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(71) 6

(72) 가 999-3,

(74) :

(54)

(3) (3) (7) RGB
(3) (8) (3) ,
,

20

1 1 (A1)
2 (7)
3 2 X-X

4	2	Y-Y	.			
5			(7)	.		
6	5	Z-Z	.			
7		(A1)			(B1)	
8		(A1)			(B1)	
9	(a)			, (b)		
10			.			
11	2		(A2)	(2)	(P)	
12	2		(A2)	(2)	(P)	
13		(A2)			(B2)	
14		(A2)			(B2)	
15	3		(A3)	(7)	(P)	
16	3		(A3)	(7)	(P)	
17		(A3)			(B3)	
18		(A3)			(B3)	
19	4		(A4)	.		
20		(A4)	(3)	(8)		.
21			(3)	(8)		.
22	21	a-a	.			
23	21	b-b	.			
24		(A4)			(B4)	
25		(A4)			(B4)	

26	5	(A5)	.
27		(A5) (H) (A)	.
28	27	X-X	.
29	27	Y-Y	.
30		(H) (A)	.
31		(A5) (B5)	.
32		(A5) (B5)	.

가 (), ()
(1). 2).
가
(3).
2 1 가
(4, 5).

[1]

8-292413

[2]

7-318929

[3]

2878231

[4]

2000-298271

[5]

2001-166289

LED
가
R()G()B()
RGB 4 5
RGB
RGB
RGB
RGB

(一主面)

RGB

가

가, RGB

(1)

1 (A1) , 2 (A1) STN

3 2 X-X , 4 2 Y-Y

(A1) 가 (A1) 가

(A1) , 1 (1) 가

PHA094X, PHA103X (2) (P) (2) (7)

(P) 가 (3) (3) ITO

(4) (rubbing) (6)

(5) SiO₂

(2) (3) , 2 가

(7) (3) 1 , 1 2

(7) (1)

(成膜) (7)

(2) Al , AlNd Al , Ag Ag

(7) (7)(

(7) () ,

(7) (3)

(3) ()

(3)

(2) (3) 2 (3) (18)

9 (10) (9) ITO

(10) (11)

(9) (1) , 200° 260°
 (12) , (5,10) () ()
 , 가 (1,9) (12)

(9) 1 (13), 2 (14), (15)
 (1) 3 (16), (17)

(1) (17) , LED

(A1) , (2) (3)
 (7)
 RGB RGB

(A1)가

(A1)
 (3) , RGB

(2) (3)
 (7) , 1 (7) , R()
 39%, G() 39%, B()

27%

[1]

	투과모드					반사모드				
		투과구멍	Y	x	y		CF개구율	Y	x	y
종래예	R	0.30	32.5	0.515	0.311	R	-	32.5	0.515	0.311
	G	0.30	75.4	0.332	0.469	G	-	75.4	0.332	0.469
	B	0.30	29.7	0.206	0.212	B	-	29.7	0.206	0.212
	W		45.9	0.336	0.339	W	-	45.9	0.336	0.339
	NTSC비		21.1			NTSC비	-	21.1		
실시예	R	0.39	43.3	0.515	0.311	R	-	27.9	0.515	0.311
	G	0.39	100.6	0.332	0.469	G	-	64.8	0.332	0.469
	B	0.27	26.5	0.206	0.212	B	-	31.1	0.206	0.212
	W		56.8	0.352	0.356	W	-	41.3	0.326	0.330
	NTSC비		21.1			NTSC비	-	21.1		

() , (2) (3) , , (A1)
 (7)

(B1)

(B1)

5, 6

5 2

6 5

Z-Z

(B1) (2) (7) , 1
 RGB 30%

(A)

(B)

7 8

7

8

7, 8 (x, y)=(0.016, 0.017) (R, G, B) (W) 가
 (x, y)=(0.010, 0.009) 가
 가 9
 9 (a) 15° (C)
 (가)
 9 (b) (C)
 (가)
 10 RGB NTSC
 가 가
 (2)
 2
 2 (A2) (A1) (A2) 1
 (A2) (P) (2) 11
 12
 11 12 (A2) (2) (P)
 11
 (P) (A2) (2) (3)
 (2) (1)
 (7)
 (7) (3) (7)
 (2) (3) (A2) (P) (3) (2) (7)
 (3) 가
 (3) 가
 RGB RGB
 (A2)가
 (A2) (3) (R), (G), (B)
 (P) (2) (3) 2 R(

(2) 100%, G() (2) 10
 0%, B() 75% (2) r /
).

[2]

	투과모드					반사모드				
종래예 2		투영수지 / 반사부	Y	x	y		투영수지 / 반사부	Y	x	y
	R	100%		0.515	0.311	R	100%		0.515	0.311
	G	100%		0.332	0.469	G	100%		0.332	0.469
	B	100%		0.206	0.212	B	100%		0.206	0.212
	W		3.0	0.336	0.339	W		26.2	0.336	0.339
NTSC비		21.1			NTSC비		21.1			
실시예 4		투영수지 / 반사부	Y	x	y		투영수지 / 반사부	Y	x	y
	R	100%		0.515	0.311	R	100%		0.515	0.311
	G	100%		0.332	0.469	G	100%		0.332	0.469
	B	75%		0.206	0.212	B	75%		0.182	0.168
	W		3.0	0.336	0.339	W		25.4	0.326	0.328
NTSC비		21.1			NTSC비		22.3			

(3) 10
 0% () (P)
 (B2) (A2)

(2) (7) , RGB 30%
 (A2) (B2)

13 14
 가 , 1
 13 , 14
 13 14 , ()
 011, 0.011) , () R, G, B (W) , (x, y)=(0.
 , RGB CF 가
 (3)
 3
 3 (A3) (A1) , 1
 15 16 (A3)
 15 , 16
 15 16
 15 16 , (3) (P)

(A3) , (3) (3)
(P) (7) (3))
가 .

가 . ,
가 .

(3) , , ,
(7) , (P) (7) , RGB
RGB

(A3)가 .

(A3)
(3) , RGB

(P) (7) (3) , (R), (G), (B)
(7) 70%, G() 3 , R()
(7) 100% (7) 70%, B()
(7) (3) / ,
) .

[3]

	투과모드					반사모드				
	투영수지 /투과부	Y	x	y		투영수지 /투과부	Y	x	y	
종래예	R	100%		0.515	0.311	R	100%		0.515	0.311
	G	100%		0.332	0.469	G	100%		0.332	0.469
	B	100%		0.206	0.212	B	100%		0.206	0.212
	W		3.0	0.336	0.339	W		26.2	0.336	0.339
	NTSC비	21.1				NTSC비	21.1			
실시예	투영수지 /투과부	Y	x	y		투영수지 /투과부	Y	x	y	
	R	70%	29.3	0.538	0.314	R	70%		0.515	0.311
	G	70%	71.1	0.329	0.488	G	70%		0.332	0.469
	B	100%	29.7	0.206	0.212	B	100%		0.206	0.212
	W		2.8	0.344	0.347	W		26.2	0.336	0.339
	NTSC비	24.8				NTSC비	21.1			

() , (3) , , (A3)
(P) ,
(B3) .

(2) (7) RGB 30% .

(A3) (B3)
17 18 .

17 , 18 .

17 18 , () R, G, B
(W) , () , ()
x, y)=(0.008, 0.008) , , 가

, RGB CF , 가
 (4)
 4
 19 (A4) , 20 (A4) STN (A4)
 , (A4) 가 (A4) , 가
 , 1 (1) , (3)
 (2) (4) (4) ITO (5)
 (5), (6) SiO₂ (6) (5)
 (3) , , (7)
 (2) (3)
 (1) , , , (7)
 , (2) Al , AlNd Al , Ag Ag
 , (3) (, ,)
 , (3) , (7) (7) (7) (7) (7) (2) (7) (7)가
 , (3) , 가 () (8)
 20 , (8) 20 (18) , (3) (18)
 (8) (8) , 20 , , ,
 , 9 (9)
 (10) ITO (10) (11)
 , (9) (1) , 200 ° 260 ° (5,10) () , ()
 (12) (1,9) (12)

5) , (9) 1 (13), 2 (14), (1

, (1) 3 (16), (17)

, (1) (17) , LED

, (3) (A4) , (3) (8) (8)

가 , ,

가 , () , 가

, (2) (3) (8) , , RGB ,

(A4)가

(A4) (3) , RGB

(2) (3) , , , R()

(7) 39%, G() 4 39%, B() , RGB

27% 15% (4 CF).

[4]

실시예		투과구멍	Y	x	y		CF개구율	Y	x	y
	R	39%		0.500	0.310	R	15%		0.483	0.327
	G	39%		0.333	0.459	G	15%		0.325	0.469
	B	27%		0.213	0.221	B	15%		0.224	0.209
	W		3.8	0.350	0.352	W		20.1	0.323	0.326
	NTSC비		18.1			NTSC비		17.4		

, (A4) , (2) (3)

, (A4) (B4) (7)

(B1) , 21 23

21 a-a (B1) (3) (8) , 22 21

b-b

(B4) , (7) , 5 , RGB
 30% , (3) (8) RGB
 15% (5 CF).

[5]

비교예 종래예	투과모드					반사모드				
		투과구멍	T	x	y		CF개구율	R	x	y
	R	30%		0.500	0.310	R	15%		0.492	0.327
	G	30%		0.333	0.459	G	15%		0.325	0.475
	B	30%		0.213	0.221	B	15%		0.226	0.211
	W		3.1	0.335	0.338	W		24.9	0.337	0.343
	NTSC비		18.1			NTSC비		18.5		

, (A4) (B4)
 24 25 .
 24 , 25 .
 , R, G, B (W) 가 (x, y)=(0.015, 0.014) , (x, y)=(0.014, 0.017) .
 , 가 ,
 , 가 .
 , 15° (C) , ,
 (, , , ,) , ,
 , 가 .
 , (C) , ,
 (, , , ,) , ,
 , 가 .
 , 10 . RGB NTSC
 , 가 가 .
 (5)
 , 5 .
 26 , (A5) , 27 29 (A5)
 , 27 , 28 X-X
 , 29 Y-Y .
 (A5) , 1 (1)
 ITO (5) , (5)
 (2) ,
 (6) .
 , (2) Al , AlNd Al , Ag Ag .
 , 9 , (9) (3) , (3)
 (4) , (4)
 ITO (10), (11) SiO₂ (11)
) , (10) (11)

, (H) (3) (H) , 27 , 가 , 27 ,
 (3) , (7) 1 , 1 ,
 (2) (1) (5) , , (H)
 (H) , (H) , (H)
 (H) (3) , , RGB
 (A5)가
 (3) , (, ,)
 (3) ,
 (3) (18)
 (3) (A)
 (18) , (3) 4 , 4 , (3) , (A)
 (A) 27
 (3) , (A)
 (A) , () , (A)
 , , 가
 (3) RGB , ,
 RGB (H) , (A5)가
 (3) (A5) , RGB
 (3) , R()
 (H) , 6 (H) 39%, G() 27%
 (3) (8) RGB 39%, B() 15%

(6 CF).

[6]

실시예	투과구멍					CF개구율				
		투과구멍	Y	x	y		CF개구율	Y	x	y
	R	0.39	44.8	0.500	0.310	R	0.15	28.0	0.483	0.327
	G	0.39	100.2	0.333	0.459	G	0.15	53.9	0.325	0.469
	B	0.27	29.3	0.213	0.221	B	0.15	29.5	0.224	0.209
	W		58.1	0.350	0.352	W		37.1	0.323	0.326
	NTSCH		18.1			NTSCH		17.4		

() , (3) , (A5) (B)

5)

(B5)

30

(2) , 7 , RGB 30%
 (3) (A) , RGB 15
 % (7 CF).

[7]

종래예	투과모드					반사모드				
		투과구멍	Y	x	y		CF개구율	Y	x	y
	R	0.30	34.5	0.500	0.310	R	0.15	34.6	0.492	0.327
	G	0.30	77.1	0.333	0.459	G	0.15	68.8	0.325	0.475
	B	0.30	32.6	0.213	0.221	B	0.15	27.8	0.226	0.211
	W		48.0	0.335	0.338	W		43.7	0.337	0.343
	NTSCH		18.1			NTSCH		18.5		

(A5)

(B5)

31 32

31

32

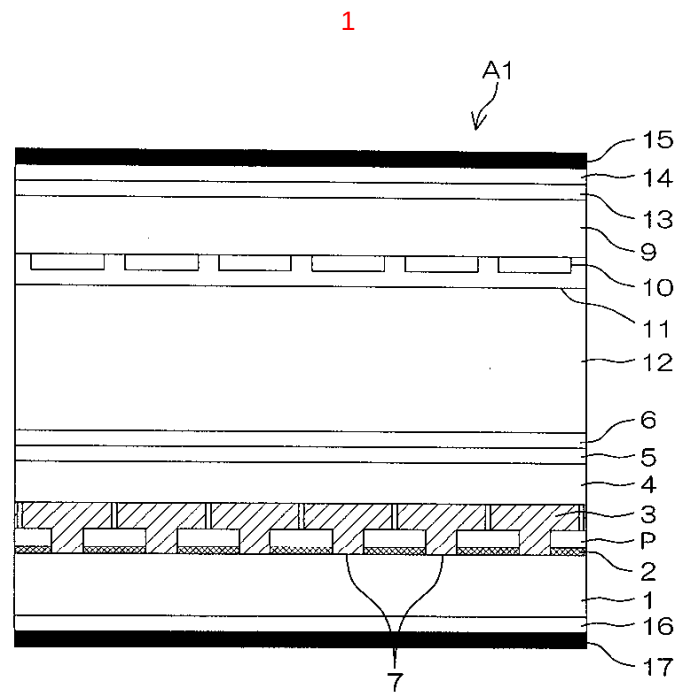
(x, y)=(0.015, 0.014) , () , R, G, B (W) 가
 (x, y)=(0.014, 0.017) 가

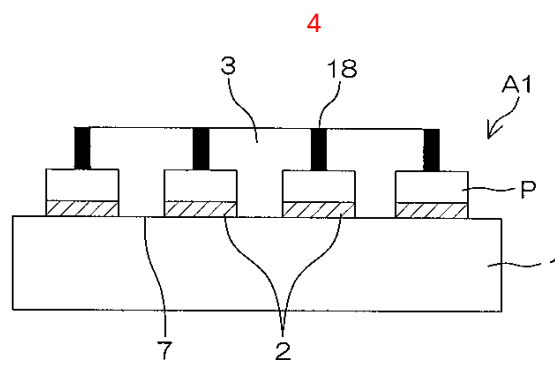
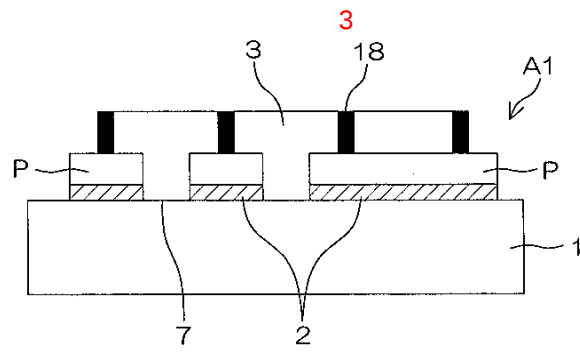
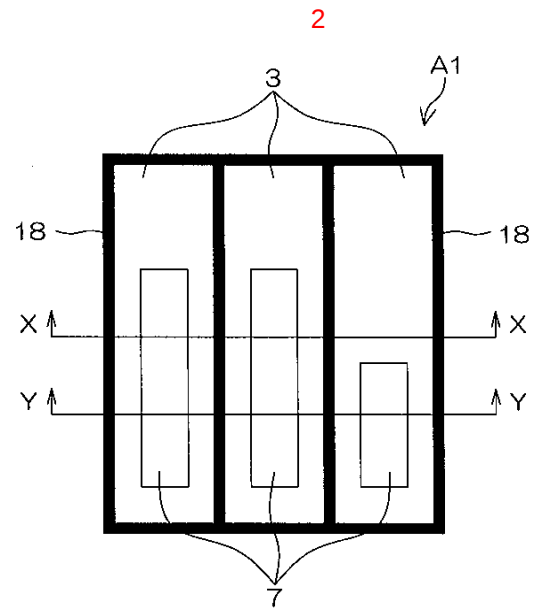
1 5
STNTFT TFD
가

가

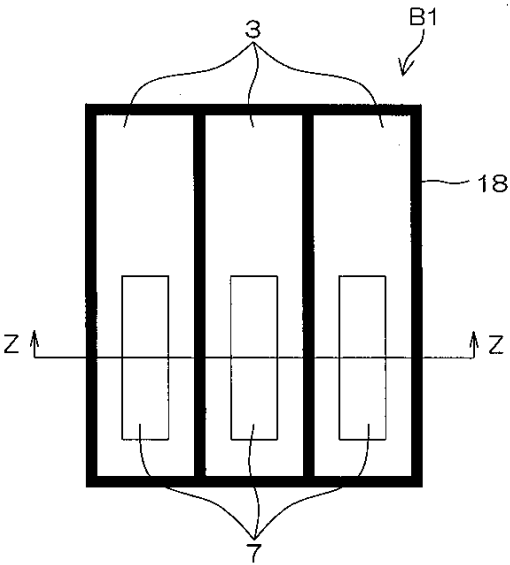
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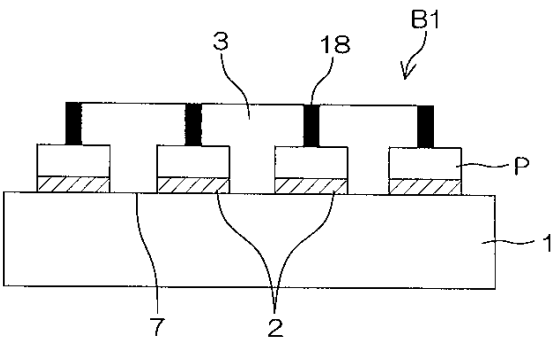




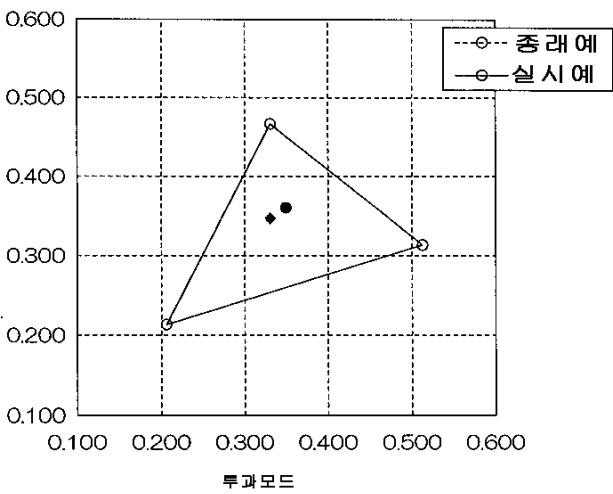
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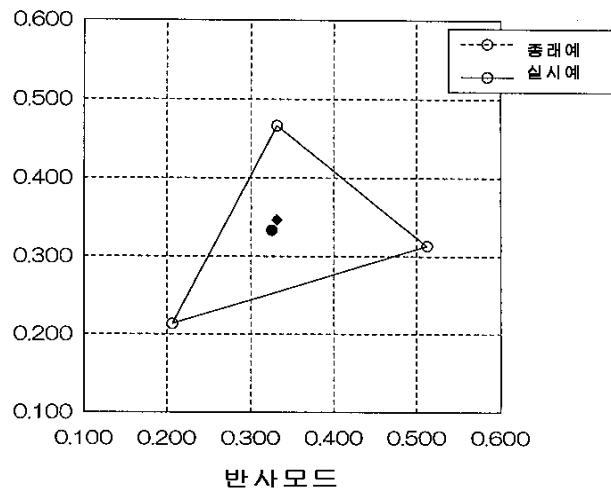
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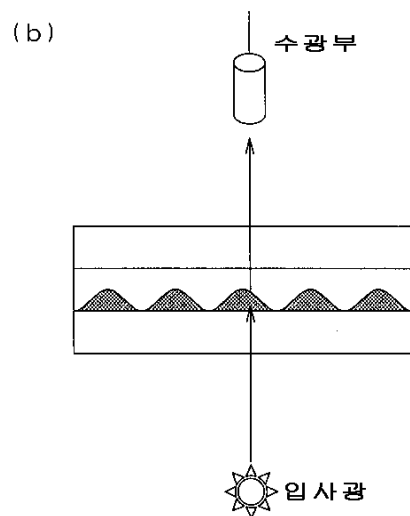
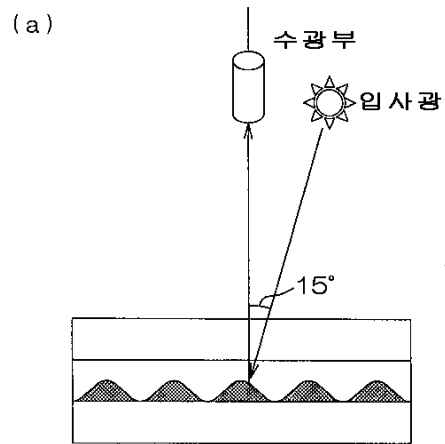
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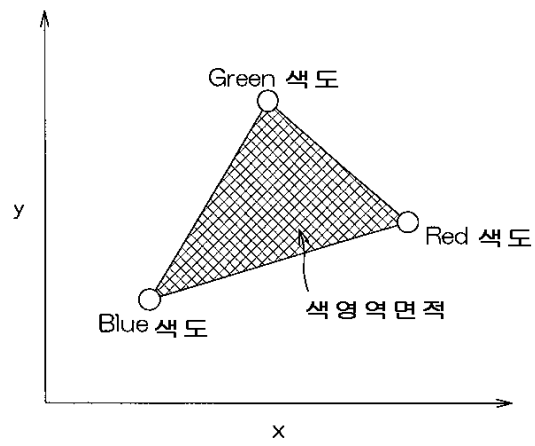
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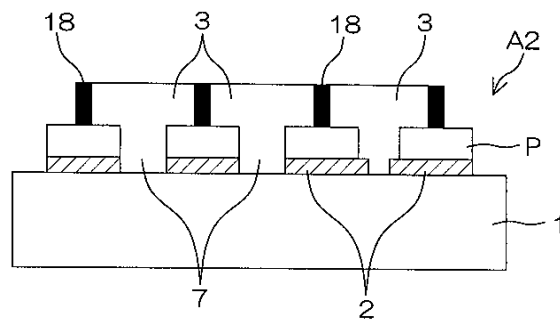
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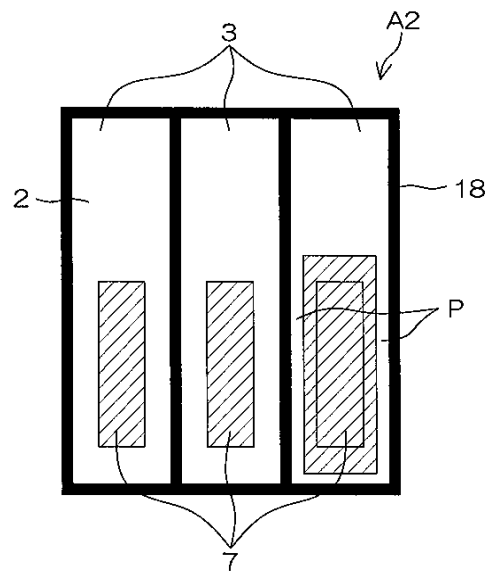
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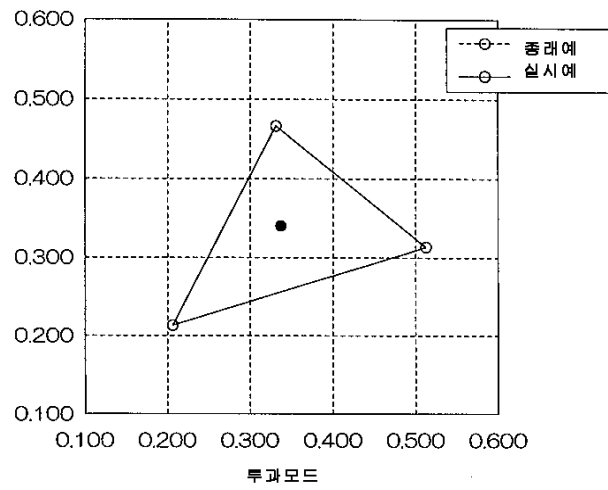
11



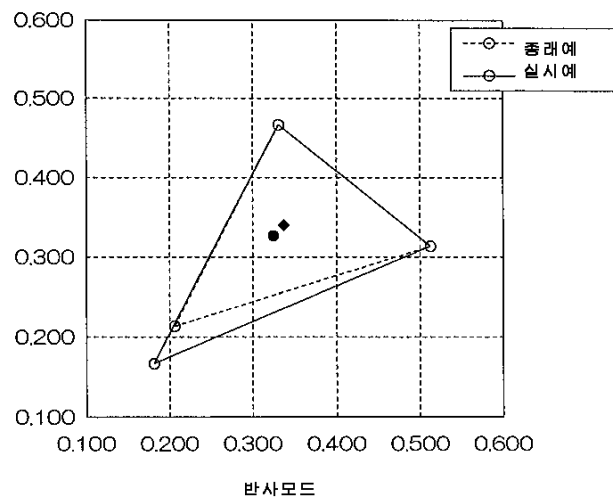
12



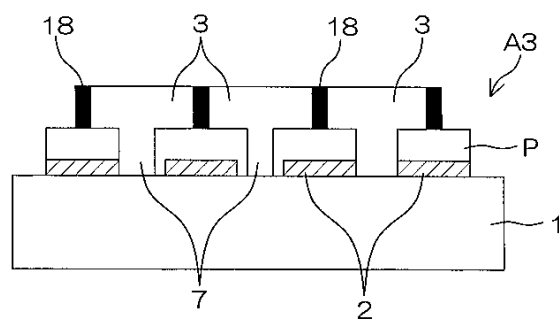
13

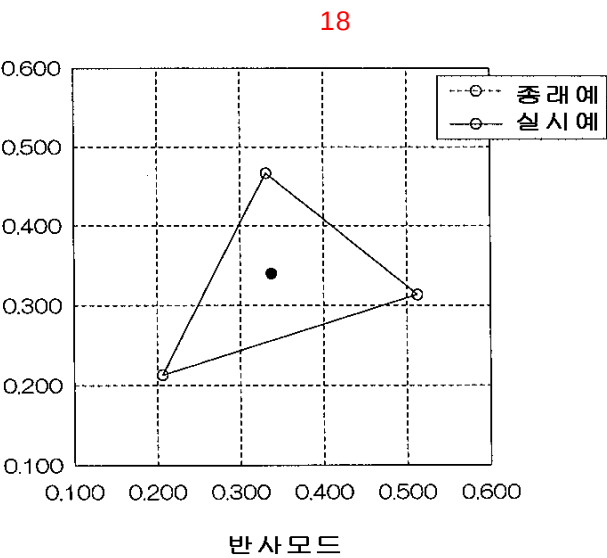
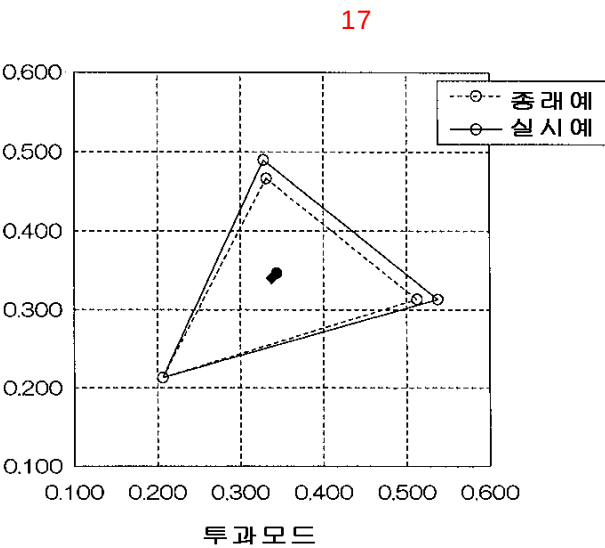
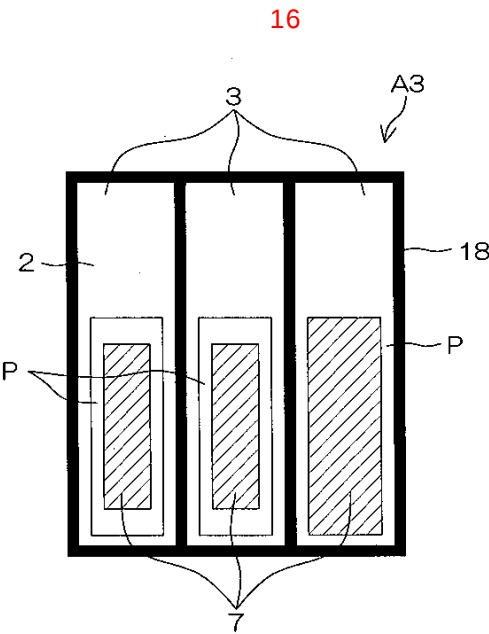


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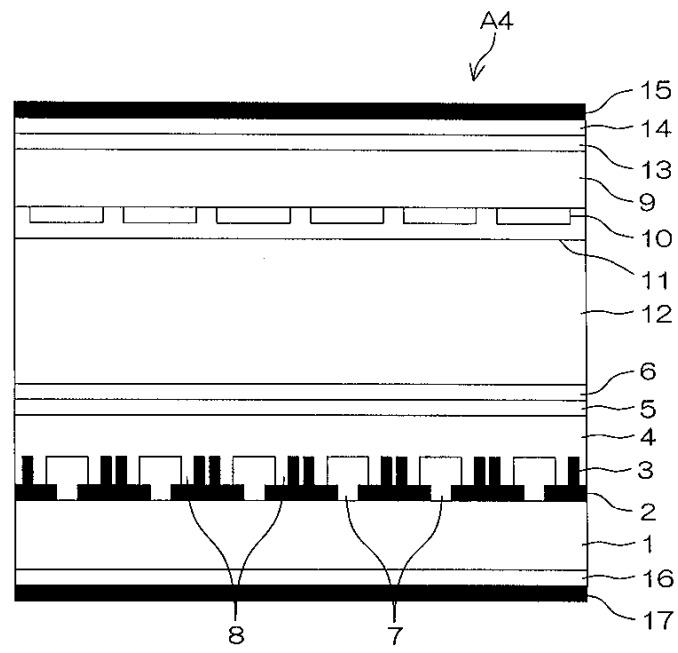


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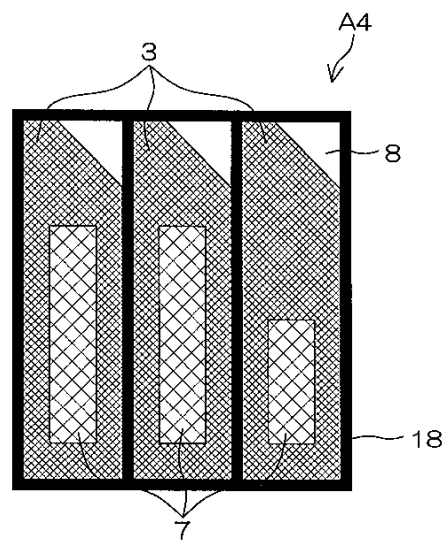




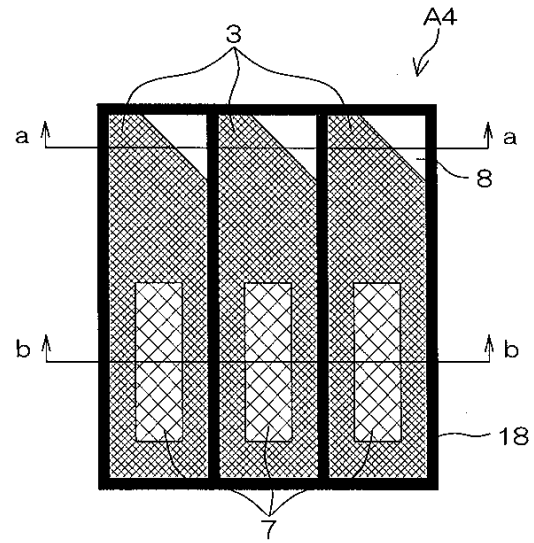
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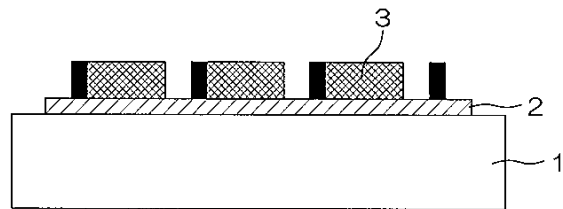
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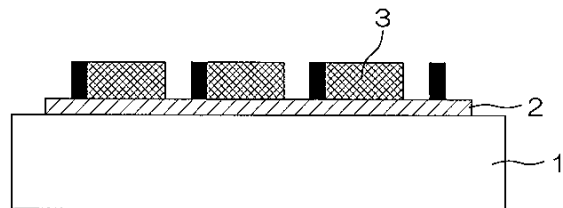
21



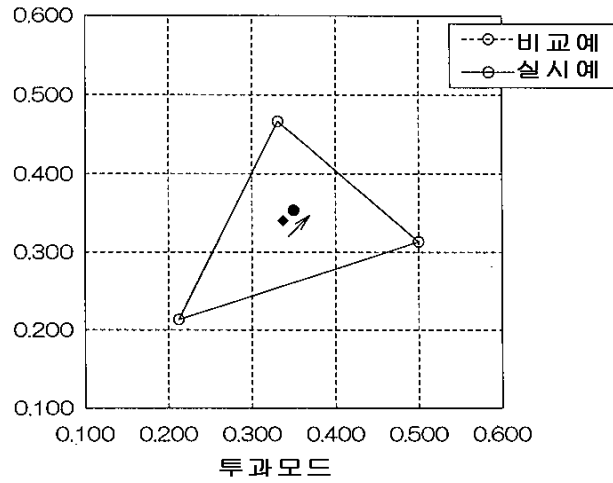
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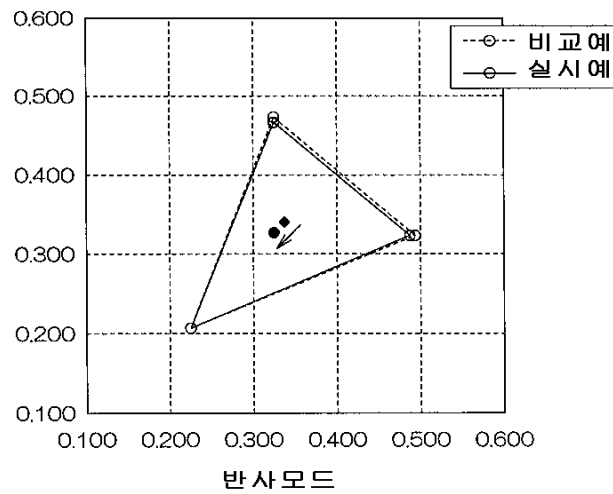
23



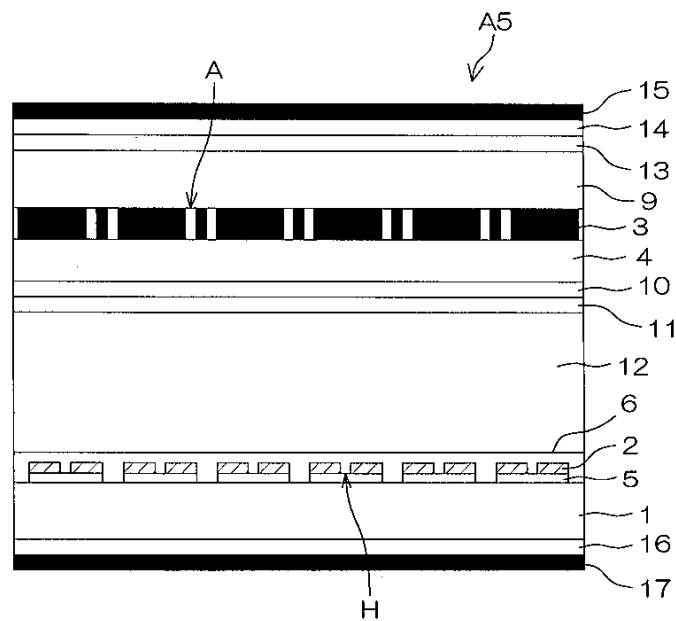
24



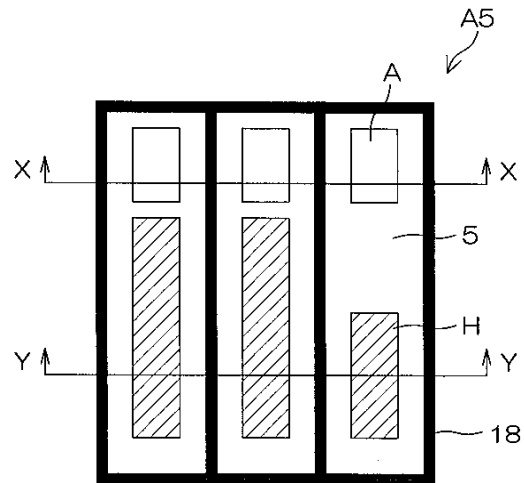
25



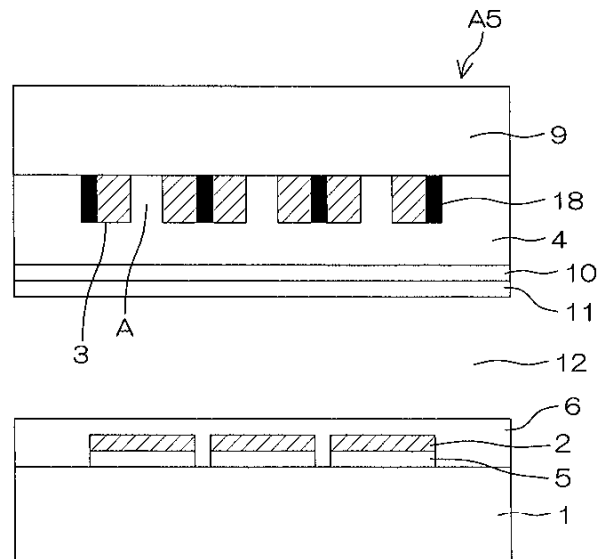
26



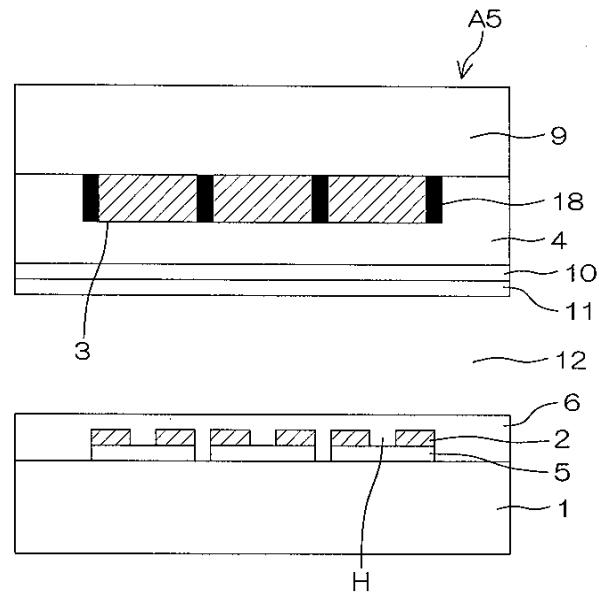
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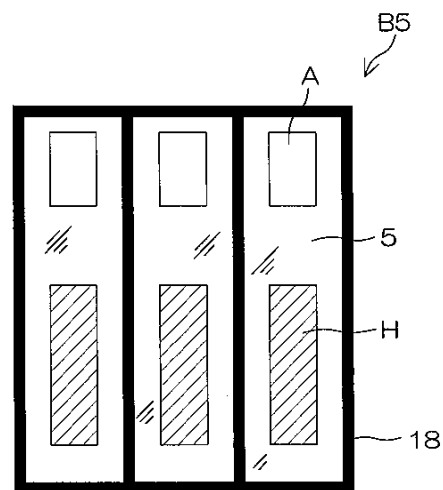
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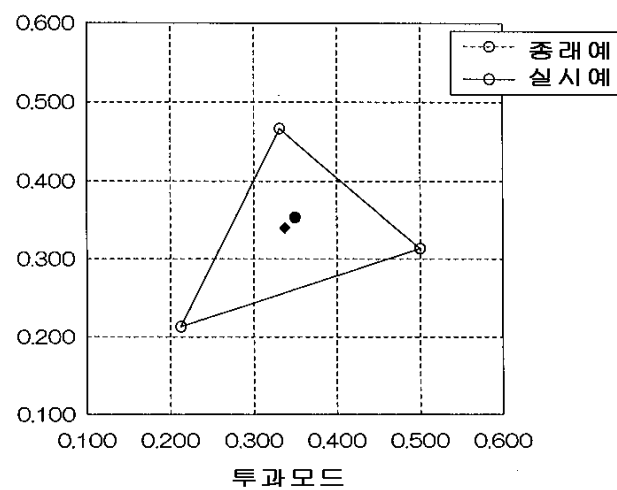
29



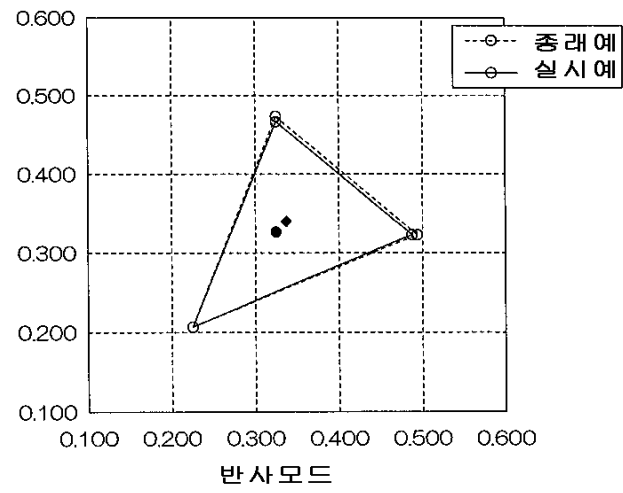
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专利名称(译)	透反式彩色液晶显示器		
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摘要(译)

本发明的半透射型彩色液晶装置形成光学传输部分(7)，每个彩色层(3)具有围绕光反射膜的不同光通过面积，关于序列堆叠层盒，光反射器薄膜在玻璃基板和彩色层(3)和外涂层以及透明电极和取向层上。此外，凹口位置(8)形成在每个彩色层(3)的反射区域上。使用此配置，独立设置由反射模式的RGB和透明模式组成的白平衡。执行该白平衡控制。这样就可以提供高质量和高效率的半透射型彩色液晶装置。

