

(19)  
(12)

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2004 06 24

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(22) 2003 11 28

(30) JP - P - 2002 - 00362345 2002 12 13 (JP)

(72)	가	가	가	가	4-1-1	가	가
	가	가	가	가	4-1-1	가	가
	가	가	가	가	4-1-1	가	가

(74)

1

(54)

(劣化),

5

, LED , , , ,

1 ( 1, 2, 3 )

2

3

4 LED

5 ( 1 )

6 ( 2 )

7 ( 3 )

8 ( 4 )

9 ( 4 )

10 ( 5 )

11 ( 5 )

12 ( 5 )

13 ( 5 )

14

15

16

\*

\*

3 :

7 : LED

21 :

22 :

23 : (階調數)

24 : / (非)

25 :

31 :

35 :

60 :

70 : (光源)

(各色)  
(同期)

PDA(Personal Digital Assistants)  
(屋外)

(大別)

(視認性)

TFT(Thin Film Transistor)  
TFT TN (現状) 4%

STN(Super Twisted Nematic)  
TN(Twisted Nematic)

(AM-LC, SID'00 Digest of Technical Papers(T.Yoshihara, et. al., 1176, 2000), 1999).

(利點)  
(2ms)

100 1000  
TFT (長軸)

15 2  
16 (a)  
16 (b)  
16 (b)

16 (a)

(半分)  
11-119189

가

가

가 가

가

가

(劣化),

1

. 1

10

, 1

1 10

가

, 1

2

1

2

가

가

+

(burn-in)

3

$$, T_B + T_C = T_A + T_D$$

$$3, (T_B), (T_C), (T_A), (T_D) \text{ 가 } .$$

4 , , , 가 . . . , , , 가  
가 . . . , , (margin) (sequence),

$$5, \quad 1, \quad 4, \quad ,$$

<sup>6</sup> 1 4 , ,

가 가 . , , , , r, g, b , 3  
w , r'=r-w, g'=g-w, b'=b-w, w 4 , , w

, , ,  $r, g, b$  , ,  $r', g', b'$

7 , 1 6 / , ,

8 , 1 6 ,

가,

9 , 1 8 ,

## 가

가 (反轉) 가 2ms 가

( 1 )

1 1 , 2  
. 3 . 4 LED

1 , 21 22 2 , 가 (22) , 2 , , , LED (7) (導光)  
(光擴散板)(6)

$$(4) \quad (11, 12) \quad (40, 40...) \quad (12) \quad , \quad (3) \quad . \quad , \quad (11) \quad 14 \quad (13)$$



LED / , LED / , (T<sub>A</sub>) (T<sub>B</sub>) (T<sub>C</sub>) 25% , (T<sub>D</sub>) 25% ,

%, , (T<sub>B</sub> + T<sub>C</sub>) = T<sub>A</sub> + T<sub>D</sub> T<sub>B</sub> = T<sub>D</sub>

$$(22) \quad (22) \quad \left( = T_A + T_B + T_C \right) \quad 75\% \quad .$$

, 가 , 가 . ,  
60Hz .

，	(單體)	1850cd/m <sup>2</sup>	176cd/m <sup>2</sup>
，	9.5%	，	1.1W

1 , (  $T_A$  ) , 16 , (  $T_C$  ) 50% ,  
 ( ) 2465cd/m<sup>2</sup> 174cd/m<sup>2</sup> (  $T_B$  ) (  $T_D$  ) 0% 7.1% ,  
 1.5W .

$$\left( \begin{array}{cc} 2 & \\ & \end{array} \right)$$

1,  $T_A, T_B, T_C, T_D$  1, 2, .  
 , 1, (等方相)-, C (相轉移) (11, 12), C  
 $\pm 3 (100 \ 94)$ , (13) (昇溫) 10V 가 -1 / (25 )

$$\frac{nC}{cm^2} \quad . \quad 2 \quad (1, 5) \quad (21) \quad ,$$

(21) , , 가 LED (7)  
(22)

$$6 \quad 2 \quad , \quad 6 \quad (a) \quad (21) \\ 6 \quad (b) \quad (22) \text{ (LED)} \quad /$$

$$1 \quad \quad \quad 3 \quad \quad \quad 20\% \quad \quad , \quad \quad \quad (T_A) \quad \quad \quad (T_C) \\ 30\% \quad , \quad 30\% \quad . \quad , \quad T_B + T_C = (T_A + T_D) \quad T_B = T_D$$

(22)(LED) 1

$$T_{\text{total}} = T_A + T_B + T_C \quad (22) \quad 70\%$$

1725cd/m<sup>2</sup> 183cd/m<sup>2</sup>  
10.6% 1.0W  
2465cd/m<sup>2</sup> 179cd/m<sup>2</sup> 7.3%  
1.5W  
6 2 16 2 6 2  
가 가  
가 14 가

$$\left( \begin{array}{c} 3 \\ \vdots \\ 3 \end{array} \right)$$

2096cd/m<sup>2</sup> 177cd/m<sup>2</sup>  
8.4% 1.2W  
7 3 16 3 7 3 1.2

( 4 )  
가 , , , , 가 (





5

, 5

LED

(DMD)

LED

, EL

가

14  
2  
3 (R, G, B)  
(70)

(3) (2)  
(6)

14  
(40, 40...) (40, 40...)  
(22)

50%

, 1

( )

( 1)

, 1

( 2)

1

( 3)

$T_A$ ,  
 $T_B$ ,  
 $T_C$ ,  
 $T_D$

( 4)

5  
4

6  
1 4

( 7)

1 6 /

( 8)

1 6

/

( 9)

1 8

( 10)

1 9

( 11)

10

( 12)

가 가

가  
10 11

( 13)

, 1

( 14)

, ,

, , 1

, 1 가

, , , ,  
, , , ,

(57)

1.  
(光源)(入射)  
(同期)

(field-sequential)

(走査)

, 1

2.  
1

3.

$$T_B, T_C, T_A, T_D, T$$

$$T_B + T_C = T_A + T_D$$

4.

5.

1 4 ,

,

6.

1 4 ,

, ,

7.

1 4 ,

(出射) /

8.

1 4 ,

/ ,

9.

1 4 ,

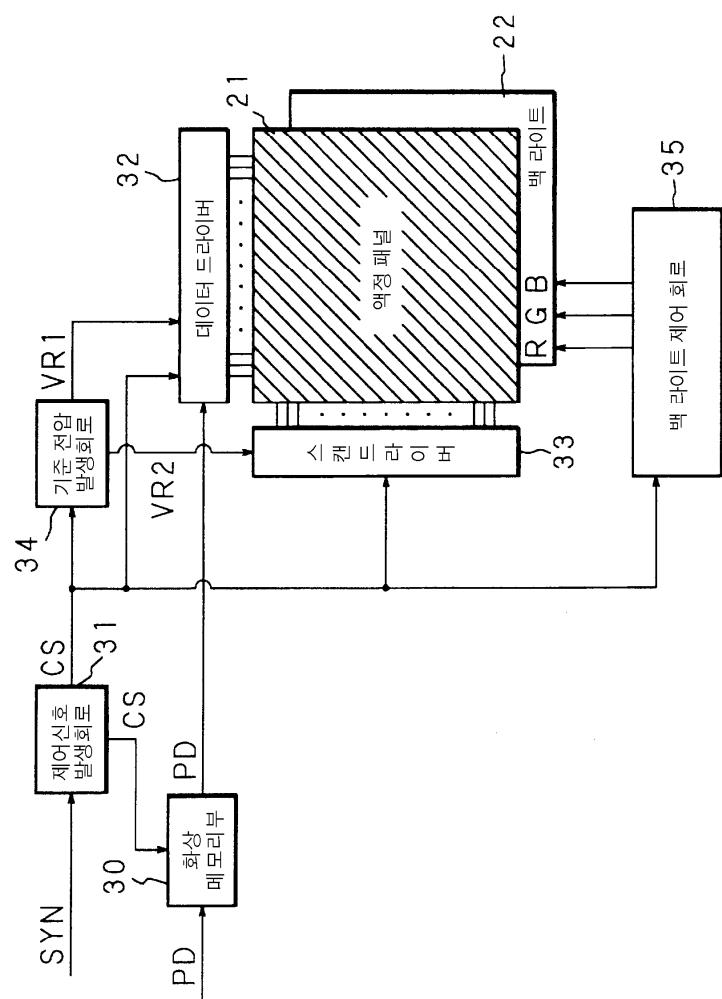
(非) ,

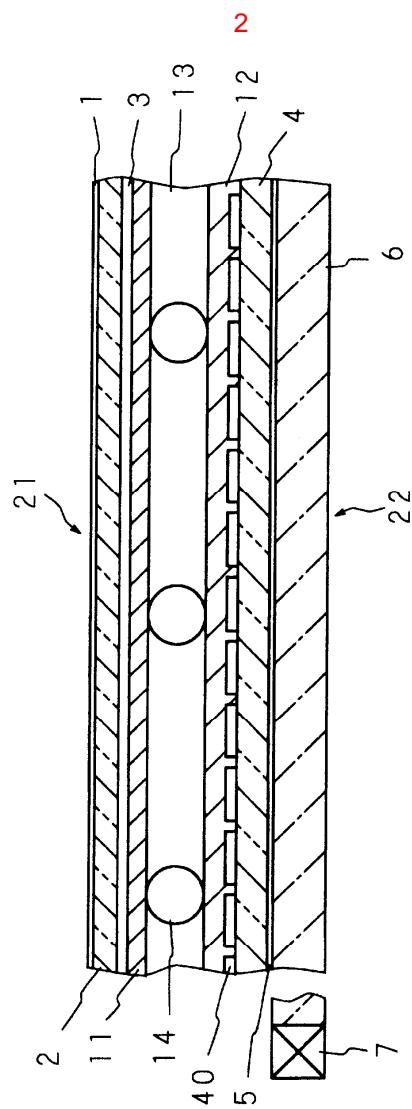
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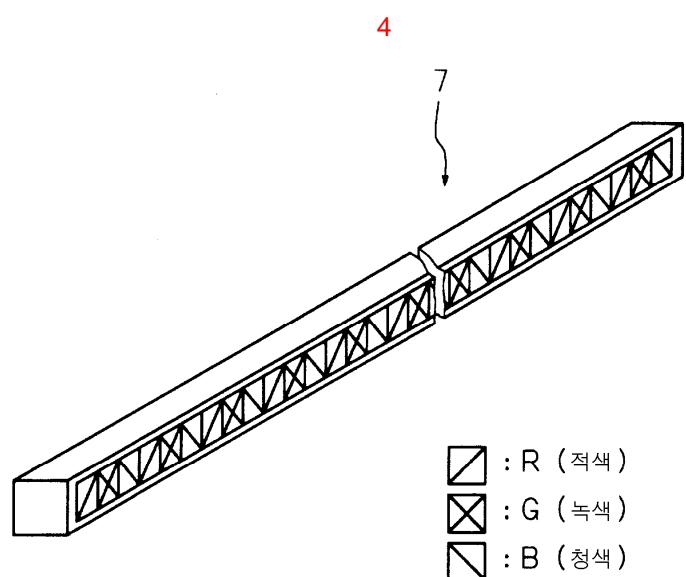
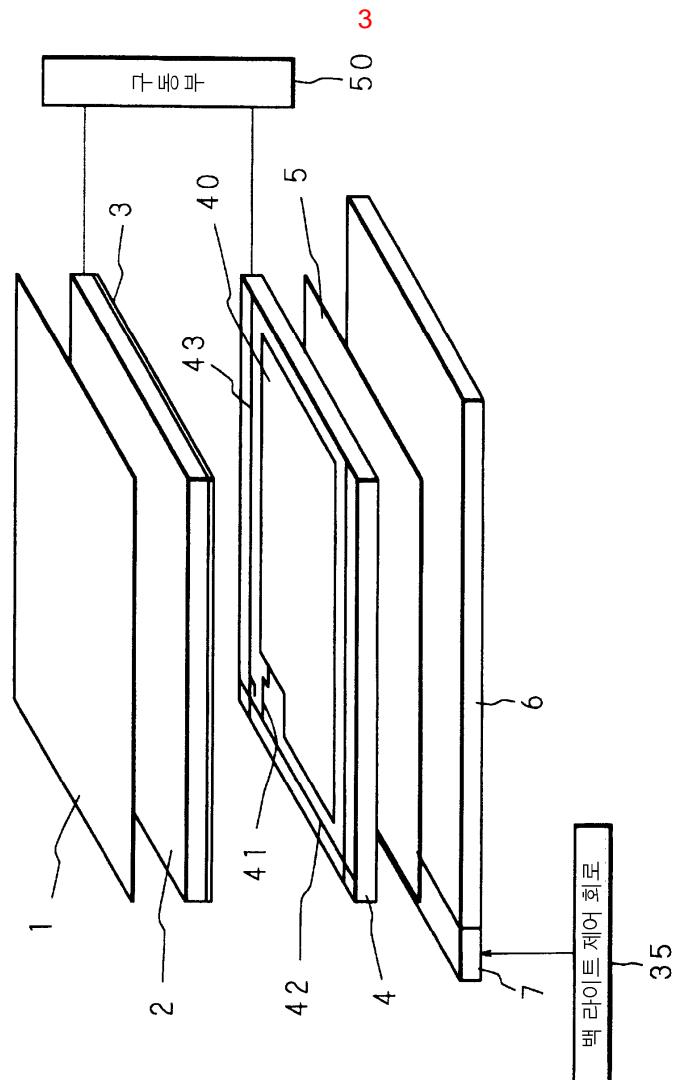
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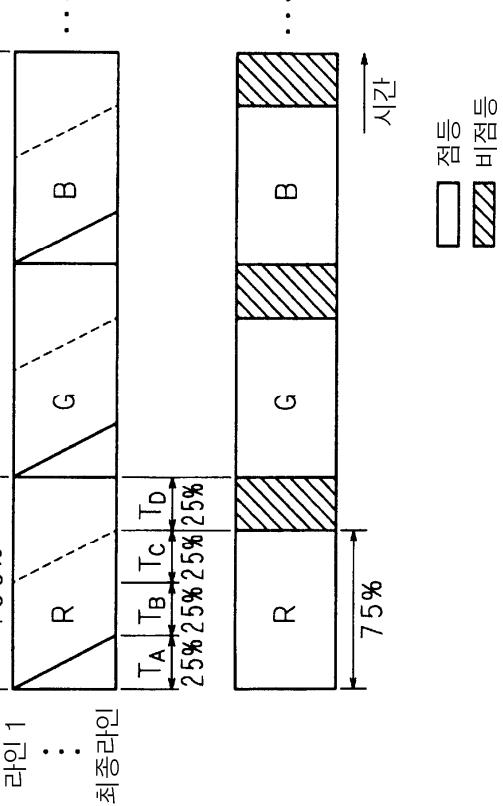
, 1

1









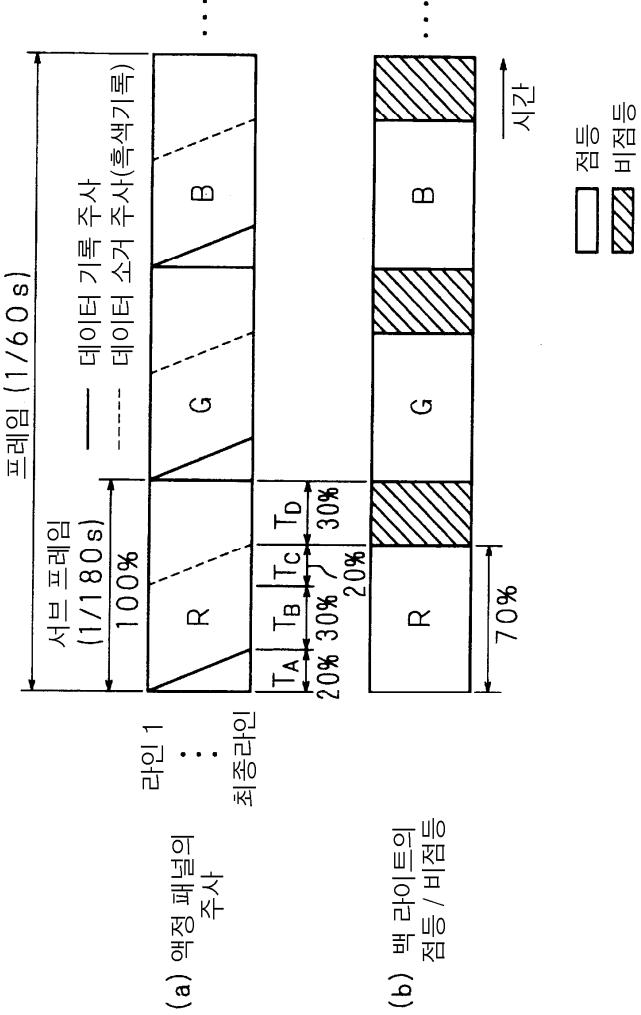
리인 1  
⋮  
최종리인

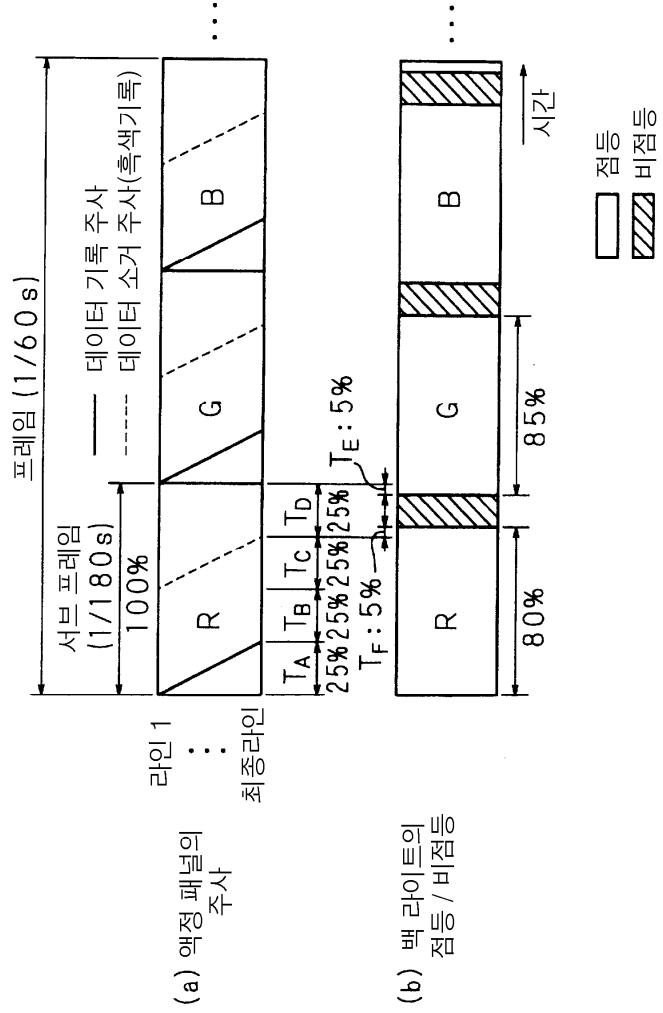
(a) 액정 패널의  
주사

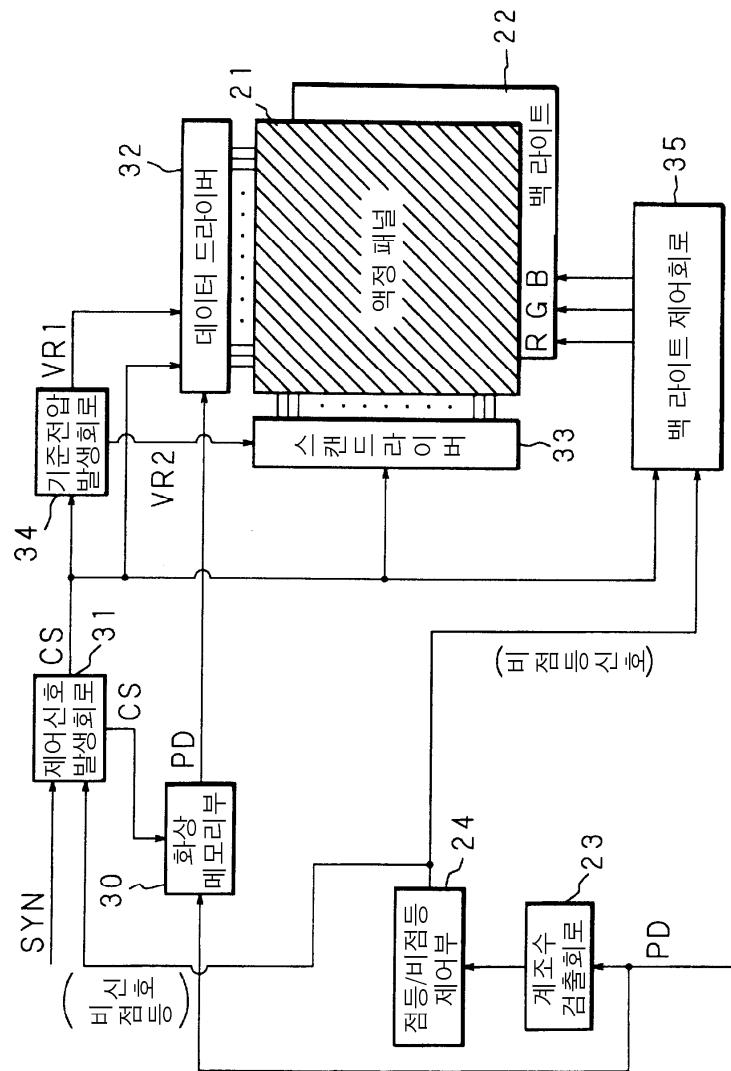
(b) 백 라이트의  
점등 / 비점등

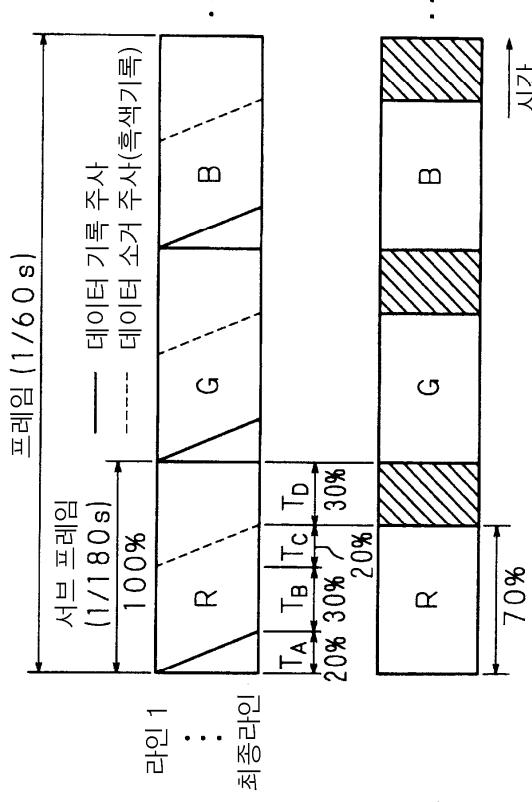
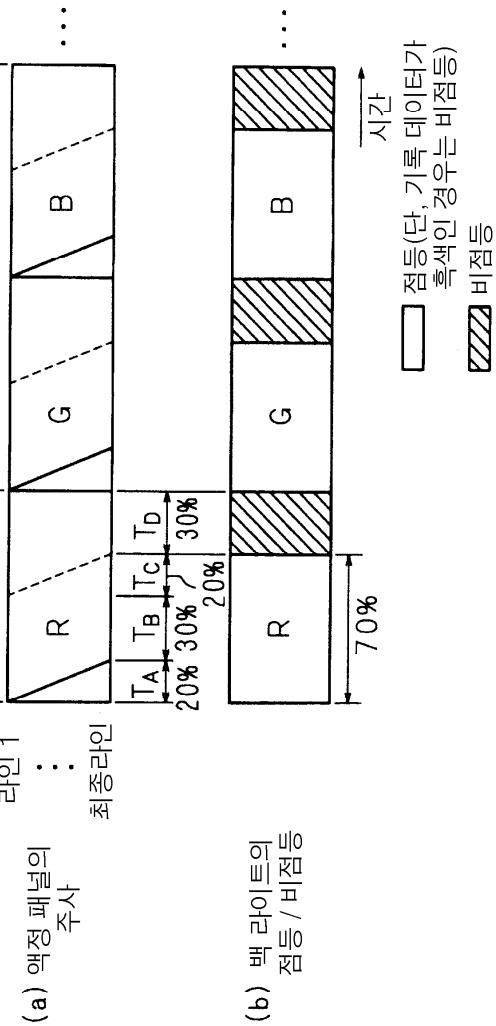


점등  
비점등

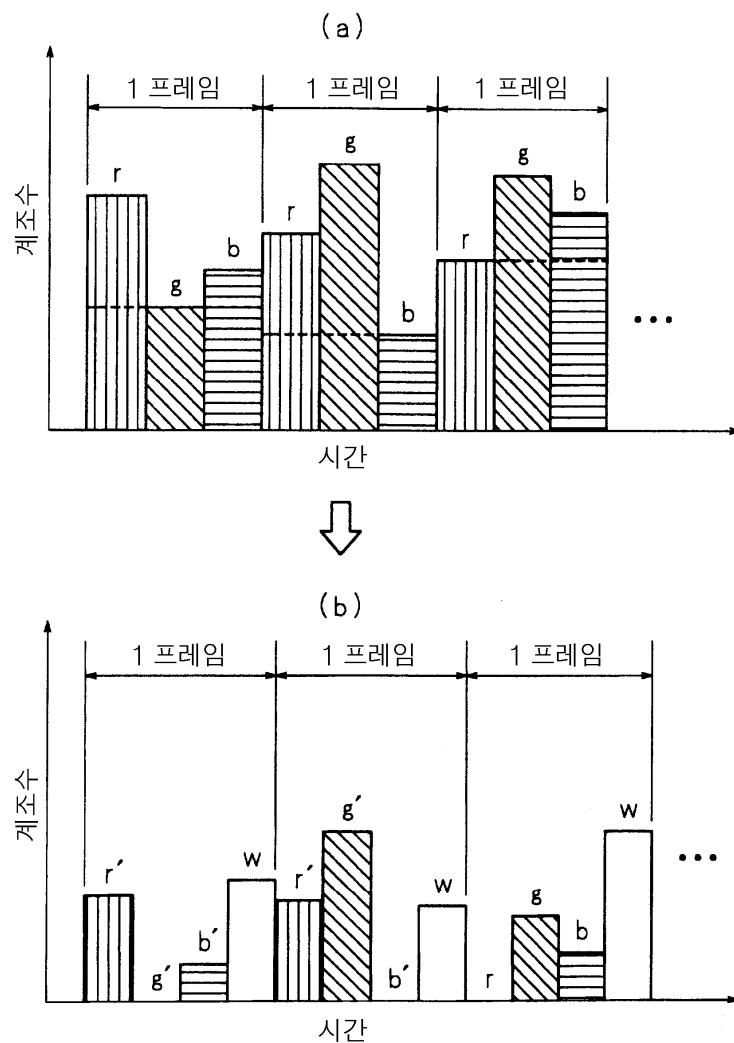




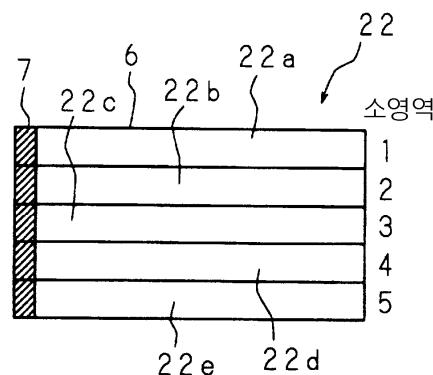




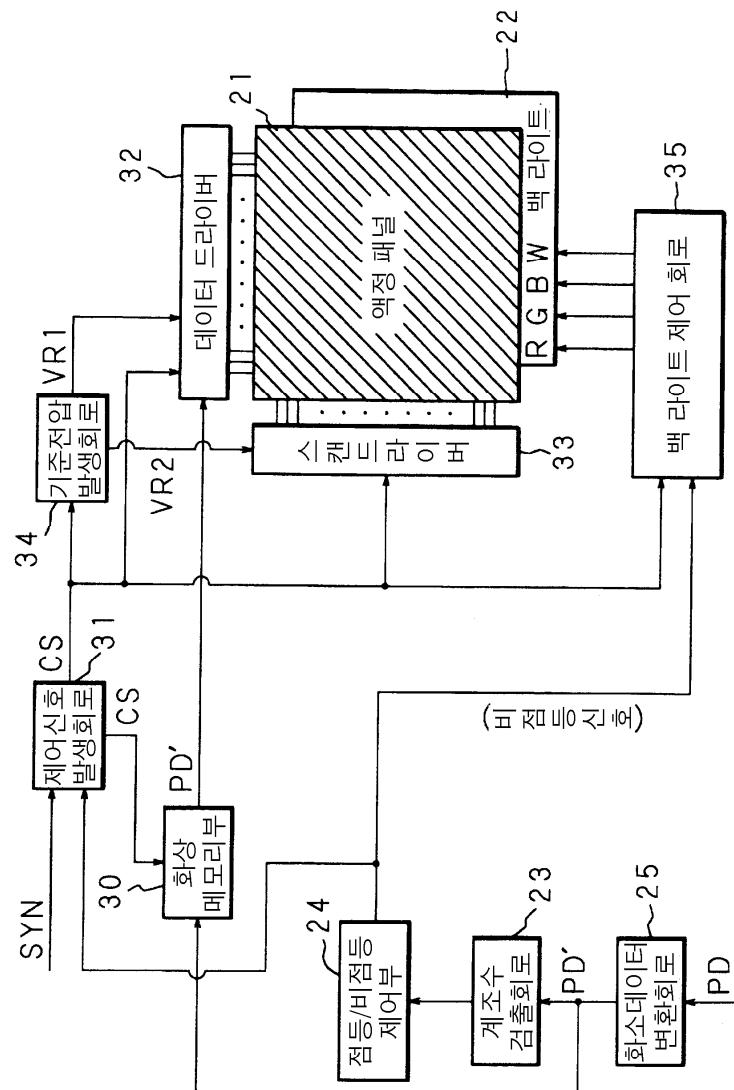
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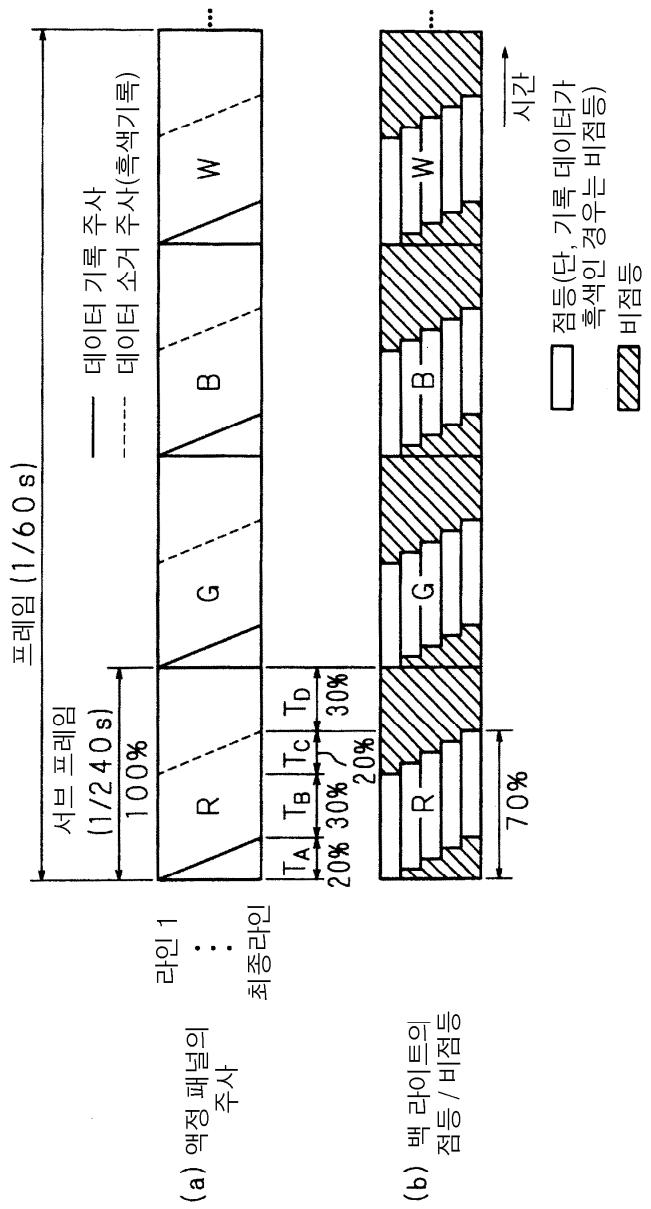
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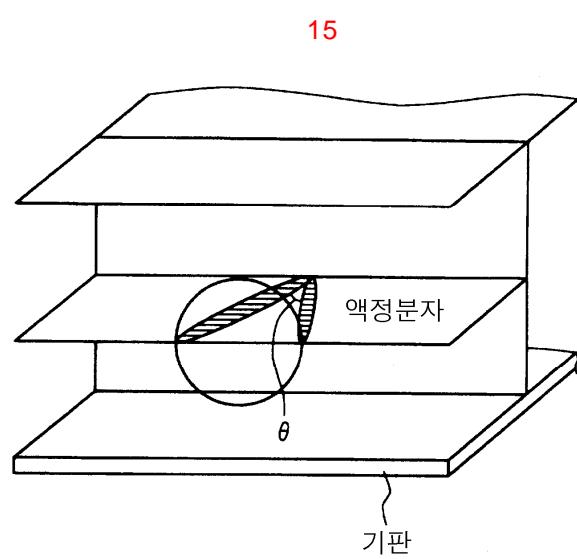
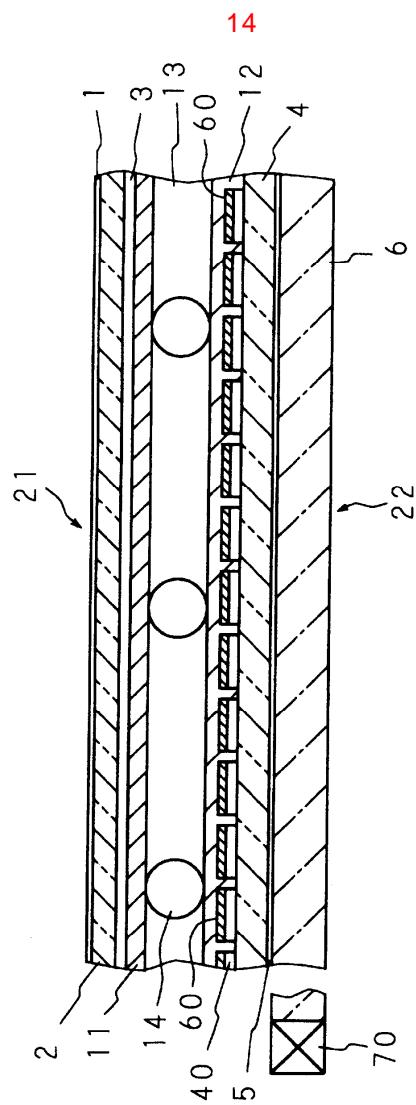


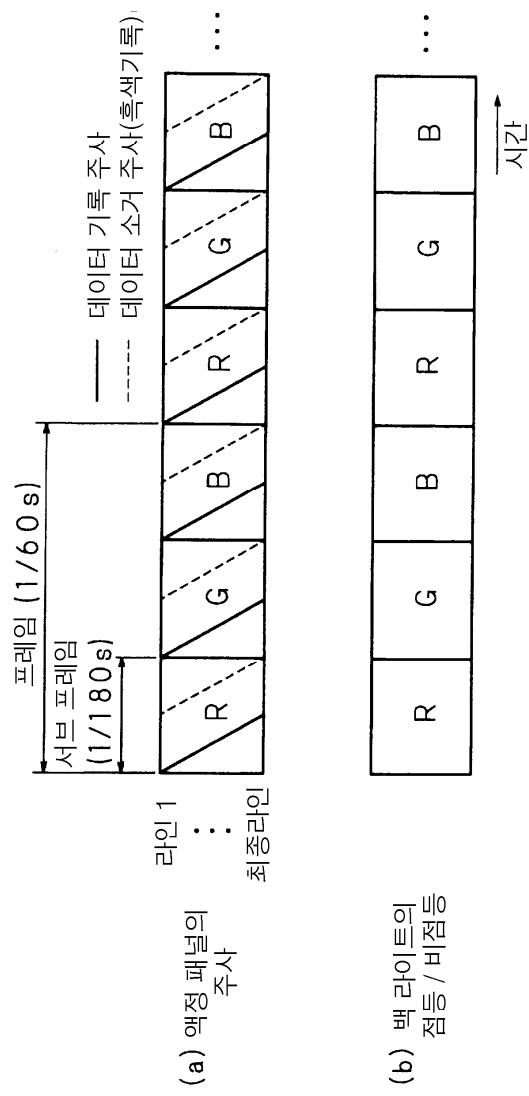
12



13







专利名称(译)	显示装置和显示方法		
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申请(专利权)人(译)	富士sikki有限公司		
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其他公开文献	KR100922118B1		
外部链接	<a href="#">Espacenet</a>		

### 摘要(译)

本发明的目的在于提供一种显示装置和显示方法，该显示装置和显示方法导致显示清晰度的劣化，特别是亮度的降低和用于规划光学使用效率的提高。对于每个子帧，1帧可以被称为寄存器注入所需的时间( $T_{(SB)A} / SB$ )，它划分为红色，绿色和3的子帧用于蓝色戏剧化，时间( $T$ )取消扫描所需的( $SB)C / SB$ )，以及从完成时刻到下一颜色(下一子帧)的寄存器注入的开始时刻的时间( $T_{(SB)D} / SB$ )从寄存器注入和取消扫描的完成定时到取消扫描的开始定时的时间( $T_{(SB)B} / SB$ )是子帧的25%。满足 $T_B = T_D$ 和 $T_B + T_C = T_A + T_D$ 的关系。在从寄存器注入的开始定时开始的取消扫描的完成定时的间隔中，背光灯点亮。间隔从间隔中的取消扫描的完成定时到下一颜色的寄存器注入的开始定时发出光。背光的点亮时间可以是子帧的75%。公共电极，LED阵列，背光，刻度数，液晶面板。

