

(19)
(12)

(KR)
(B1)

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(45)
(11)
(24)

2002 11 23
10 - 0362016
2002 11 11

(21) 10 - 2000 - 0020868
(22) 2000 04 20

(65) 2000 - 0077052
(43) 2000 12 26

(30) 99 - 112588 1999 04 20 (JP)

(73) 가 가 5 7 1

(72) 5 7 1 가 가

(74)

:

(54)

, 5 , 2 ,

1

, ,

1

1

CF

2	1	CF	TFT
3	2	A - A'	.
4	2	B - B'	.
5			.
6			.
7		()	.
8		2	.
9		2	.
10			.
11			.
12		3	.
13		4	.
14		5	.

6, 13 :

21, 21a, 28 :

2 , , ,
 , LCD , LCD
 atic) LCD LCD
 LCD TN(twisted nematic) STN(super twisted nem
 LCD 가
 (IPS) LCD 가
 IPS LCD (comb - shaped) 2

(13) (d) 3 (10) TFT (6) (CF) (6) CF (13)

(13) (2) (3) TFT (6) (CF)

(9) TFT (6) CF (13) 5 ()
 (2) (3) 3 1, 2

(19) TFT (6) CF (13) 1 2 1

6(a) (19) (2) (3) 가 (22) (19)

6(b) (3) (2) (3) 가 (2)

(19) (10) (th
 e effect of refractive index) (19)

LCD (2) (3)
 (XY) LCD

TFT (thin - film transistor;) LCD(, AM - LCD)
 (2) (3) TFT TFT (6)

AM - LCD , TFT 3 2 가

IPS LCD 가 가 CRT

TN - IPS - ()
 (13) (23) TFT (6) (13) (10) (6)

(6) (13) (23) (23)

(spherical) (bar - shaped)

2751392

(KOKAI) 10 - 104606

8 - 262484

가

(KOKAI) 10 - 82909

가 가 , TN -

가 가

IPS -

가 , TN -

가

11 IPS -

11 , 24

, 25, 26 27

11 , IPS - LCD , (25, 26 27)
(26) , (25, 26 27) (24)

1 IPS - LCD , (24) 2
(24)

TFT CF (13) (10)

(columnar - shaped)

(24) 가

, TFT (6) CF (13)

, (6, 13) (10)

(normaly closed)

1

가 2, 3

3, 1 2 1 2

1 2 1 CF TFT 4 2 B-B'

2, 4 (columnar - shaped) 5, 2 (3) TFT(

2 (2), (1), (5) (3)

(7) (3) (2)

2 (3) 2 (3) 2

1, 3 4, 3 (2) (5)) 30

0 μm 100 μm (2)

2 (1), (5) 2 (2)

(line defects) (1) (1) (1), (5) (2)

10 μm, 7 μm, 7 μm

2 가 (2) (3)

가 (3) (2) 가

(7) 10 μm (3) (2) (3) (2)

1024 × 3 (R, G B) 768 1024 × 3 × 768 .

4 2 , 1 , 1.1 mm
 0) TFT (6) CF (13) (1)

2 , TFT (6) (18) ,
 () , (9) .

(9) , , .

CF (13) (17) (,
 (14, 16 15); (16) 3) (14, 15 16) (1
 4, 15 16) (11) , 가

(9) , .

가 TFT (6) (10) ,
 CF (13) (10) (9) , 5
 , 가 3 1 75 ° .

7.3 0.74(589 nm 20) n (nematic)
 , (6) (13) .

(6) (13) (d) , CF (13) (17) ,
 (16, 15 14) (21) ,
 4.0 μm .

TFT (6) (21) 가 , 2 (2)

3 4 (21) (14, 15 16)
 , (11) , ,

2 (19) .

(19) 1 75 ° , (19) 2 - 15 ° ,

1 CF (13) .

1 , 21 , 25, 26 27 (R), (G) (B)
 (striped pattern) .

(6 13) , (10)
 (d) (6 13) .

, 1 , 가 .

1 , (21) (G) , .
 , (VOFF) (VON)
 , 6 , (22)
 .
 , 6 (a) , (22) . (22)
 2 (19)
 , 6 (b) , 가
 , TFT (6) CF 가 (13) , 3 4 (10)
 (d) 가 .
 4.0 μm (d) , (d) - 20 3.9 μm , 60 4.1 μm
 .
 - 20 60 (d) 가 0.2 μm , TFT (6) CF (13)
 가 (d) , (10) TFT (6), CF
 (13)
 , ,
 - 20 60 .
 1 , 1 , (21) 3 (RGB) (26)
 , (21) 5
 2 .
 , (21)
 , (6 13) 가 가 , TFT (6) CF (13) (100)
 (d)
 7 (6 13) . (6 13)
 가 (105 N/m²) .
 (21) 가 , (6 13) 가 .
 - 20 60 , 0.2 μm
 .
 , 7 , (21) 400 μm .
 , 300 μm (21) 가 ,
 , 3 (21)
 600 μm , (6 13) 0.55 μm ,

7 , 300 μm (21)

-20 60 (21)

8 2

2 , 1 2 (21a) 1 (6 13)

1 (21) (10) (d) (21a) (6 13)

(d)

9 (21 21a) 9 (17) (1)

1) (21) 1 , RGB

2 (21a) RG , 2 (21a) 1

(21)

2 2 , 1 , 2 , 가

(21a) 가 (d) (6 13) 1 (21) 2 (21a) (6)

(13) (d)

(d) , 2 (21a) 2 (21a) 가 ,

12 3

3 , (17) , ((16) 12)

가 , (28) , 가 (11) 가 (9)

(28) (14, 15 16) (11)

3 (28) , (28) 가 가

1 , 2 (28) (28)

13 4

4 , , ((16) 13)

(17) (9) , (11) 가 (28) 가 , 가

(28) (14, 15 16) (11)

4 (28) , (28) 가 가 ,
(28) (28) , 1
2 .

14 5 .
5 , , ((16) 14)
(17) , (28) (11) .

, (11) (28)
, 가 (9) 가 .

5 (28) , (28) 가 가 ,
(28) (28) , 1
2 .

, , 가 , 가

(57)

1.

1 ,

1

5 ,

2

2.

1 ,

3 ,

1 .

3.

1 ,

1

1

2 가 ,

1

2 ,

4.

1 , 1 1 2

1 2 1

5.

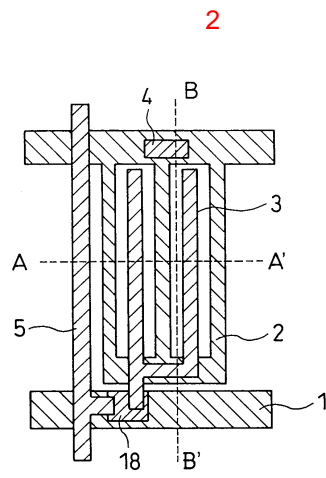
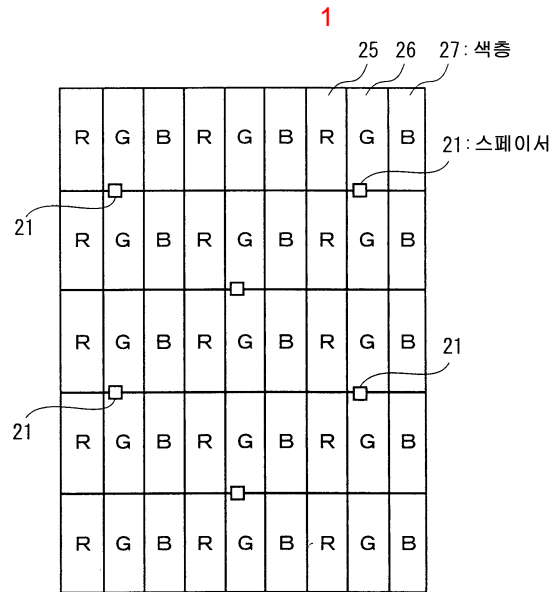
4 ,

3 , , , , , .

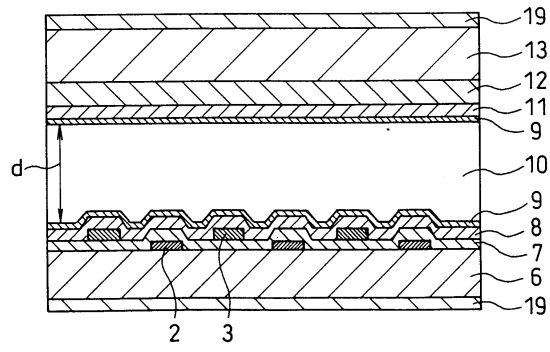
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5 ,

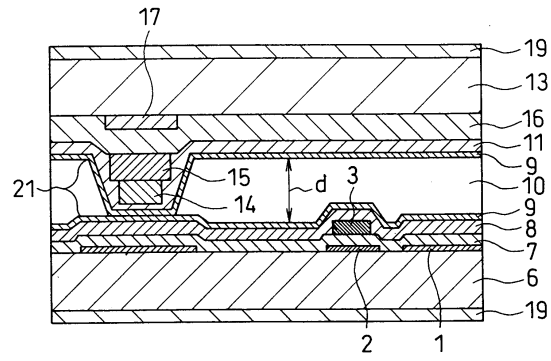
1 2 가 가



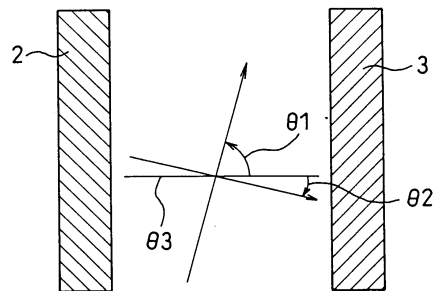
3



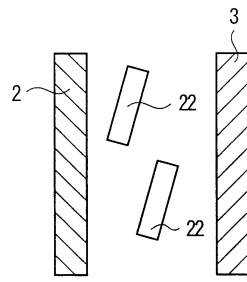
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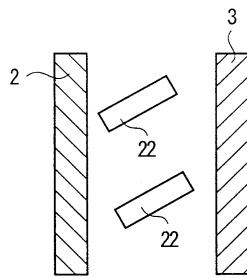
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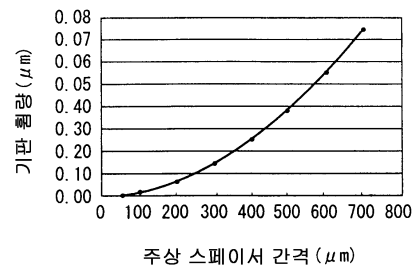
6a



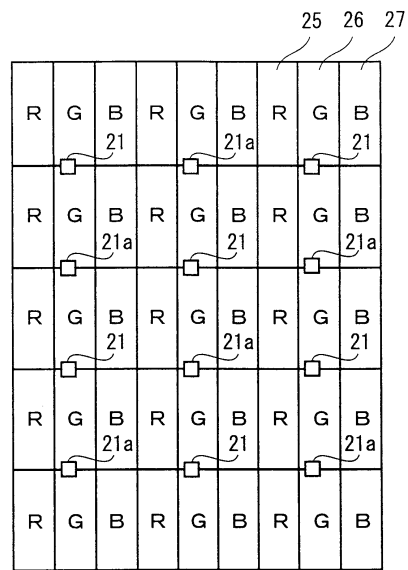
6b



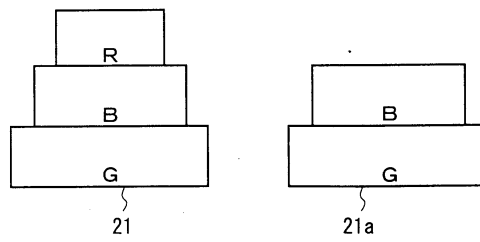
7



8

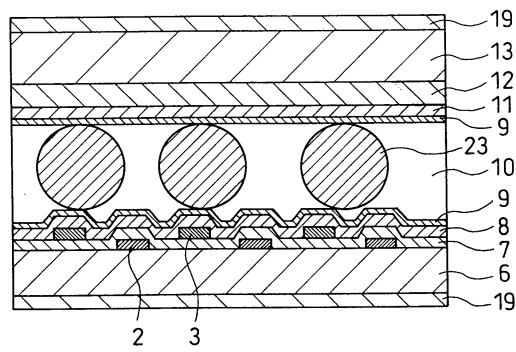


9



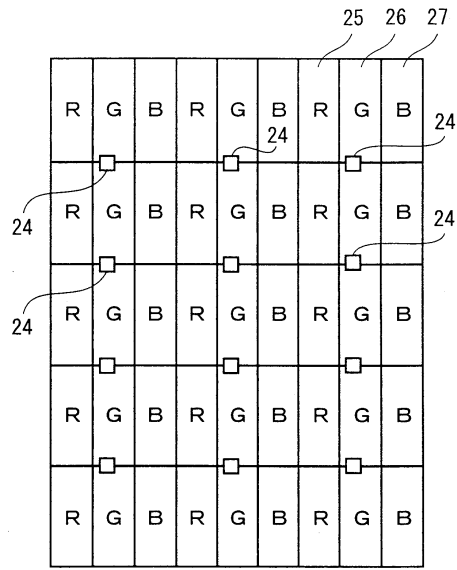
10

종래기술

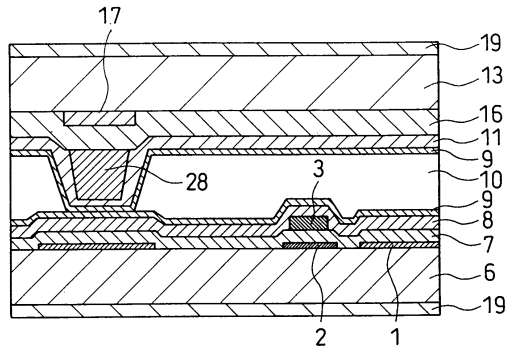


11

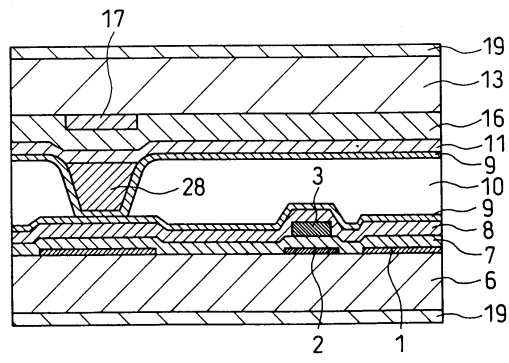
종래 기술



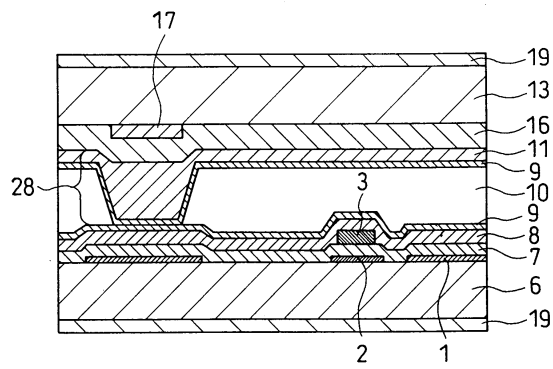
12



13



14



专利名称(译)	液晶显示器		
公开(公告)号	KR100362016B1	公开(公告)日	2002-11-23
申请号	KR1020000020868	申请日	2000-04-20
申请(专利权)人(译)	日本电气有限公司sikki		
当前申请(专利权)人(译)	日本电气有限公司sikki		
[标]发明人	SHIBAHARA HIDEO		
发明人	SHIBAHARA,HIDEO		
IPC分类号	G02F1/133		
代理人(译)	韩国专利公司 CHO, YOUNG WON		
优先权	1999112588 1999-04-20 JP		
其他公开文献	KR1020000077052A		

摘要(译)

通过将间隔物布置在与颜色层中的一个颜色层的像素的位置相对应的位置处，支撑基板的间隔被扩大，并且平面之间的间隔在横向方向上是5个像素并且在纵向方向上是2个像素。随着伴随基板之间的液晶的温度变化的间隙尺寸的变化，基板翘曲。 1 指数方面 垫片，液晶显示器件，像素

