

(19)
(12)

(KR)
(B1)

(51) 。 Int. Cl.7
G02F 1/1339

(45)
(11)
(24)

2004 08 04
10-0443236
2004 07 26

(21) 10-2001-0069566
(22) 2001 11 08

(65)
(43)

10-2002-0036737
2002 05 16

(30) JP-P-2000-00342163 2000 11 09 (JP)

(73) 가 가 가 , . 1753

(72) 5 7 1 가 가

5 7 1 가 가

(74)

:

(54) ,

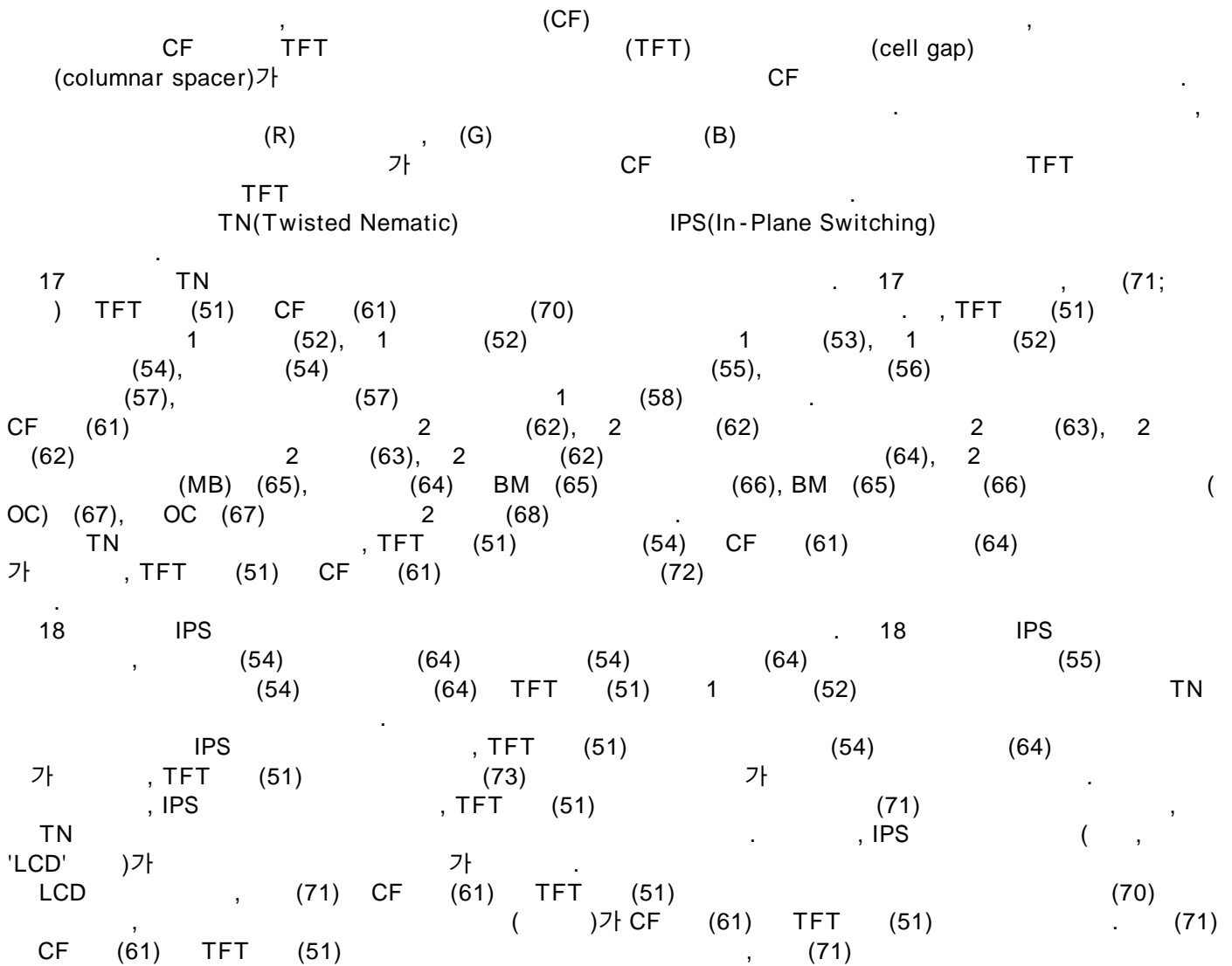
가
가 . , (R) , (G) (G)
가 0.05% 0.15%
가,

6

, (spacer), , ,

1 1 LCD
2 1 A-A LCD ,
3 1 B-B LCD ,

4a	4c	1	LCD	CF
5	1	LCD		
6	1	LCD		
7	2	LCD		
8	3	LCD		
9	4	LCD		
10	5	LCD		
11	LCD	가		
12	LCD	가		
13a	13c	LCD		
14a	14c	LCD		
15	LCD			
16	LCD			
17	TN			
18	IPS			



가, (70) CF (61) TFT (51) (trade-off)가
 (CA)
 (CA) = (Px) · (Py)/(Lx) · (Ly)
 Px 가 , Py 가 , Lx , Ly R, G B
 (CA)
 (CA)가 0.05% 0.15%
 63 2001 4 27 (2001-117103). 2000-3421
 (Px) (Py) 가 , 가 (Px) 가
 (Py) 8μm 가, TFT (51) (Px) (Py) 가
 () P(G)(13μm) 가
 (Px) (Py)가 , CF (61) TFT (51) (s
 hift) 'n'(3μm) 가 R, G B
 (13a 75) , 13a
 (76)가 (75) (76)가
 '1/1' , 13b ,
 (75) (75) , '1/2' , 13c , '1/1'
 가 (75) , '1/3' , 13b , '1/1'
 () , '1/2' (76) 13b (76) 13a
 (76) (76) '1/3' 13c (76) 13a
 R, G B 가 (Px) 가 (Ly) 13a 13c (CA)
 (76) 가 (Py)가 13a ,
 '1/1' , 0.19%
 '1/2' , 0.095%
 '1/3' , 0.063%
 (CA)
 (0.05% 0.15%) , 가 13
 b (77) '1/2' ()
 (76)가
 14a 14c (76) , 가 (L
 x) (Ly) 13a 13c (76) 가 (Px)
 (Py) 13a 13c
 (CA)
 '1/1' , 0.285%
 '1/2' , 0.142%
 '1/3' , 0.094%
 , , (CA)
 , 14c (77) '1/3'
 () (76)가 (Py)
 , 가 (76) 가 (Px) 가 (Lx) (Py)
 가 가 가 (76) 가 (Ly) (Px)
 (Py)가 ,
 15 LCD (CA)가
 '1/2' (76)가 15 LCD
 (76) (75)(
) (76)가 (75) ()
 76) (CA)가 (stagger) 가 '1/2' (75) (76)

0.05% 0.15%

가

4 , , , , , 가 TFT TFT TFT 가 . 1/1

가 1/2

5 TFT TFT , CF CF TFT TFT 1 TFT 2 TFT ; TFT CF CF TFT

TFT CF CF

6 TFT CF , TFT TFT CF , CF 가

, CF 가 TFT , 1()

가

1 1 1 1 LCD 2 1 A-A LCD LCD 3 1 B-B LCD 4a 4c 1 LCD LCD (20) LCD (21;) TFT (1) CF (11) (2) TFT (1) 1 (2), 1 (; 10), (2) (14) (10) (14) (5), (5) (4), (5) (6), (5) (22), (6) (7), (7) (8) (4) (14) (4) (14) (14) (2) TFT(30) (6), (5) (9), (10) TFT (24) (21) (rubbing) 29 CF (11) 2 (12), 2 (12) 2 (13) (23) 2 (12)) (16) 2 (13), 2 (12) BM (15), BM (15) (16), BM ((17) OC (17), OC (17) (26) TFT(30) (; 10) (26) (20) (20) , CF (11) TFT (1) (20) (26) (20) (1) 1 (8) 가 CF (11) 2 (18) 4a 4c , LCD

4a OC (17) (17) , , , 2 (12) (28) , , BM (15), (16) 가 OC
 (, 4b (UV))가 (31A) (31B) (31) (28) (28) ,
 V) TFT (1) (; 10) (26) CF (11) (31) (31B) 가 (28) (U
 FT (1) (21) (20) (26) CF (11) T (26) 4
 μm 7 μm 가 (13) 2 (13) CF (11) (20) (21) CF (11)
 , 1 3 TFT(30)가 TFT (1) , (21)
 CF (11) TFT (1) (26) (20)
 LCD가 (26)가 CF (11) ,
 (26) LCD CF (11) TFT (1) (26) 가 CF (11)
 LCD 5 가 '1/2' (26) (CA)가 ,
 (26) (Y) 가 , (G)
 (G) (26) (X) (25)
 LCD 가 6 가 가 , 6 가 (X)
 가 (Y)
 (26)가 (26) 가 (26) (Y) (26)
 (26) (26) (26)가 (26)
 , 1 LCD (CA)가 (26)가 (Y)
 (X) (G) (G) (G) (26)
 (26) (26) (26) (26)
 가, LCD (26) CF (11)
 (26)가 (26)가 , ,
 $\frac{2}{7}$ 2 LCD . 2
 (26) (26)가 (X) ,
 , 2 LCD , 7 (CA)가 가, (26) (26) (G) (26) (B)
 가 '1/2' (26) (X) (26) , (G) (26) (B)
 (X) , (G B)
 2 LCD 1 , 1 ,
 (26) 가 (26)가 (X) , 2 LCD ,
 , (26)가 (16) 가 (26)
 (26) ,

3, 2, 1 가 .

$\frac{3}{8}$ LCD (gate line) LCD (26) 3 3
 (2 21) LCD (21) (26) 가 가 (Y) 1

4, 3, 1 가 .

$\frac{4}{9}$ LCD (26) LCD (26)가 LCD 9
 가 '1/3' (26) (CA)가 (26) G G (26)
 가 '1/3' (Y) (26) (X) (CA)가 G G

5, 4, 1 가 .

$\frac{5}{10}$ LCD (26) LCD (26) LCD 10
 가 '1/4' (26) (CA)가 (26) G G (26)
 가 '1/4' (Y) (26) (X) (CA)가 G G

11, 5, 1 가 .

11 LCD 가 11 가 R, G B (33)가 TFT(30) (14) (35)가 TFT(30) (1)
 TFT(30) (10) (21) (C1), LCD TFT (1)
 (9) (34)가 가, (14) (35)가 TFT(30)
 (C2) (16) (C3)가 12 (CA)가 TFT(30) (1)

가, R B (26) (CA)가 (26) (CA) (26) 'G' 가
 (26) (26) (X) (Y)

가, 가 CF 가 CF 가

(57)

1.

1

2.

1

3.

1

4.

1

5.

0.05%

0.15%

6.

5

7.

5

8.

5

9.

가

0.05%

0.15%

10.

9

11.

9

12.

9

13.

9

가

1

/1

14.

13 , 가 1/2

15.
가

0.05% 0.15%

16.

15 ,

17.

15 ,

18.

15 ,

19.

15 , 가 ,

1/1 , ,

20.

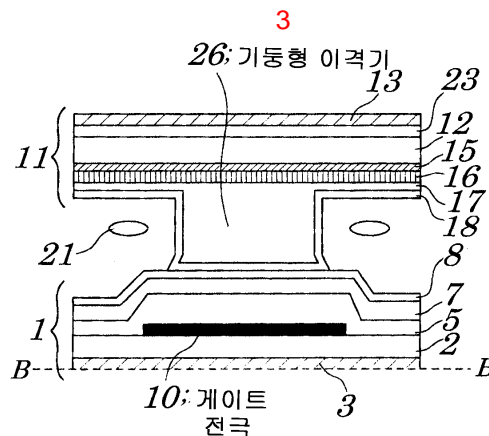
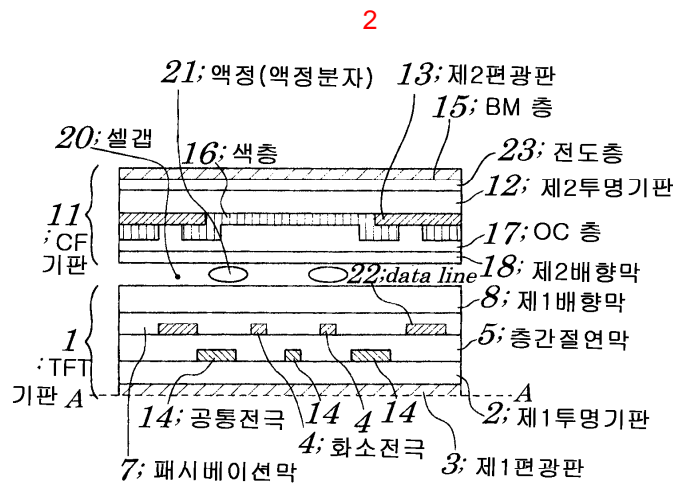
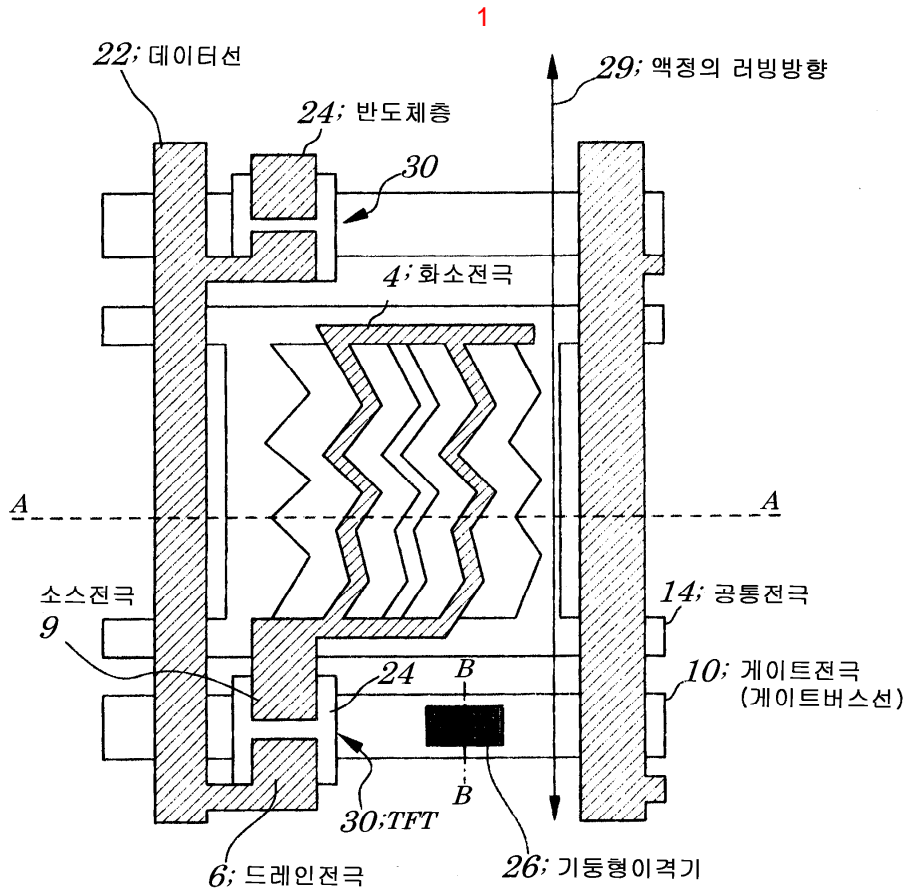
19 , 가 1/2

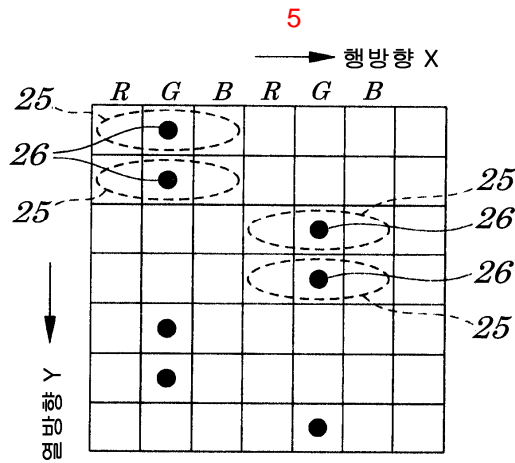
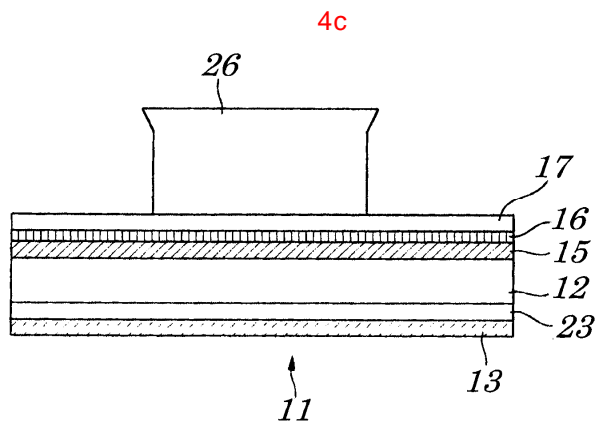
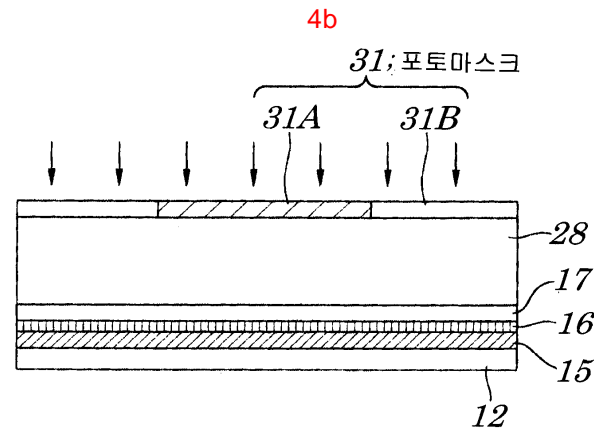
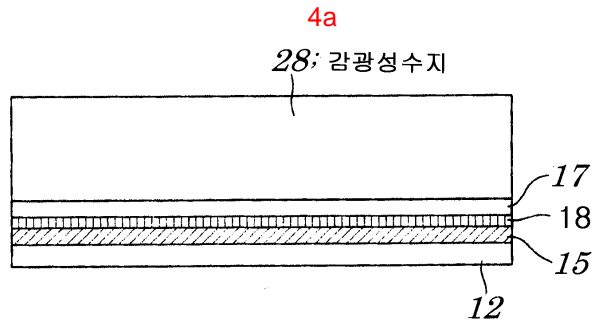
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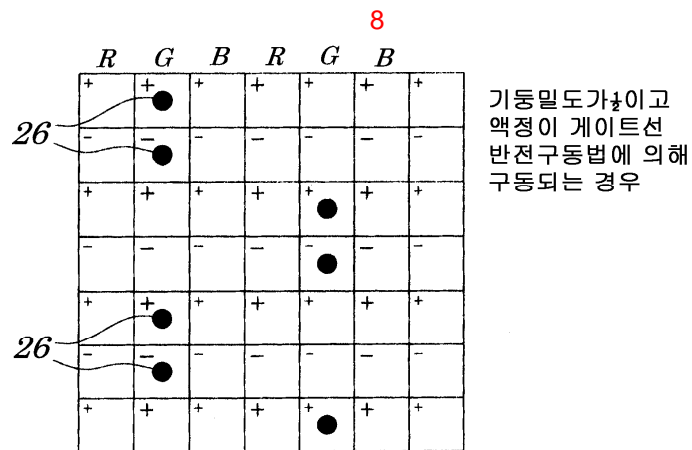
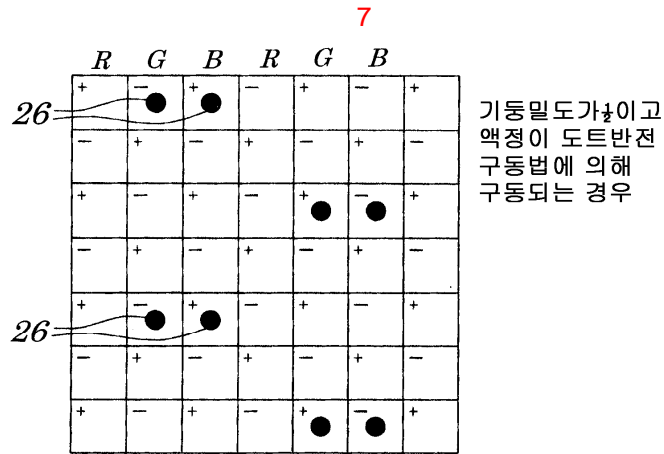
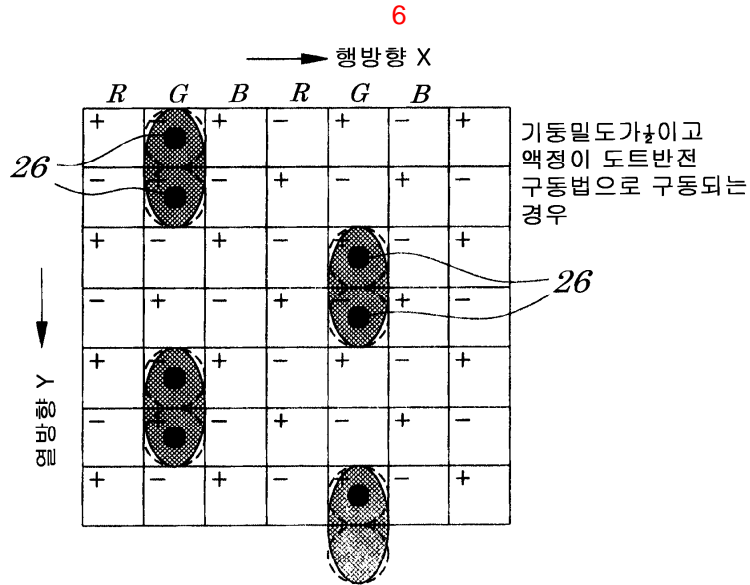
22.

23.

24.







9

	R	G	B	R	G	B	R	G	B	R	G	B
	+	-	+	-	+	-	+	-	+	-	+	-
26		□						□				
26	-	+	-	+	-	+	-	+	-	+	-	+
	+	-	+	-	+	-	+	-	+	-	+	-
	-	+	-	+	-	+	-	+	-	+	-	+
				□						□		
	+	-	+	-	+	-	+	-	+	-	+	-
	-	+	-	+	-	+	-	+	-	+	-	+
	+	-	+	-	+	-	+	-	+	-	+	-
		□						□				

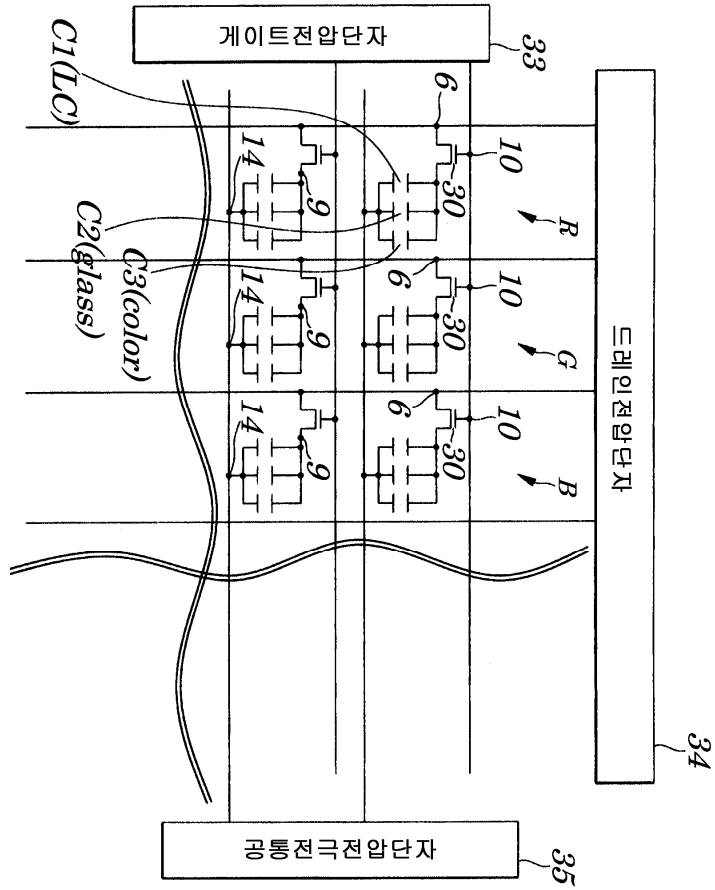
기동밀도가 1/3이고 액정이
도트반전구동법에 의해 구동되는 경우

10

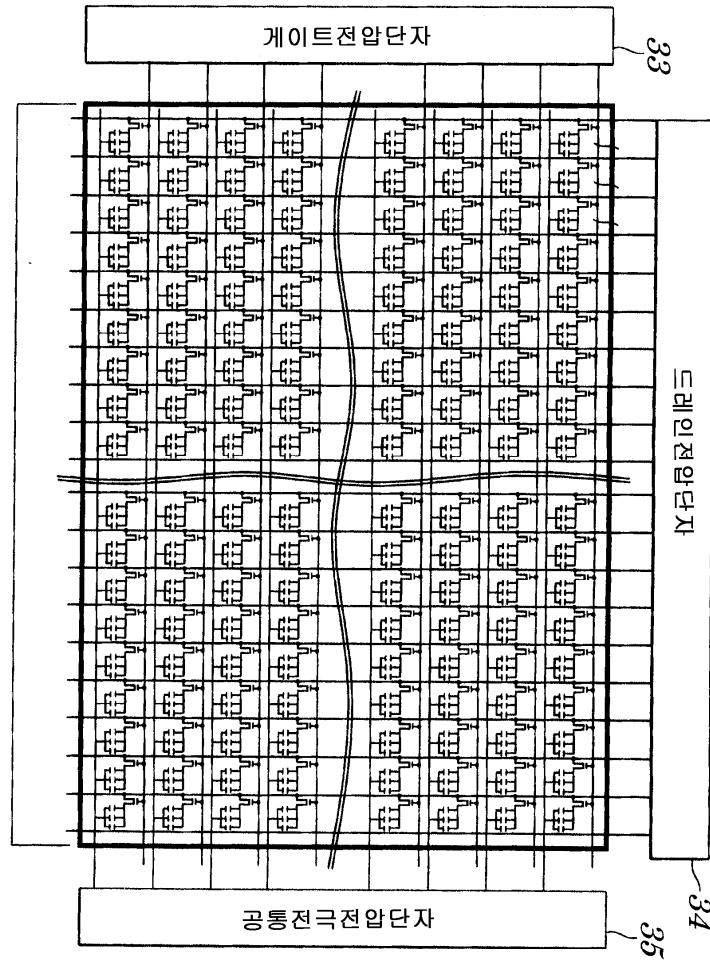
	R	G	B	R	G	B	G	G	G	G	G	
	+	-	+	-	+	-	+	-	+	-	+	-
26		□				□			□			□
26	-	+	-	+	-	+	-	+	-	+	-	+
	+	-	+	-	+	-	+	-	+	-	+	-
	-	+	-	+	-	+	-	+	-	+	-	+
	+	-	+	-	+	-	+	-	+	-	+	-
	-	+	-	+	-	+	-	+	-	+	-	+
	+	-	+	-	+	-	+	-	+	-	+	-
	-	+	-	+	-	+	-	+	-	+	-	+
	+	-	+	-	+	-	+	-	+	-	+	-
			□			□			□			□
	-	+	-	+	-	+	-	+	-	+	-	+
	+	-	+	-	+	-	+	-	+	-	+	-
			□			□			□			□
	-	+	-	+	-	+	-	+	-	+	-	+
	+	-	+	-	+	-	+	-	+	-	+	-

기동밀도가 1/4이고 액정이
도트반전구동법에 의해 구동되는 경우

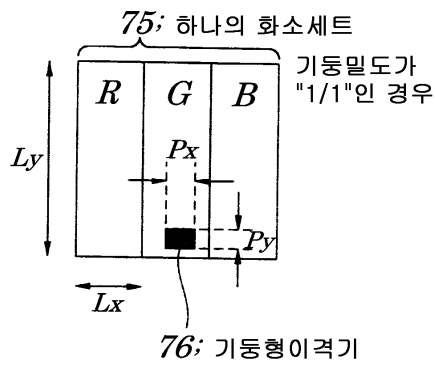
11



12

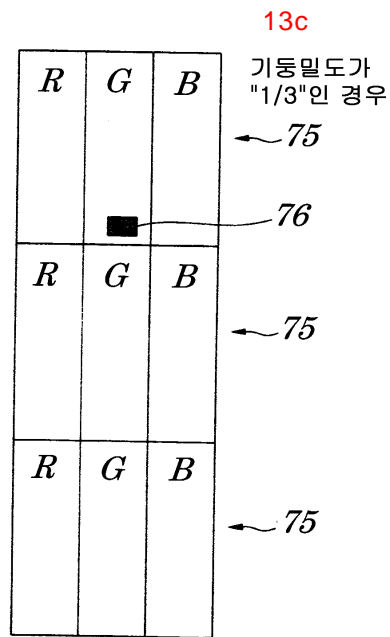
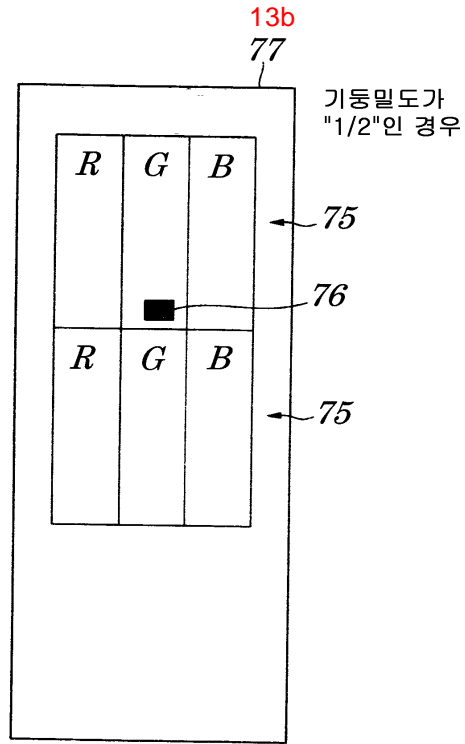


13a

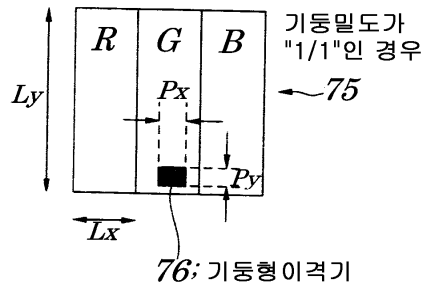


$Lx: 93.5\mu$ $Ly: 280.5\mu$

$Px: 10\mu$ $Py: 15\mu$

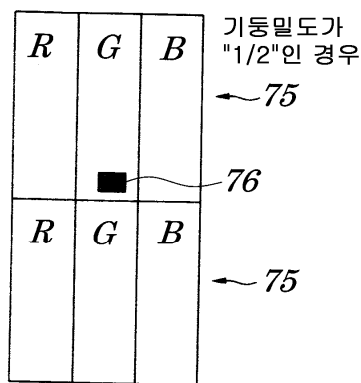


14a

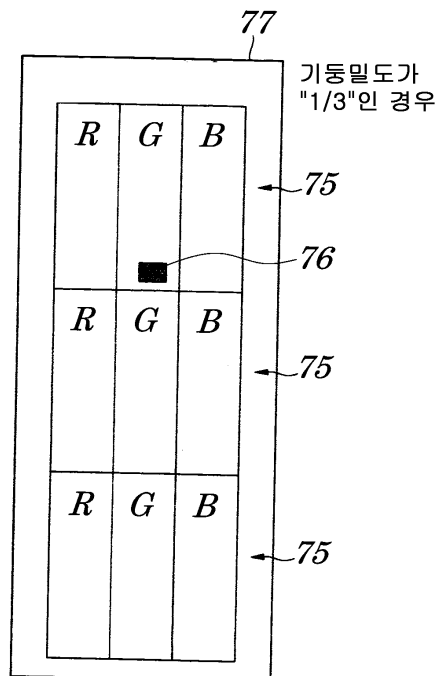


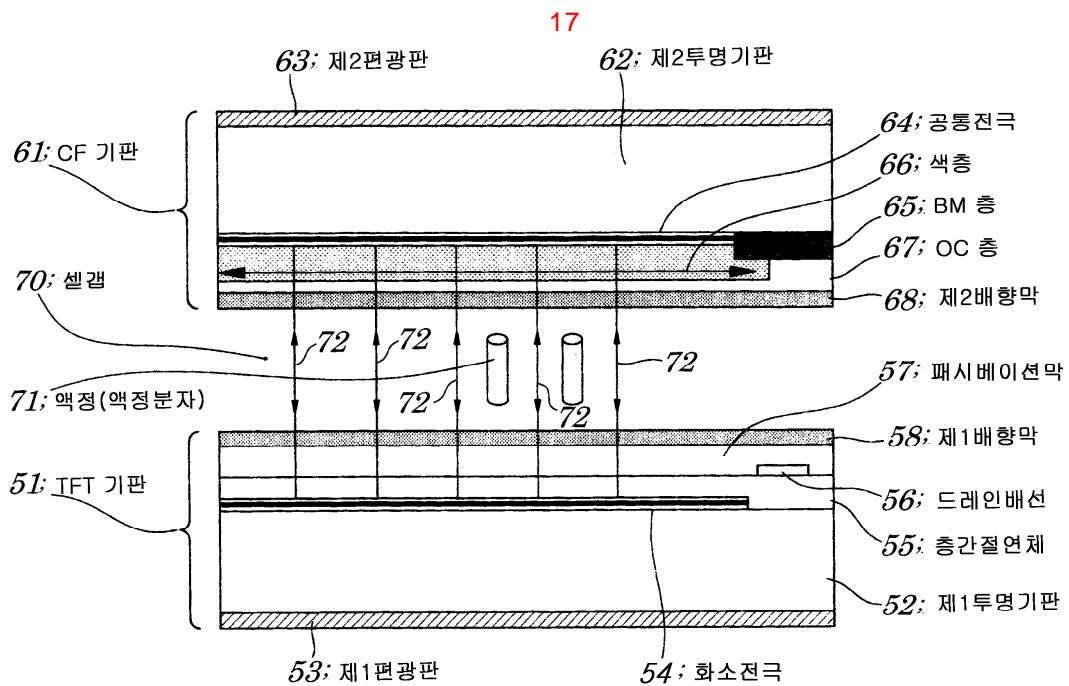
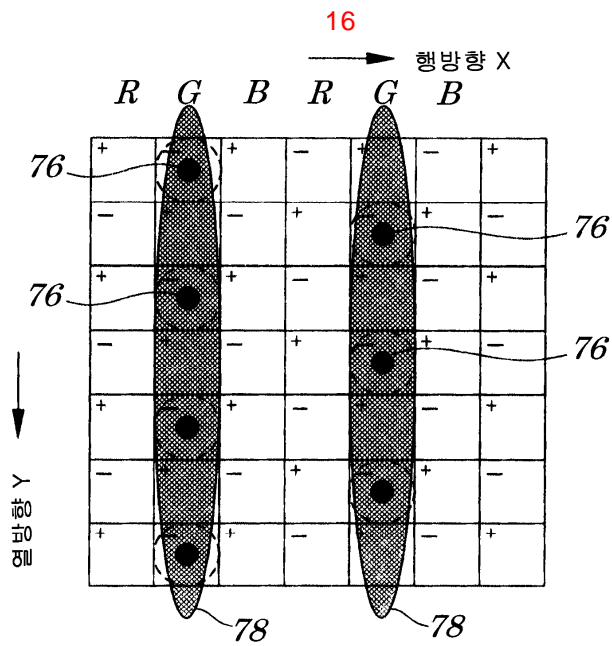
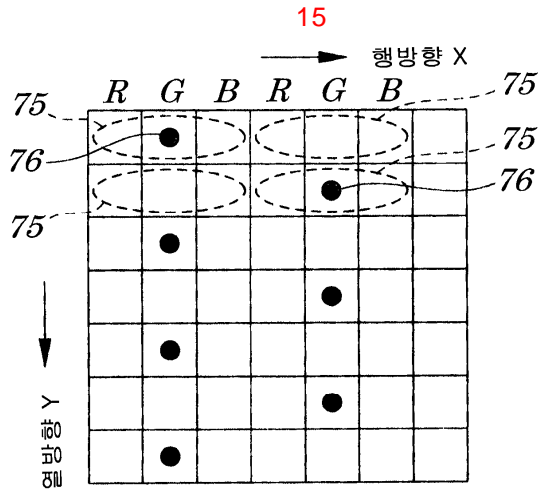
$L_x:93.5\mu$ $L_y:280.5\mu$
 $P_x:10\mu$ $P_y:15\mu$

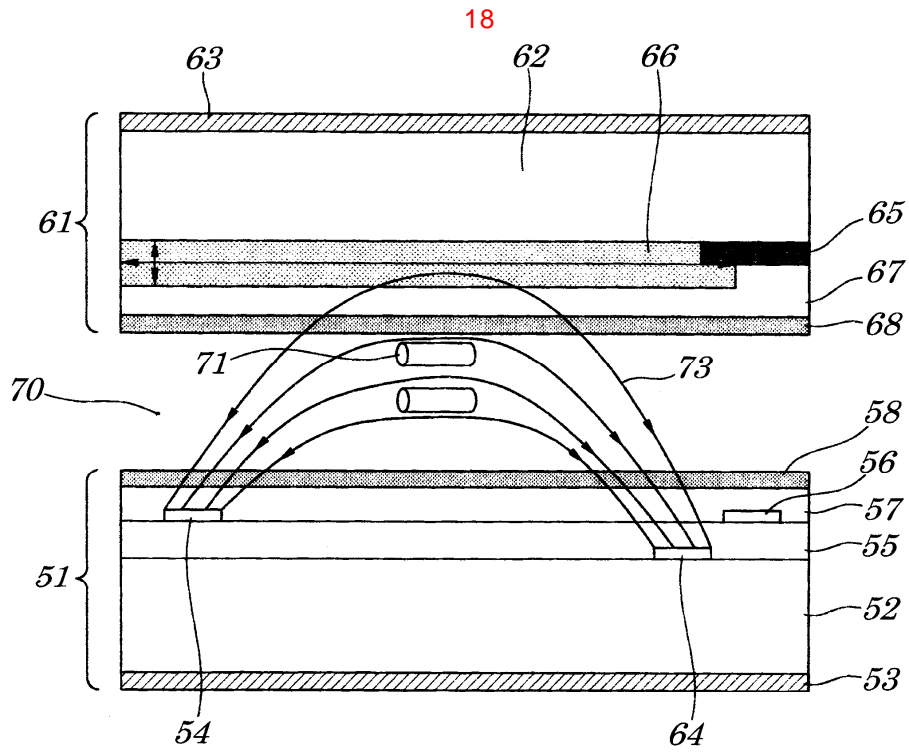
14b



14c







专利名称(译)	液晶显示装置及其制造方法和滤色器基板		
公开(公告)号	KR100443236B1	公开(公告)日	2004-08-04
申请号	KR1020010069566	申请日	2001-11-08
[标]申请(专利权)人(译)	NEC液晶技术株式会社		
申请(专利权)人(译)	日元号技术可否让这个夏		
当前申请(专利权)人(译)	日元号技术可否让这个夏		
[标]发明人	MATSUMOTO KIMIKAZU 마쓰모토기미카즈 WATANABE MAKOTO 와타나베마코토		
发明人	마쓰모토기미카즈 와타나베마코토		
IPC分类号	G02F1/1335 G02F1/133 G02F1/1339 G02F1/1343		
CPC分类号	G02F1/134363 G02F1/13394		
代理人(译)	JO, EUI JE		
优先权	2000342163 2000-11-09 JP		
其他公开文献	KR1020020036737A		
外部链接	Espacenet		

摘要(译)

即使当柱状间隔物承载信号电荷并且防止横向电场中的干扰时，能够抵消信号电荷效应的液晶显示装置包括成对的柱状间隔物，所述柱状间隔物设置在彼此相邻的两个单位像素中。行方向或列方向。每对柱状间隔物与所有其他柱状间隔物对隔开一行或一列的至少两个像素。

