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(12)(KR)
(B1)(51) 。 Int. Cl. ⁷
G02F 1/136(45)
(11)
(24)2003 03 08
10 - 0375239
2003 02 25(21) 10 - 2000 - 0018592
(22) 2000 04 10(65) 2000 - 0071622
(43) 2000 11 25(30) 99 - 106382 1999 04 14 (JP)
99 - 106383 1999 04 14 (JP)(73) 가 가
가 4 6(72) 가
1 5 1 가 가

1 5 1 가 가

1 5 1 가 가

1 5 1 가 가

(74)

:

(54)

, , (1) 1

, (2) 1

2

, (1) 1

, (2) 2

1

1(A) , 1(B) 1(A) b - b

2 가 (main chain)

3 가 2

4(A) , 4(B) 4(A) b - b

5

6(A)
6(B) 6(A) b - b

7

8(A) , 8(B) 8(A) b - b

9

10

11(A) , 11(B) 11(A) b - b

12(A) , 12(B) 12(A) b - b

13(A) , 13(B) 13(A) b - b

14(A) , 14(B) 14(A) b - b

15

16

17(A) , 17(B) 17(A) b - b
,

18(A) , 18(B) 18(A) b - b
,

19 ,

20 19 ,

21 ,

22 ,

23 ,

24 ,

25 ,

26 ,

27 ,

28(A) ,

28(B) ,

29 ,

30(A) 30(E) 29 ,

31(A) 31(E) 29 ,

32 ,

33 .

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(散在)

(散在)

가 .

3.22), 8 - 114809 (1996.5.7), 2907137 (1999.4.2)가 . 8 - 76131 (1996.

가 ,

1 1
1 2
가 1 2
가 .

1 1
1 2
가 1 2
가 .

1, 1, 1, 1

2, 2

가

1, 2, 1, 2

가

" (multi - domain effect)가

[]

[1]

1(A) 1(B)

1(A)
1(B) 1(A) b - b

1(A) 1(B) 가

(, - (IPS))

가

2 1997 , 1 28

5,598,285

(1) x

() (2)

가 (2)

(2) 가 (TFT)

x (4) (2)

(4) (4A) (4A) (4)

(±y) 3

(4) (4A) (5) 가

(4) (1) (1) 가

(4) (2) (4) (1) (2)

(4) (INS)

(INS) (TFT) (4)

(Cadd) (2)

(INS) (2) (TFT)

Si (6)

(6) (3A) (5A) (2)

(inverted staggered structure) (TFT)가

(6) (3A) (5A) (3) (5)

1(A) y (3) (3) (3A)

(6)

(3) 1(A)

가

(5A) (3) (5)

(5) 2 (4A) y

(5) (4A) (4A)

(5) (4) (Cadd)가 (INS)

(Cadd) (5)

(2) 가 (TFT)가 (3)

가 (TFT) (5) (Cadd) (TFT)가

(5)

(1) (PAS)

(TFT)가

가, (PAS) (7) .

가 (1B) TFT (1A) , (7) .

(1B) (BM) ((1(A))(BM), (BM) (FIL) (8) .

0)가 , (8) (Cadd)가 (1

(10) (8) , (TFT (1A) (1B)

(10) (Cadd) (4)

(4) , (11) (10)

, (10)가 (BM) ,

(11) (10)가 (1B) 1(B) , (10)

, (11)

(4)

, (10)가 (Cadd)가 ,

(Cadd)가 (4)

, (4) 가

가, (10) (1B) , TFT (1A)

(4)

[2]

1 (7), (11) .

(7), (11) , TFT (1A)

(7) (1B) (11) 가 , (7), (11)

(10)가 (11)

(1A)

(7)

2

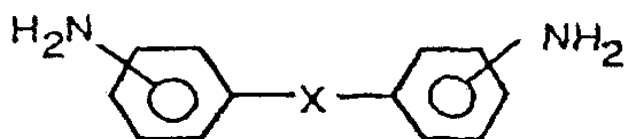
3

가

(7), (11) 가

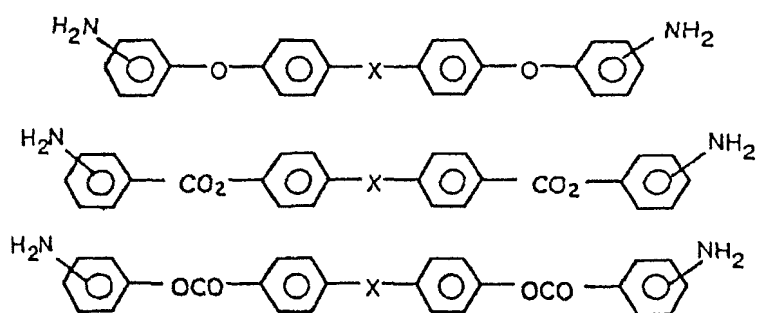
, 2,2 - [4 - (p - 50nm)]

1



(1 , X , -O -, -CH₂ -, -SO₂ -, -CO -, -CO₂ -, -CONH -)

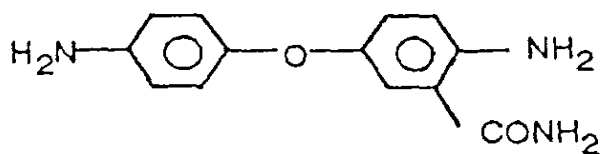
2



(1 , X) ()

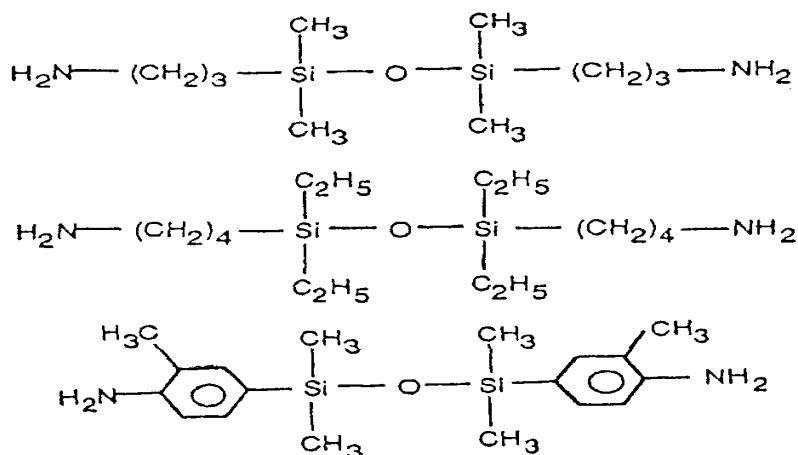
p - , m - , 4,4' - , 4,4' - , 3,3' -
 , 4,4' - , 4,4' - , 2,2' - (4,4' -) , 4,4' -
 (p -) , 4,4' - (m -) , 4,4' - (p -)
 4,4' - (P -) , 4,4' - (P -) , 2,2' - [4,4' - (p -)]

3



4,4' - - 3 -

4



가 , 4,4' - - 3
 - , 3,3' - , 3,3' - - 4,4' - , 1,6 - , 2,2' -
 [4 - (4 -)] , 2,2' - [4 - (4 -)] , 2,2' - [4 - (4 -)] , 2,2' -
 [4 - (4 -)] , 2,2' - [4 - (4 -)] , 2,2' - [4 - (4 -)] , 2,2' -
)] , [4 - (4 -)] , [4 - (4 -)]
] , [4 - (4 -)] , (4 -) , (4 -
) , [2 - (4 -)] , [2 - (4 -) - 3,5 -] ,
 [2 - (4 -) - 3,4,5 -] , [2 - (4 -) - 3,5,6 -] ,

, (15) (BM) 가 .

[4]

5 , 1A .

1A (10)가 (2) (3) ,

(10) (2) (3) (3)

, 6A (INS) (2) (3)

b - b 6B (PAS) , () ,

(PAS) 가 (INS) (3)

, (3) ()

, (2) (3) (10)

, (2) (3)

[5]

7 , 5 .

5 (10)가 (TFT) , (TF

T) .

, (10) (TFT) (3A) (5A)

(TFT)

, 8A (TFT) , b - b 8B , (3A)

(3A) (PAS) , (PAS) 가 ,

(3A)

, (3A)

(3A) (5A) (TFT) ,

, 4 (TFT) (6) (TFT) (2) (10)

[6]

9 , 5

5 (10)가 (4) (3) ,

4 (3) , y 가 ()

[7]

10 , 5

5 (10)가 (Cadd) (4) (10) ,

9 , (10) , (10)

, y (10)가 , ()

[8]

11A 11B (, 11B 11A b - b (twisted nematic type))

11A 11B 가 , () 가 가 1975 11 11 가 3,918,796²

(2), (3), (TFT)

(TFT) (5) , ITO(Indium - Tin - Oxide) (BM) ()

, (5)가), ITO (4A) (1B) (

, (5), (4A)

, (5) (10)가 (1B)

(10) 11B (8) (8)

(8) (10) (4A) (11)

(10) (11) TFT (1A) (7)

가 (10)

11B 가

(10) (BM)

11A, 11B 12A, 12B

3

[9]

13A 13B 11A 11B

13A 13B, 11A 11B (10)가 (5h)가

(5) (5h) (10) (11), (7) (5)

(4A)

(5) (10)

(10)가

, 12A 12B 14A 14B , 3
(5) 가 .

[10]

15

15

(10)

가

, 15 16 , x y 2

y x y 2 , x
2

[11]

17A 17B

, 11A 11B

11A 11B

, (10)가 (1B) , (10)
(15)

, (15) (BM) , (BM)

, 18A 18B (10) TFT (1A) (17)

TFT (1A) (17) , (2)

, (17) , (10)
, (15)

TFT (1A)

[12]

19, (10) .

, ,

19, (10), 가 (10A)

, ,

(10), (10A), (10), (10C), (10C), (10), (10A)

, (10), 20, (10A), (10D)가 가 .

(10), 가 가

(10D)

가 ,

가

, (10), (10C), 20

, (10A), (10C),

, (10C), (10A), (10A)

, (10)

[13]

21, (10)가

, (10)

, 21, (PAS), (10)

(15)가

, (15)가 (10), (10A), (10A)

[14]

22

22 , (1A), (1B) () (20) (21)가 ,
(20) (10) (10)

, (10C) 가 (21)

,

, (21) (10) , (10) 가

[15]

23 , (10)

23 , (10)

, (10)

(10) 가 , (10)
가

(10) 가 , (10)

, 24 , (10)

[16]

25

25 , TFT (1A) (1B)
(10)가

, (10) (25B) 1 (10B) ,
(25A) 2 (10A)

, (1B) TFT (1A) (2)
(21)

, (21) 2 (10A) , 2
(10A) (2)

, (2) , 가 (2)

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

[17]

26

26 (2) , TFT (1A) (1B)
(10)가

(26A) (10) (seal) (26B) (20) 3 1 (10A) (10B) ,

3 (10A) 1 (10B)

, (1B) () (22)

, 3 (10A) TFT (1A) 3 (10A)
(22) (23)

(23) TFT (1A) (20) , (22)

, TFT (1A) (1B) (22) , 3 (10A)

(22) TFT (1A) 가

[18]

TFT

가

TFT , 가

, TFT 가 TFT

TFT , TFT 가 가 .

TFT

[19]

27 (1B) (10) .

(1B) (BM), (FIL)가 ,

(8) .

(8) (10)가 , (10)

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(10) , 가 ,

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(1B) , TFT (1A) .

[20]

28A (BM) (10)

.

(10)

(10)가 .

(10) ,

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() .

[21]

28B 20 (10) 가

() 20 .

.

[22]

29 , 1B .

29 (10)가 (10)

(30)가 .

(10) ,

.

, Si

30A 30E

1.

(10) , (10) (30A).

2.

가 가 , (10) (30)
(30B).

3.

(10) (30)가 (30C).

4.

(30D).

5.

가 (30) . (10)
(30E).

31A 31E

1.

(10) , (10) (31A).

2.

(30)가 가 (31) , (31)
(31B).

3.

(10) (30)가 (31C).

4.

(31D).

5.

가 (30) . (10)
(31E).

[23]

32

32 (10)가 가 (40)

(40) , TFT (1A) (PAS) ,

(10) 가 (40) 가 , TFT (1A)

33 () (42) (40)

가

(10) 가 가 (10)가 가

(, 가

),

(10) 가

(57)

1.

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1 , 1

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, 가 .

1 2

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1 2 .

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1 2 , 1 2 , 1 2 .

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가 90 °

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1 2 , 1 2 , 1 2 ,

가 .

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가 .

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1 2 , 가

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$$1 \qquad \qquad \qquad 1 \qquad ,$$

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$$2 \qquad \qquad \qquad 2 \qquad ,$$

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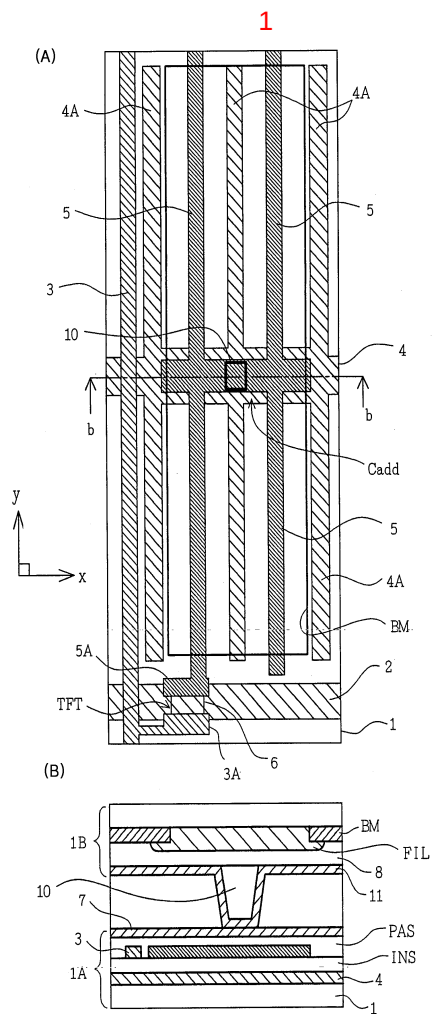
21.

3 ,

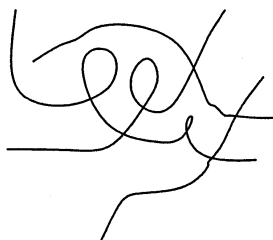
가

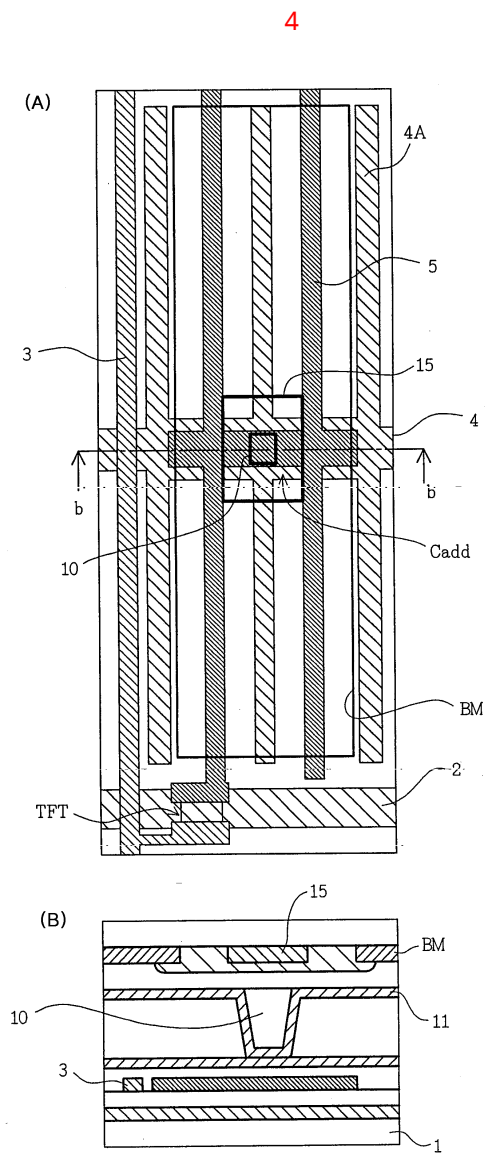
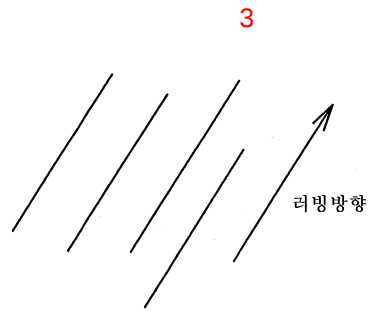
90 °

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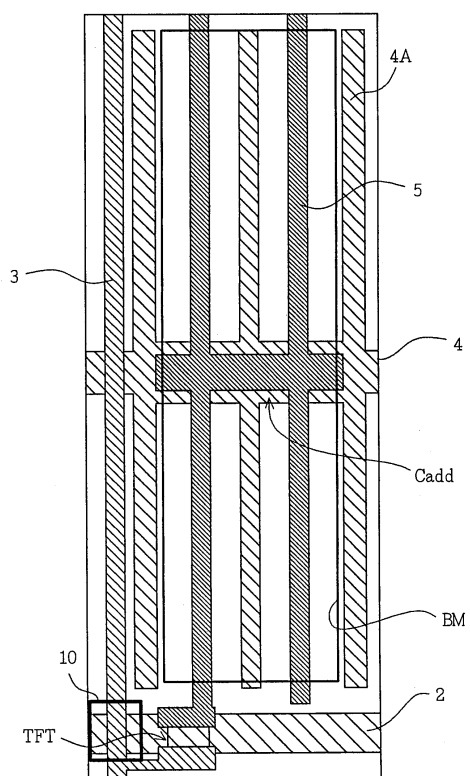


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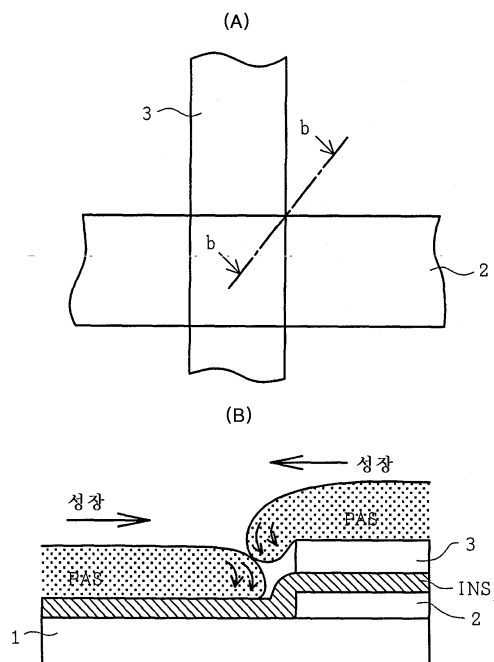




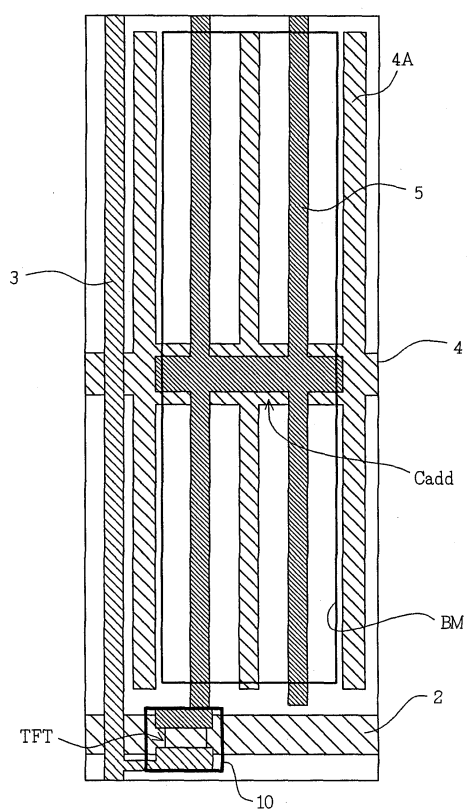
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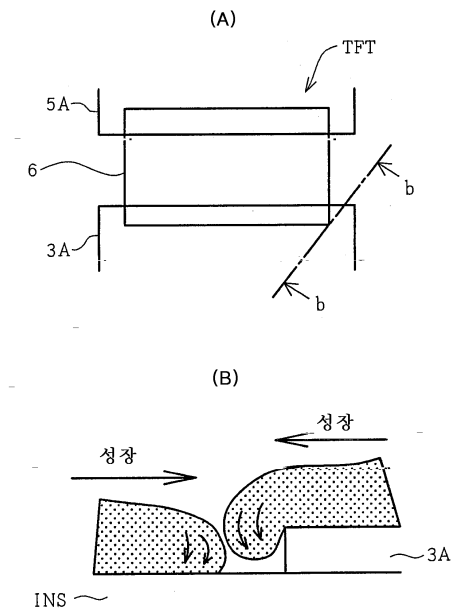
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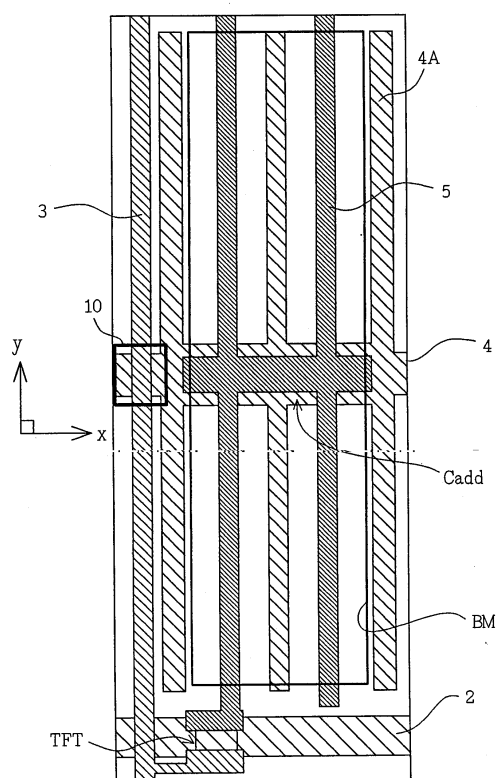
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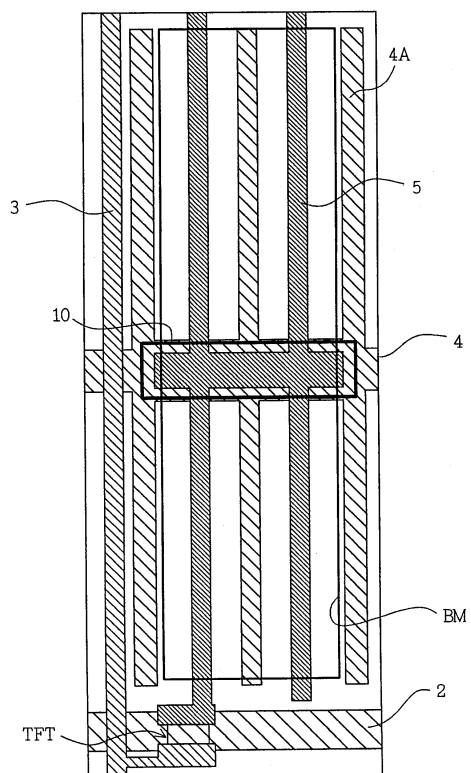
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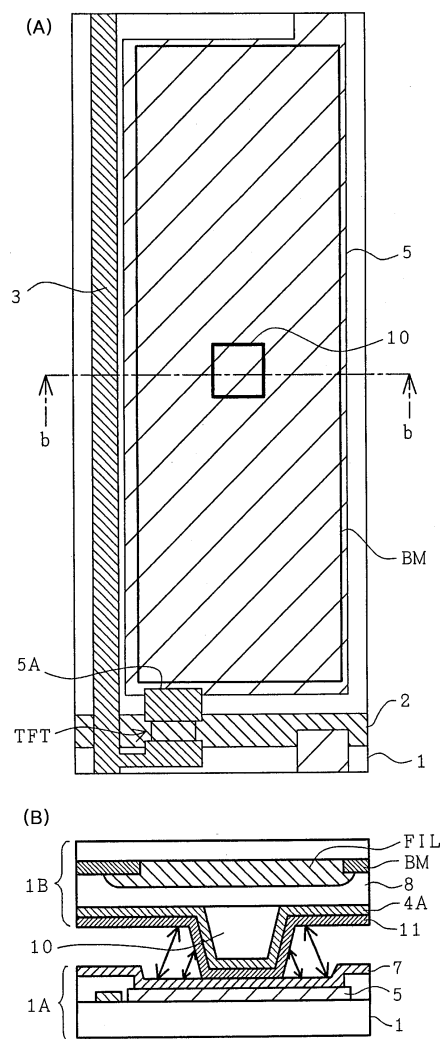
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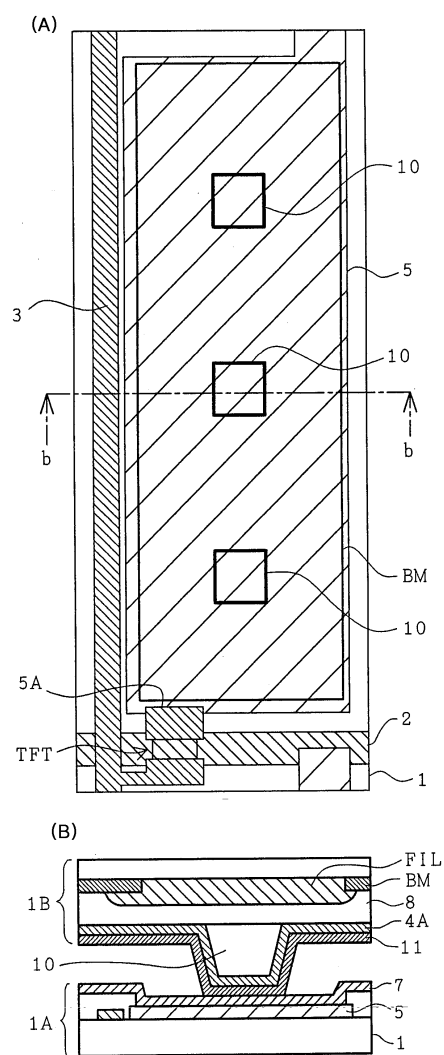
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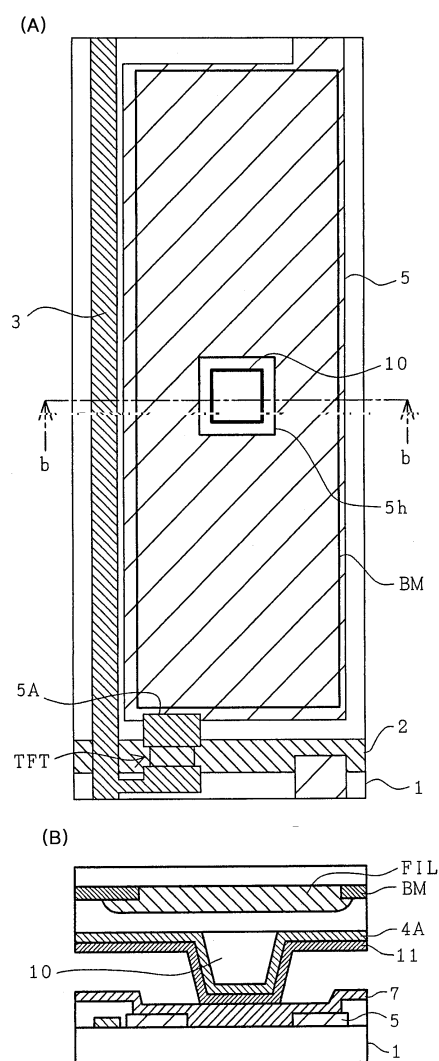
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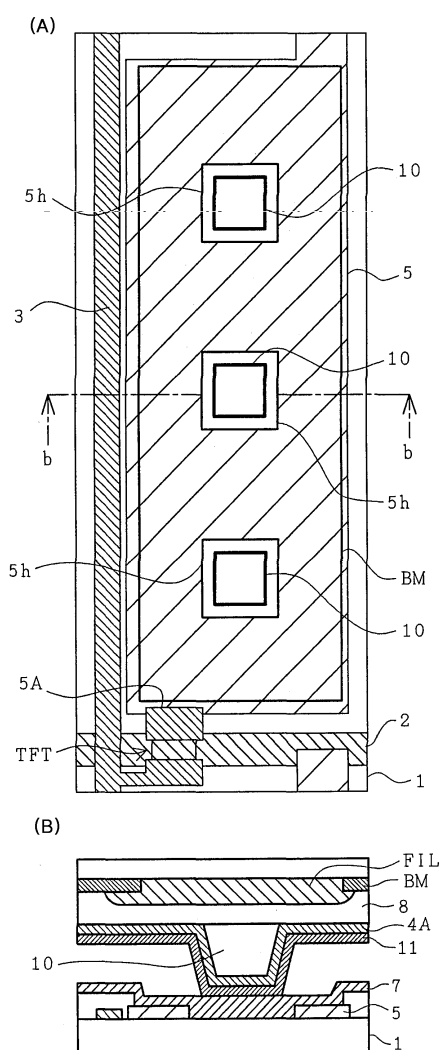
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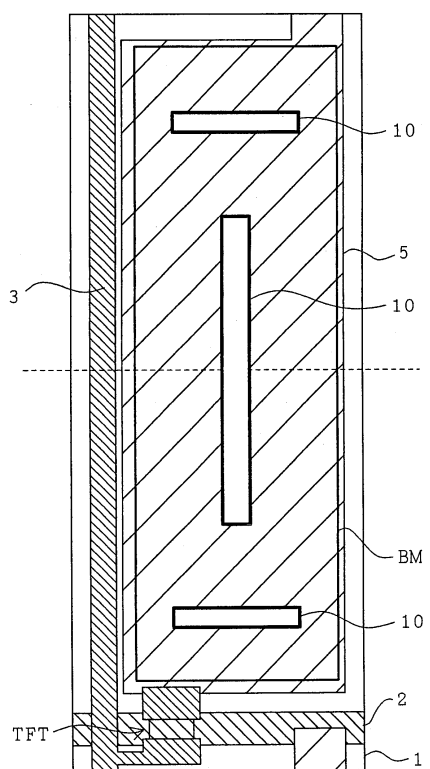
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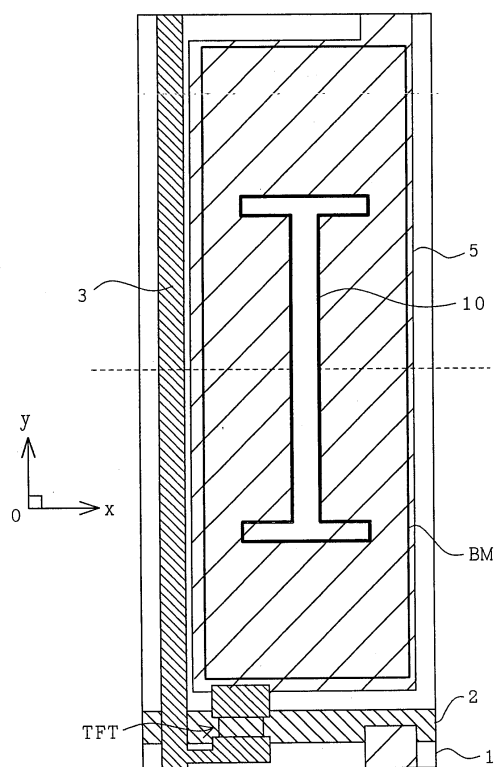
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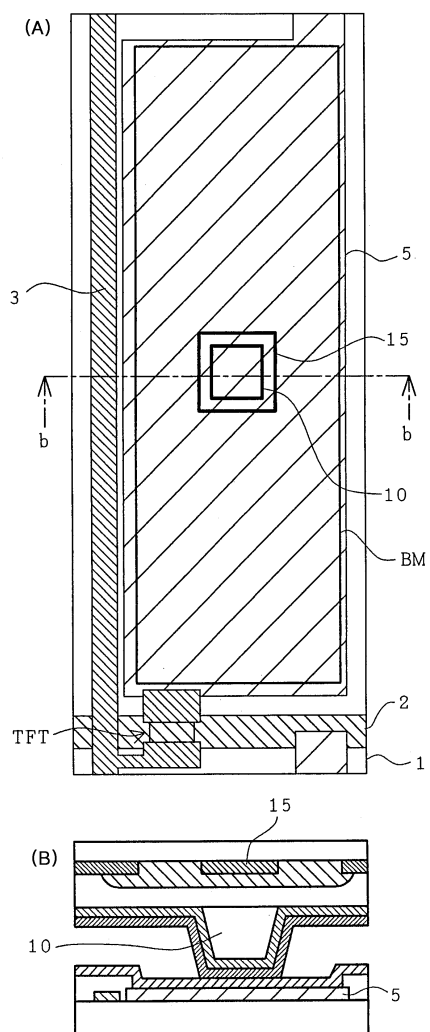
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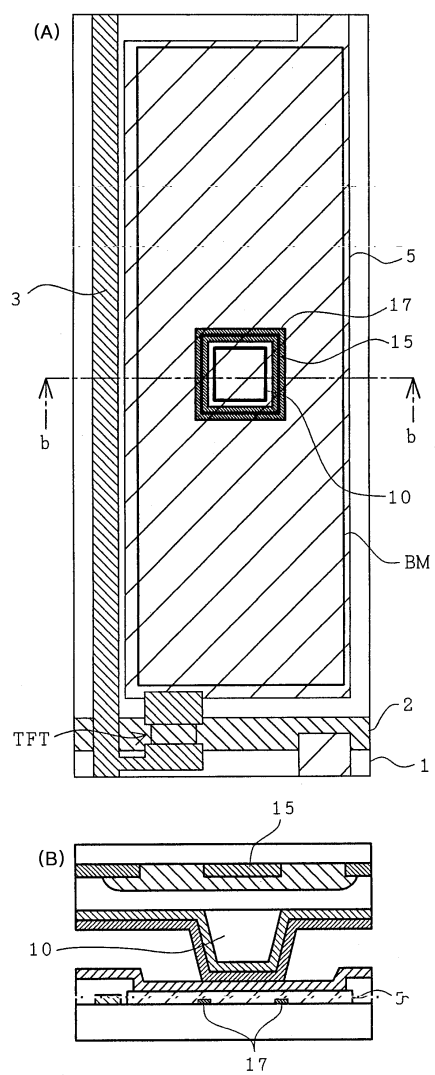
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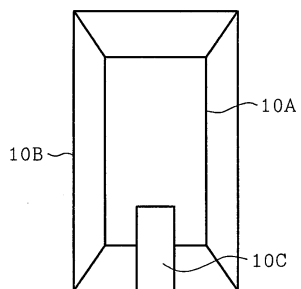
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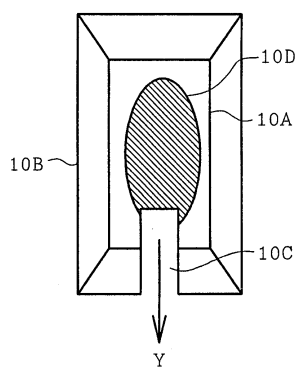
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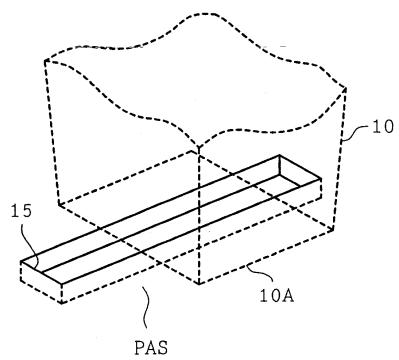
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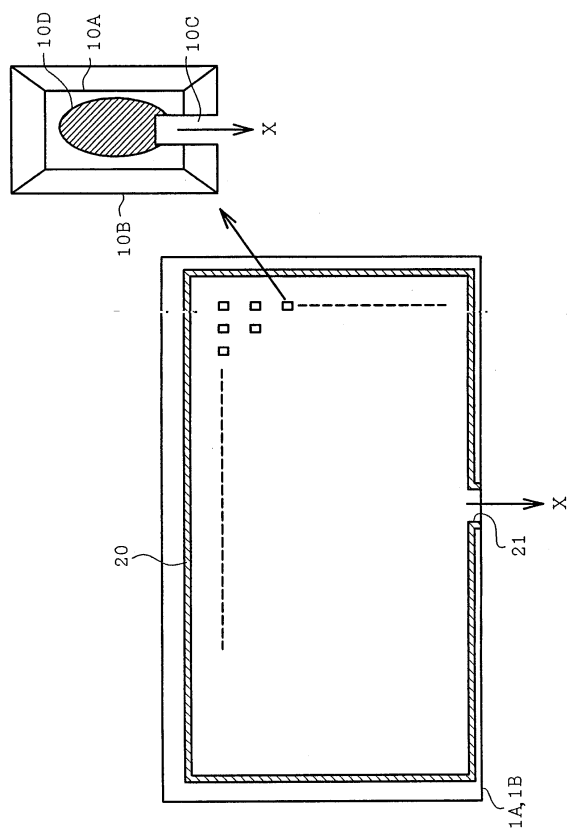
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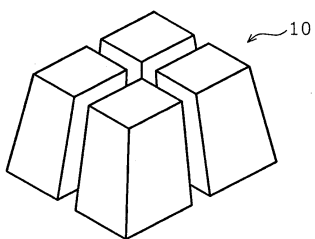
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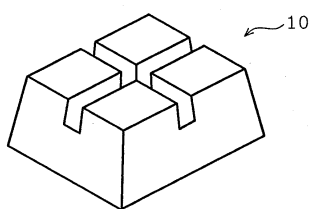
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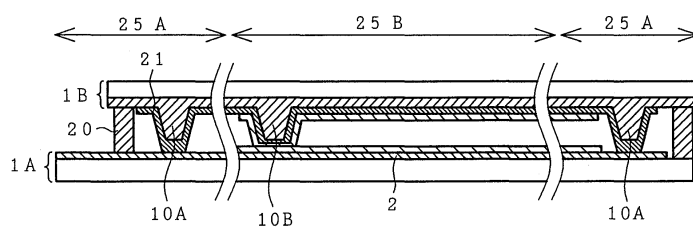
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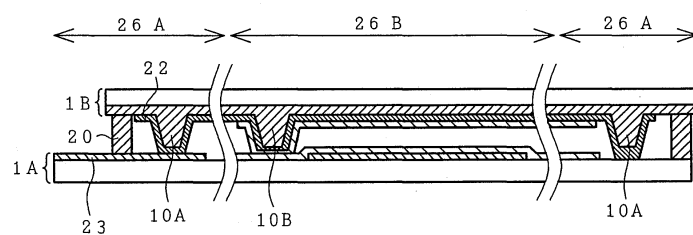
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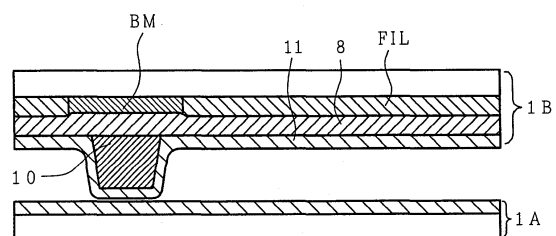
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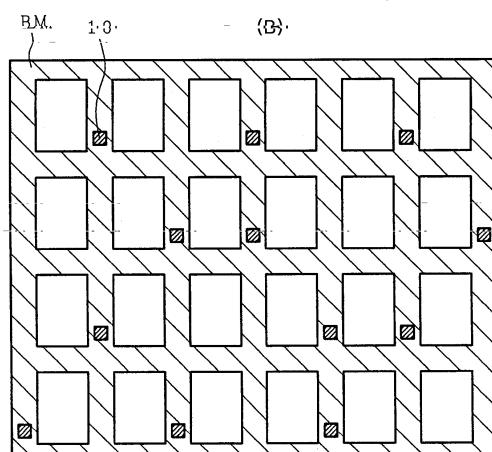
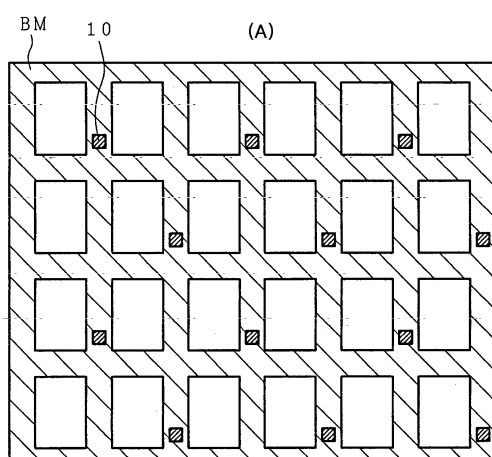
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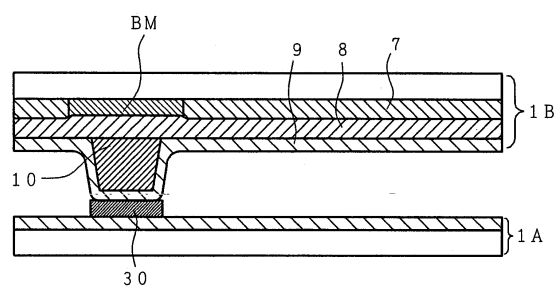
27



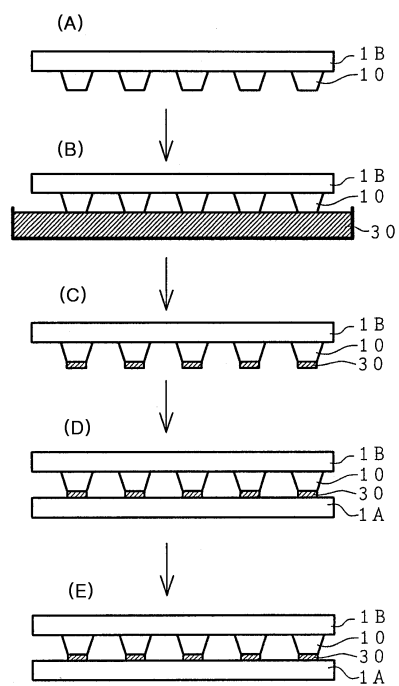
28



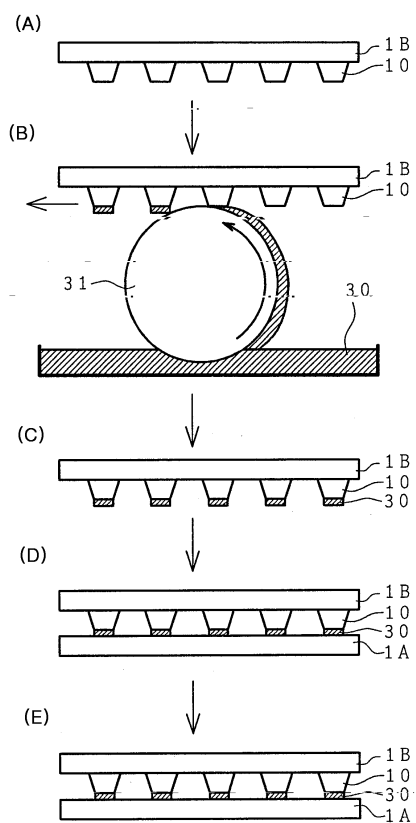
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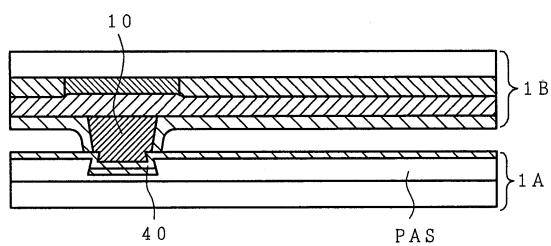
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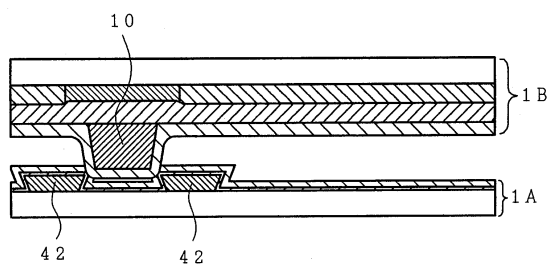
31



32



33



专利名称(译)	液晶显示器		
公开(公告)号	KR100375239B1	公开(公告)日	2003-03-08
申请号	KR1020000018592	申请日	2000-04-10
[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		
当前申请(专利权)人(译)	株式会社日立制作所		
[标]发明人	YANAGAWA KAZUHIKO 야나가와카즈히코 ASHIZAWA KEIICHIRO 아시자와케이이치로 ISHII MASAHIRO 이시이마사히로 HIKIBA MASAYUKI 히키바마사유키		
发明人	야나가와카즈히코 아시자와케이이치로 이시이마사히로 히키바마사유키		
IPC分类号	G02F1/1335 G02F1/1362 G02F1/1368 G02F1/1337 G02F1/136 G02F1/1333 G02F1/1339 G02F1/1343		
CPC分类号	G02F1/133707 G02F1/13394 G02F1/136213 G02F1/134363 A01G18/65 A01G18/68		
优先权	1999106382 1999-04-14 JP 1999106383 1999-04-14 JP		
其他公开文献	KR1020000071622A		
外部链接	Espacenet		

摘要(译)

液晶显示器包括一对相对的板，液晶膜，插入相对基板间隙中的多个电极，其布置在相对板中的一个内表面上，以便规定第一类多个像素，并且多个从(1)第一种和(2)第一种的多电极和至少一个间隔物中的至少一个中心的至少一个间隔物相邻的一对相对的电路板对的电极相邻在第二种类型的相对板中的另一个中的一个内表面中布置有多个像素，并且间隙设置在相对基板间隙中。至少一个间隔件固定到相对的板之一上。它被(1)第一种和(2)第二种多电极中相应一个的至少一个电极中相应的一个覆盖。

