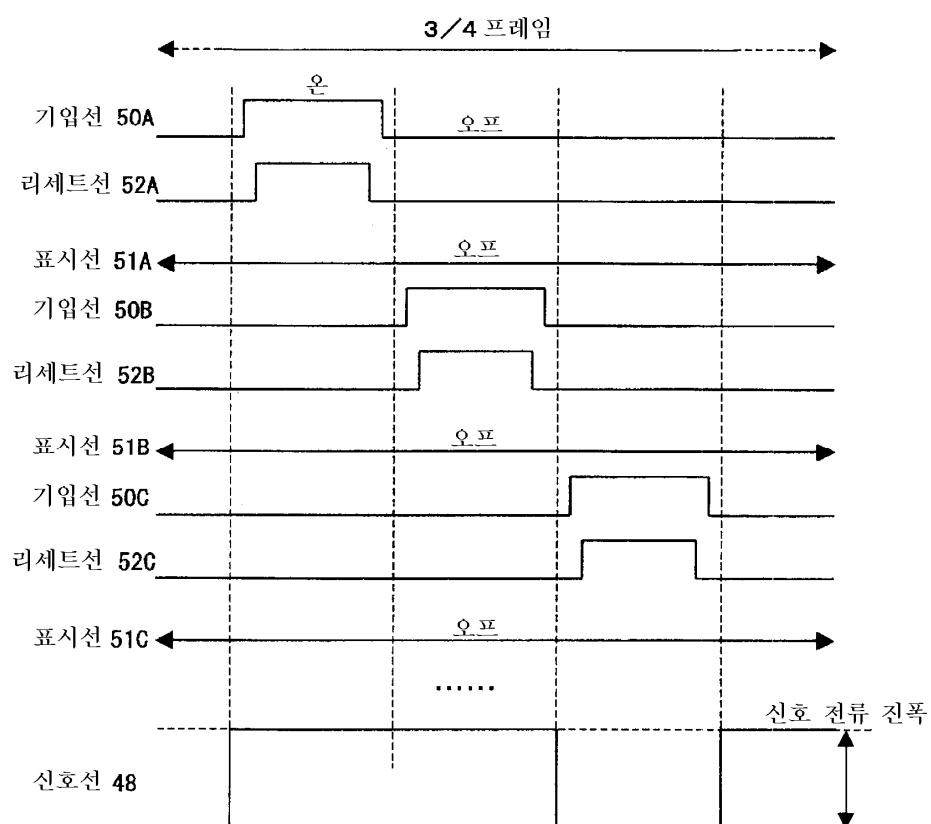




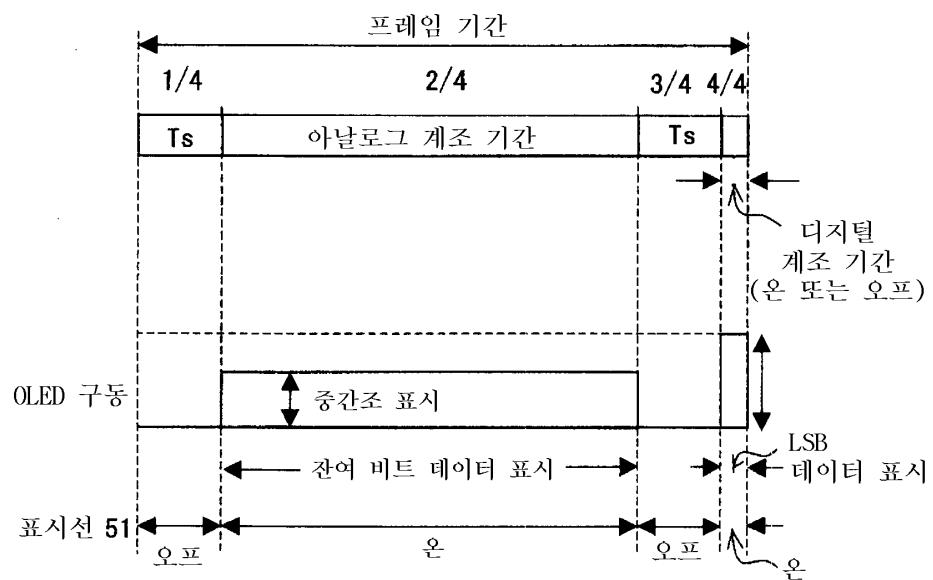
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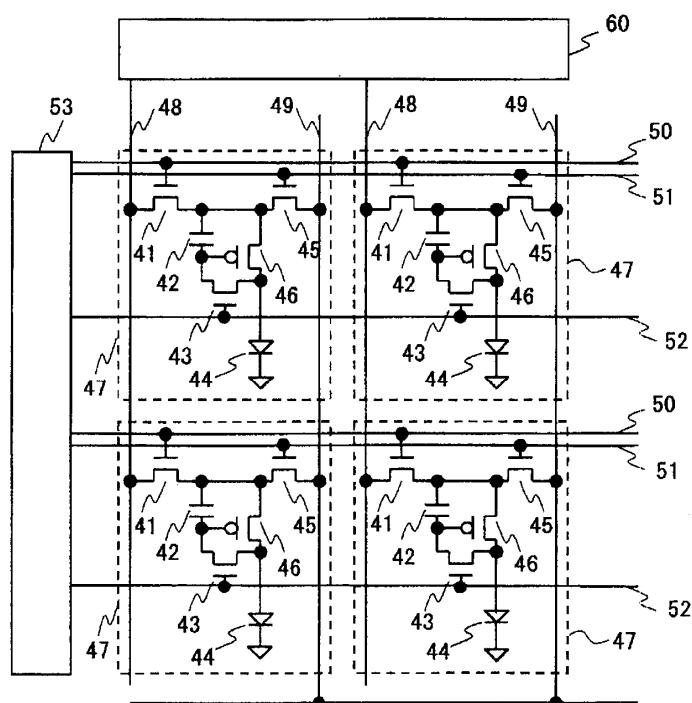
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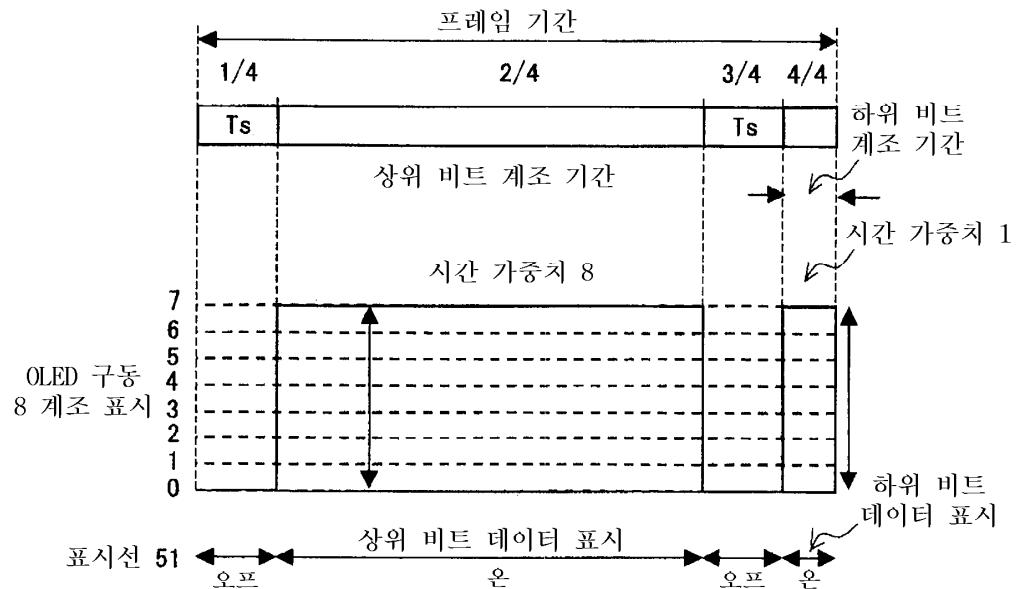
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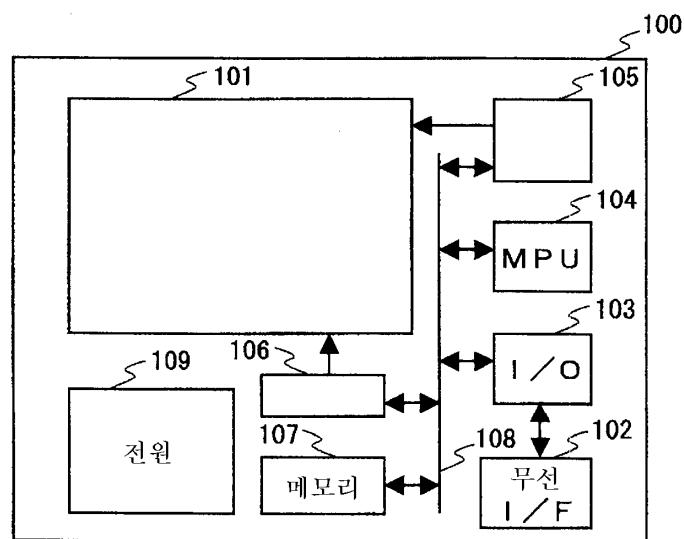
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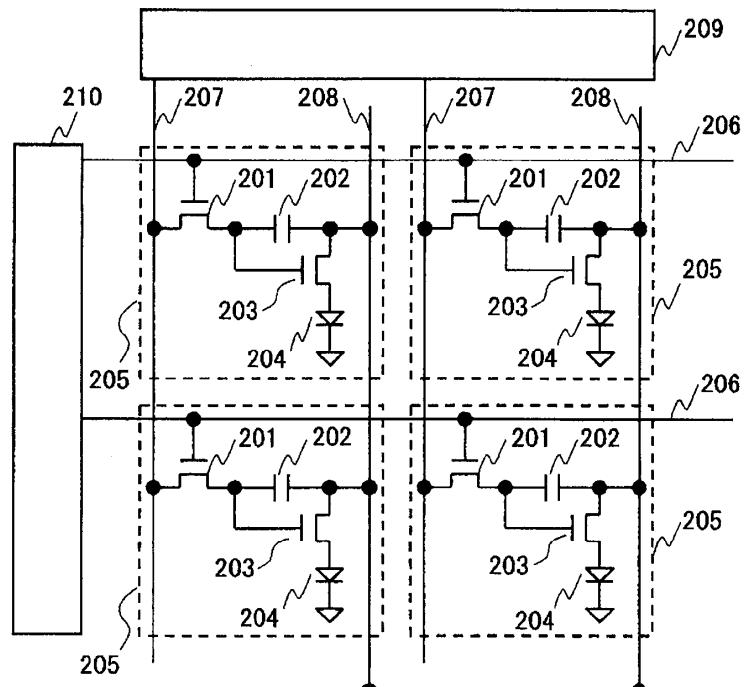
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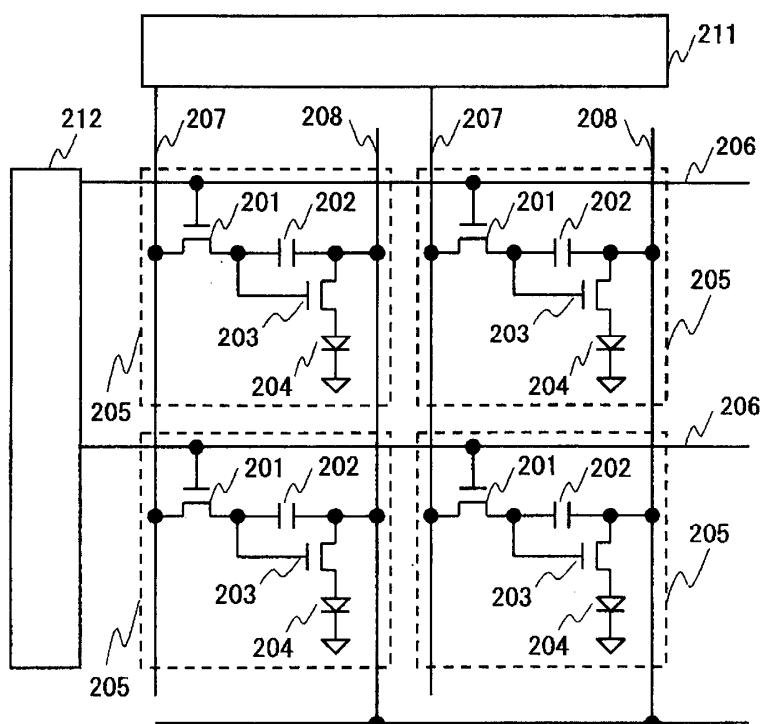
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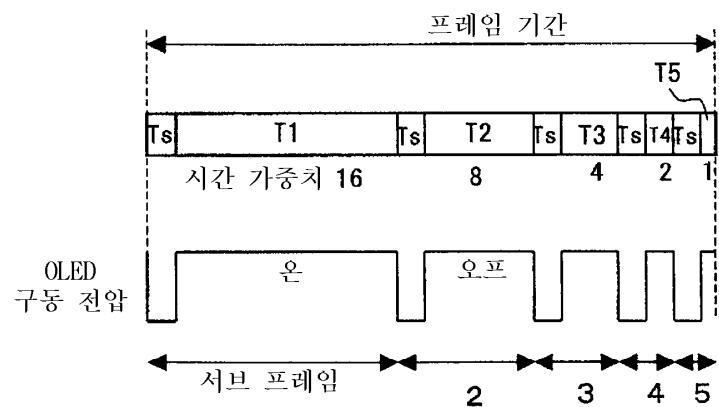
16



17



18



专利名称(译)	图像显示装置		
公开(公告)号	KR1020030089404A	公开(公告)日	2003-11-21
申请号	KR1020030001322	申请日	2003-01-09
[标]申请(专利权)人(译)	日立HITACHI SEISAKUSHODBA		
申请(专利权)人(译)	株式会社日立制作所		
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发明人	아끼모도 하지메 기누가와 기요시게		
IPC分类号	G09G3/30 H01L51/50 G09G3/32 G02F1/133 G09G3/36 G09G3/20		
CPC分类号	G09G2300/0842 G09G3/2014 G09G2320/0252 G09G2310/027 G09G3/2011 G09G3/2077 G09G2300/0417 G09G3/3625 G09G2300/0861 G09G2310/0259 G09G2320/043 G09G3/3233 G09G2310/06 G09G2300/0819 G09G3/2022 G09G3/3648		
代理人(译)	CHU , 晟敏 LEE , JUNG HEE		
优先权	2002142469 2002-05-17 JP		
外部链接	Espacenet		

摘要(译)

本发明的目的是提供一种能够高精度的多级显示装置，显示微噪声或驱动频率高速被推卸的问题。包括1帧的显示信令数据被组织在多个子帧上，例如，子帧1/4~4/4为4. 1/4帧的模拟信号的寻址周期，2/4帧为模拟灰度显示周期数字信号的寻址周期为3/4帧，数字灰度发光周期为4/4帧。像素(6)内的OLED器件(4)的模拟灰度显示周期根据在具有模拟驱动信号电路(12)的像素内的存储器容量(1)中填充的模拟信号电压而辐射时间。为了辐射/不发射二进制，数字灰度显示周期根据填充在存储器容量(1)中的数字信号电压与数字信号驱动电路(16)组织图像显示装置。数字信号电压，发光操作，模拟灰度显示周期，存储器容量。

