

(19)  
(12)

(KR)  
(B1)

(51) 。 Int. Cl.7  
G02F 1/136

(45)  
(11)  
(24)

2003 08 19  
10-0394838  
2003 08 04

(21) 10-2000-0079192  
(22) 2000 12 20

(65)  
(43)

2001-0062554  
2001 07 07

(30) 11-364544 1999 12 22 (JP)  
2000-321784 2000 10 20 (JP)

(73) 가 가 가 , . 1753

(72) 5-7-1 가 가  
5-7-1 가 가  
5-7-1 가 가  
5-7-1 가 가

3-1-1 가 가  
3-1-1 가 가

(74) :

(54)

, , , / 가 TFT  
, .

, TFT, ,

1 1  
 2 1 A-A'  
 3  
 4 1  
 5 (island)  
 6  
 7  
 8  
 9  
 10  
 11  
 12  
 13 1  
 14  
 15  
 16  
 17 1  
 18 1  
 19 1  
 20 2  
 21 20 A-A'  
 22 2  
 23 2  
 24 IPS TFT  
 25 가

< >

1 : 2 :  
 3 : 4 : TFT  
 5 : 6 :  
 7 : 8 :  
 9 : 10 :  
 11 : 13 :  
 14 : 15 :  
 16 :

IPS ) 가 IPS (In Plane Switching type)(  
 (TN: Twist Nematic)

24 IPS ( LCD ) TFT 24  
, TFT (105) (106) (101), (103) (102), (103), (104),  
(101)

가  
, 가 가 IPS 가

7-159786

가 가 가 25 가 가 가

가 (flicker) (field through)

(ON)

가

( )

가

가

TFT

가

TFT

가

TFT

가

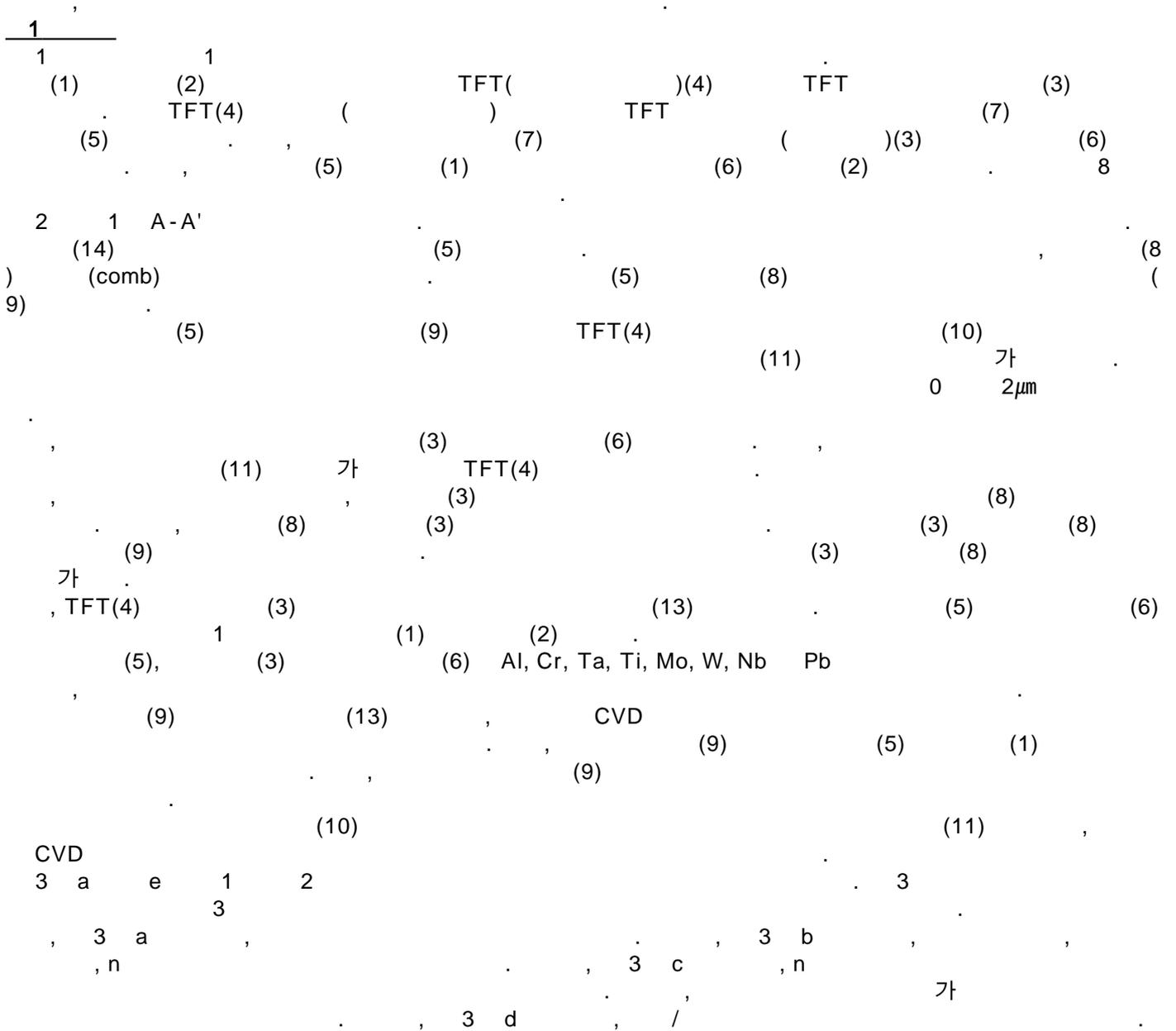
0 5μm

5 × 10<sup>12</sup> cm

가

TFT  
(twisted nematic type)

TFT  
(twisted nematic type)



3 e  
4 1 (B)

2μm (W1/L) 20/8 W1/L 20/10 0  
5 가 가

6 가 O  
가 x x x  
2μm

7 24 (gradation)  
가 5×10<sup>12</sup> [ cm]  
8

8 a 8 b 8 c  
n n

8 d 8 e /  
8 f /  
8 g 8 c n

가  
2 가 9, 10 11 9 11 4

9 가 (7) 10 (7)  
11 가 가 (7)

9 11 가 가

12 a 가 12  
= I3 << I1 = I4가 I1 I4가 (3) (6)

가 12 b 가 12 a 가  
12 c 가

(TFT) 가 가  
가 /

24

(checker black)

가( )  
가

가

0 2μm

-through)

2μm

(feed

/ ( )

(field through)

가

가

3

3

1 2

IPS  
(1)

(2)

, TFT( ) (4)

TFT  
(7)

(3)

TFT(4)

( )

TFT

(3)

6)

(7)

(5)

(1)

(7)

(6)

(2)

(3)

(

8

2 1 A-A'

(14)

(5)

5)

(8)

(8)

(comb)

(9)

(

(5)

(9)

TFT(4)

(10)

(11)

가

0 5μm

(3)

(6)

(11)

가

TFT(4)

(8)

(3)

(8)

(3)

(8)

(3)

(8)

(9)

(3)

(8)

가

(14)

TFT(4)

(3)

(13)

(5)

(6)

(5),

(3)

(1)

(2)

(6) Al, Cr, Ta, Ti, Mo, W

(9)

(13)

CVD

(9)

(5)

(1)

(10)

(11)

, CVD

3 a e 1 2

3

3

3 a

3 b

, n

3 c

n

3 d

가

3 e

13 1 (B)

20/8 W1/L 20/10 0 5μm (W1/L)  
14 가 가 가 가

15 가 , , O 5

, x , xx  
가 24 0μm 가

, 16 , 16 0 5μm

$5 \times 10^{12} [ \text{cm} ]$

8

, 8 a , , n , 8 b , , 8 c , , n

, 8 d , 8 e , 8 f , , / 가  
, 8 g , , 8 c , n

가 , 17, 18 19 17 19 13

17 (7) 가 가 (7) 18 가

가 (7) (7) 19 가

12 a , I1 I4가 , I1 I4 (3) (6) I2 = I3 << I1 = I4가 가

I1 I4가 12 b , I1 I4 , I1 I4 가  
, 12 c , 12 a , 가

가 (TFT) 가 , /  
가 , /

가 , (checker black) 24 가( )  
가 가  
가 가

0 5μm /

가 (feed-through)

5μm

4

4

13

20

4

(3)

(5)

(6)

(1)

(2)

TFT(4)

( )

TFT(

)(4)

TFT

)(3)

(7)

(

(5)

(1)

(6)

(2)

14

21

13

20

A-A'

(5)

(9)

(5)

(9),

(5)

(14)

(10), /

(6)

(16)

(11)

가

TFT(4)

(13)

(13)

(3)

(3)

(16)

(3)

(8)

(15)

(lapping)

(3)

(8)

(14)

(3)

(8)

가

22

2

22

20

(B)

(7)

(5)

가

23

2

(7)

(5)

가

11-364554 (1999 12 22 ) 2000-321784 (2000 10 20 )

(57)

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- 2.
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- 23.
- 24.
- 25.
- 26.

27.

28.

29.

30.

31.

TFT

TFT가  
가

32.

31  
TFT

가,

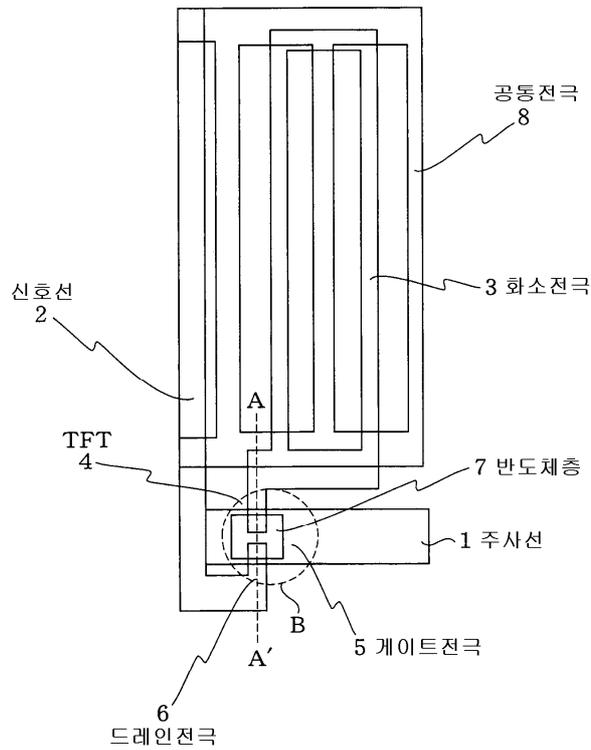
33.

31  
TFT

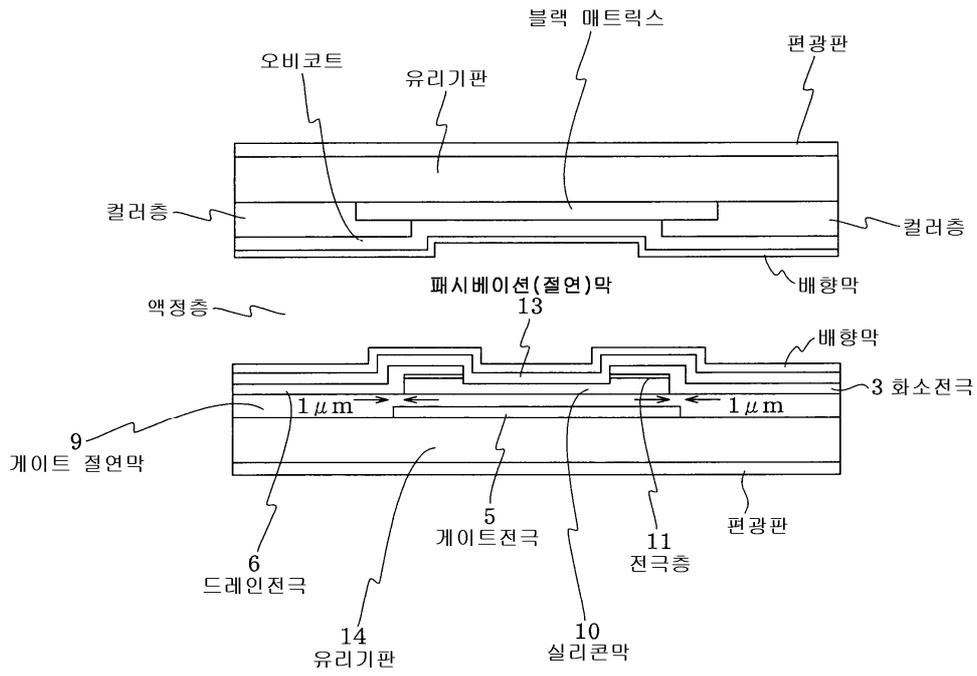
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31  
33

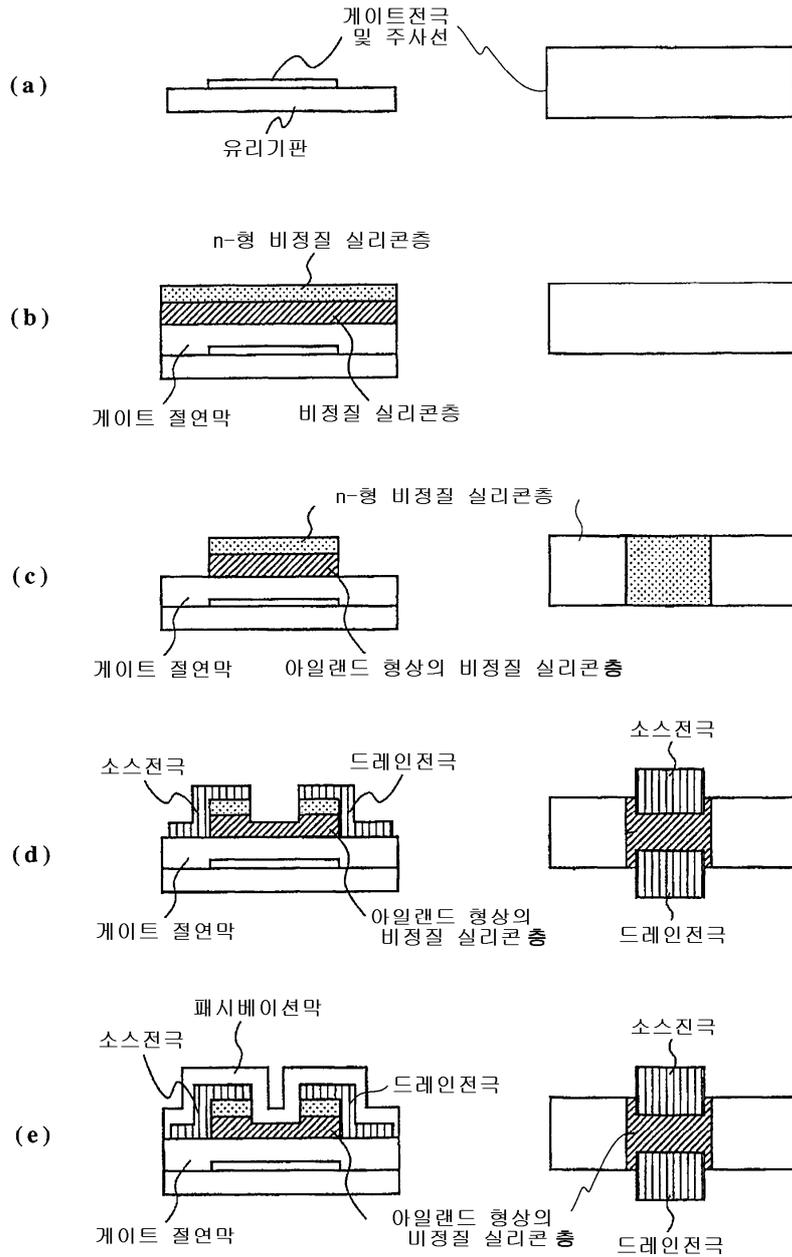
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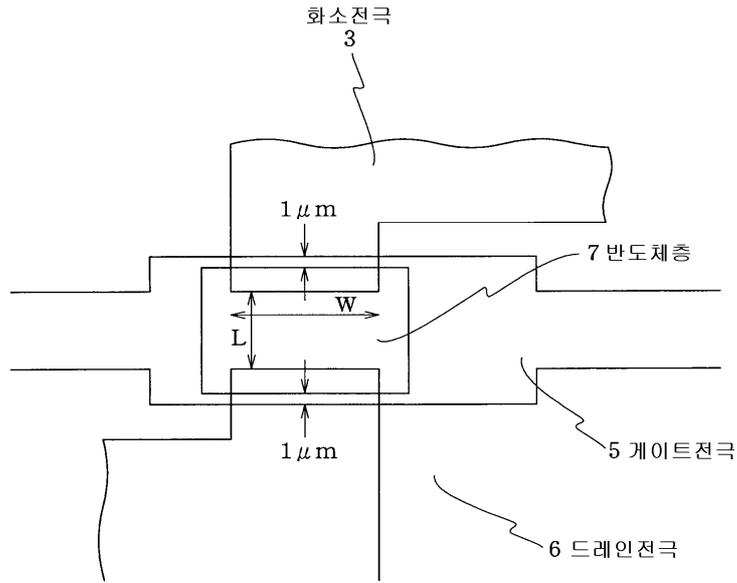
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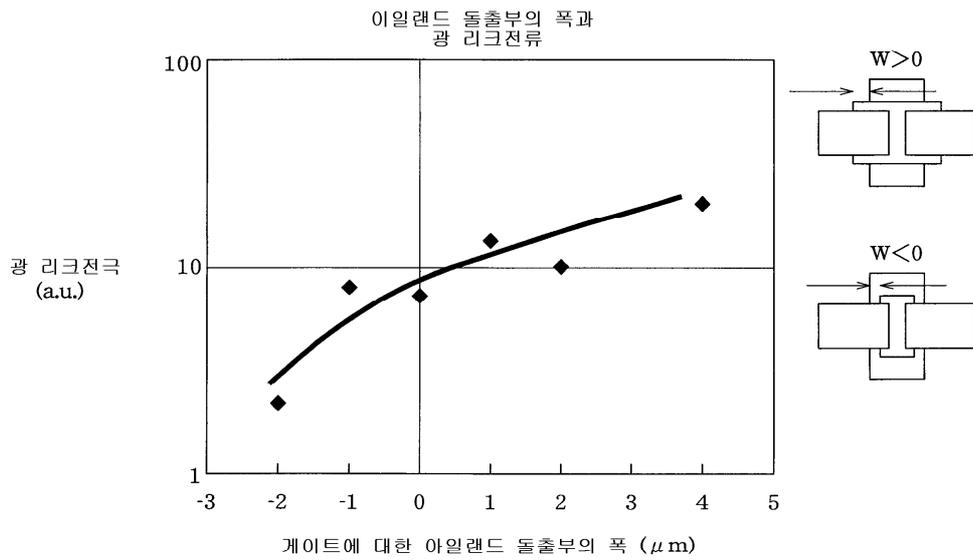
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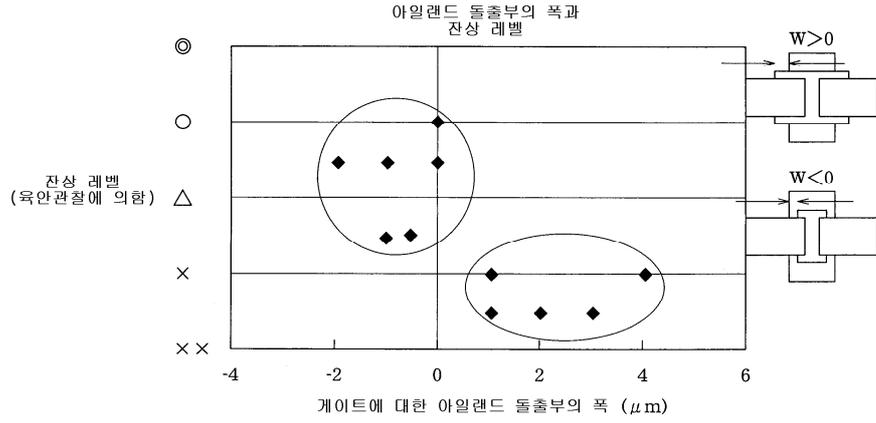
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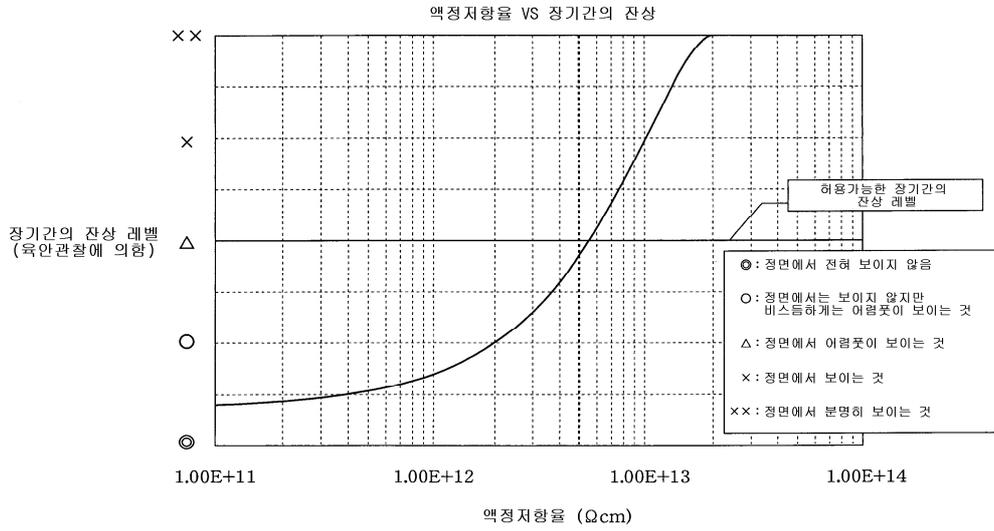
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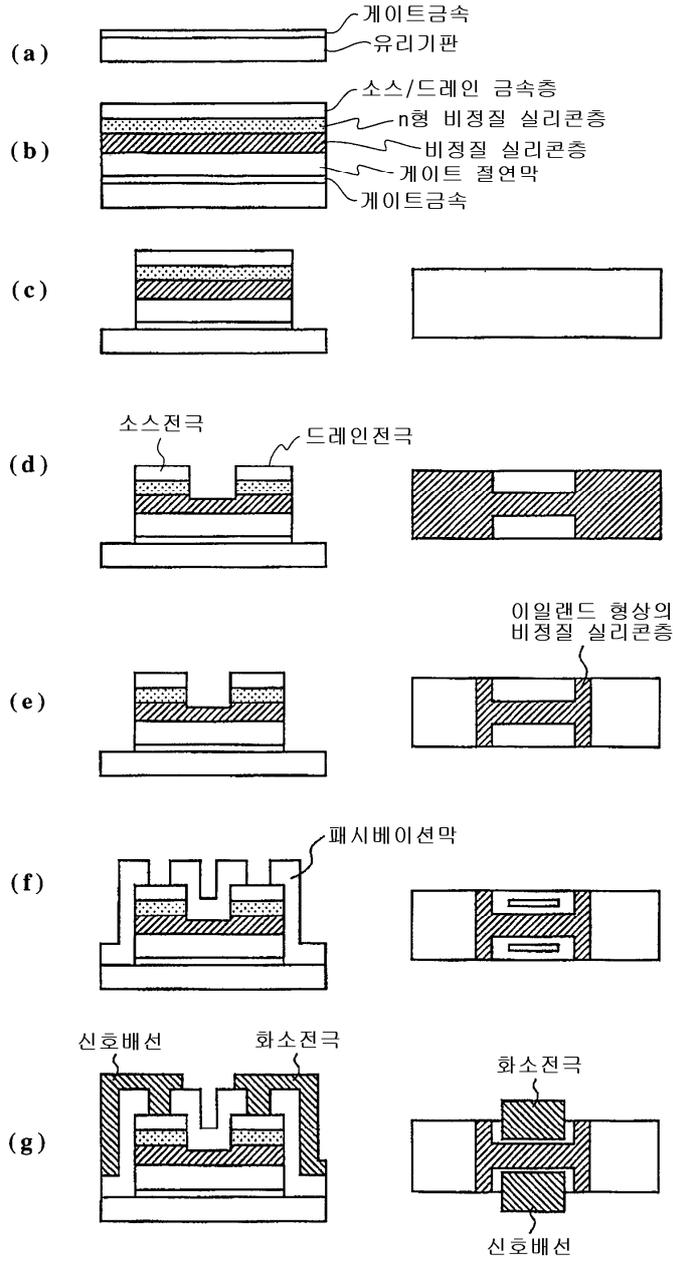


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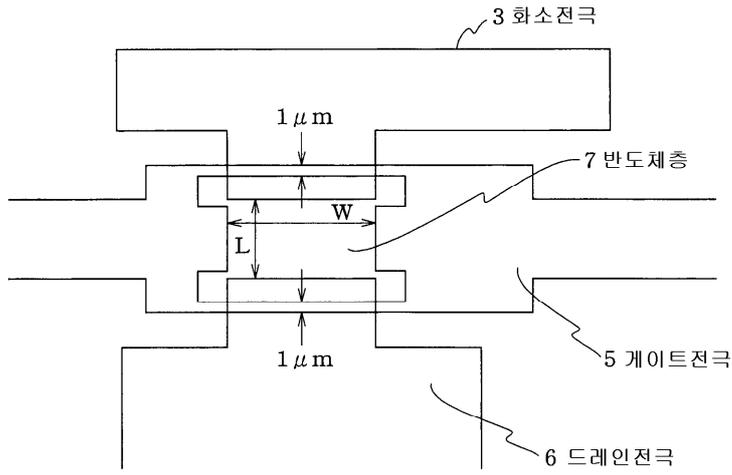


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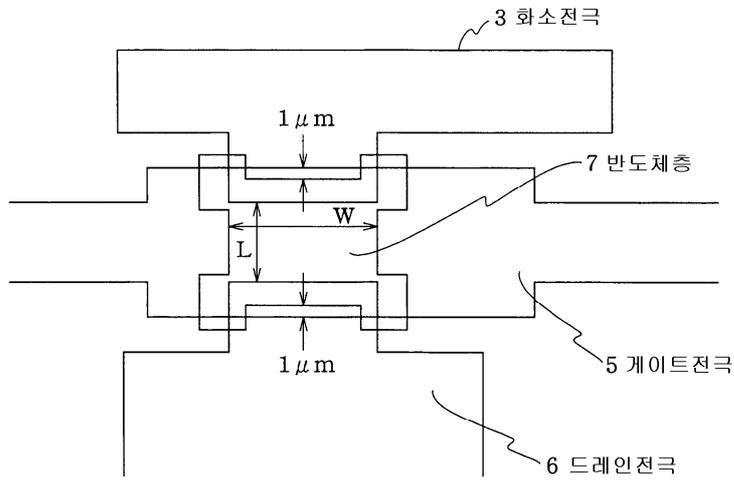




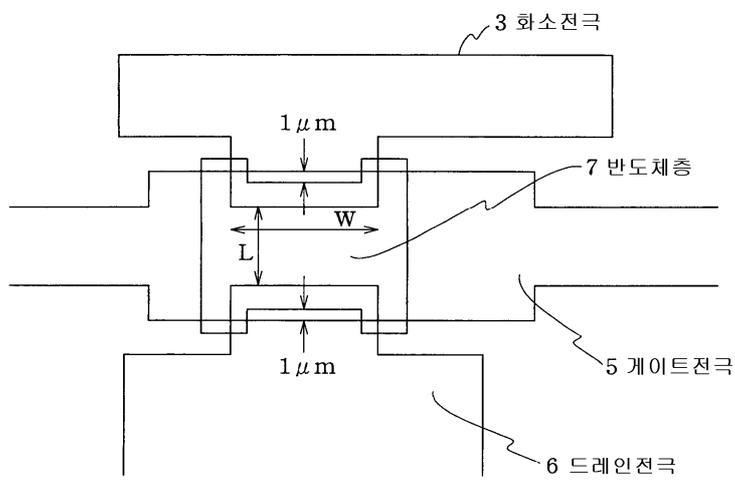
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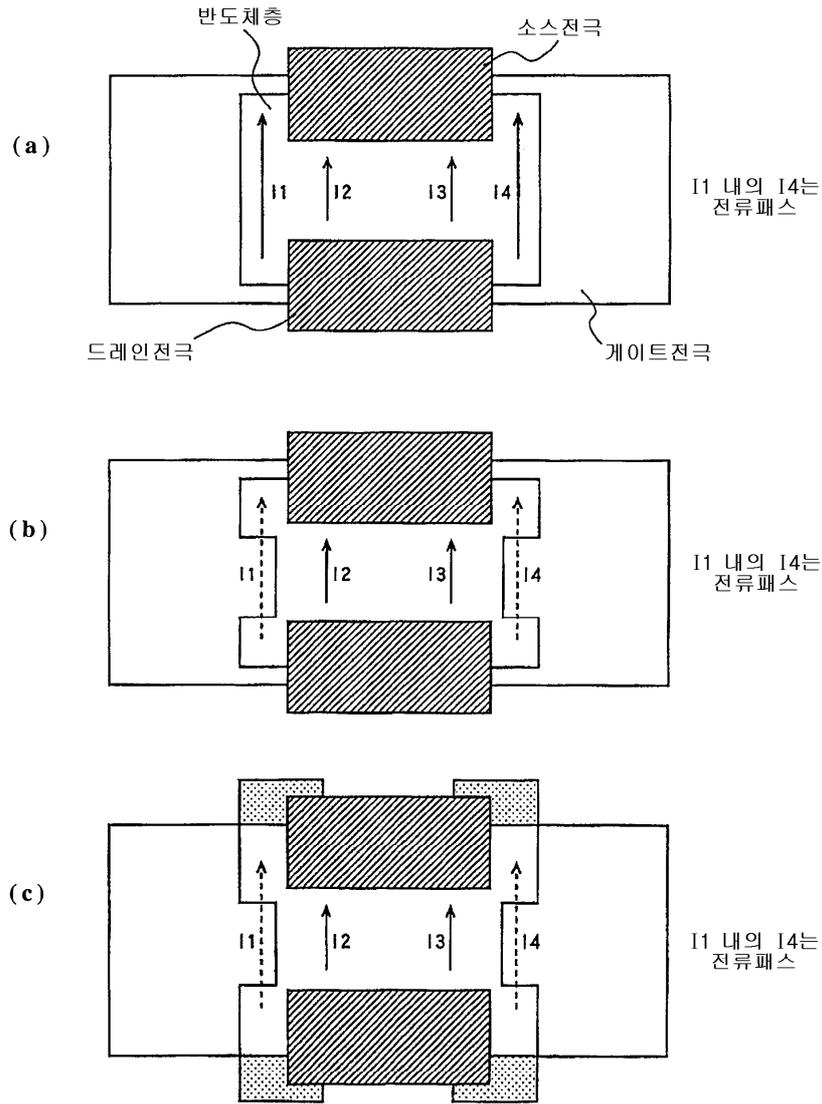
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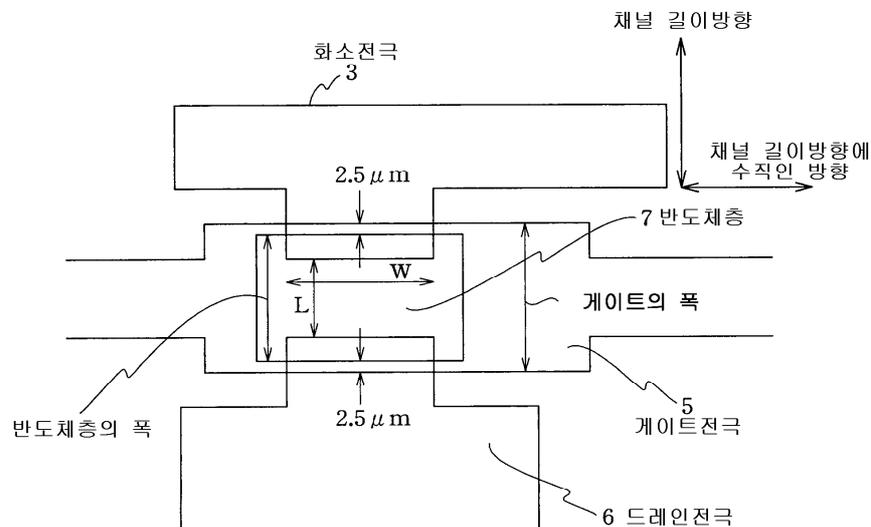
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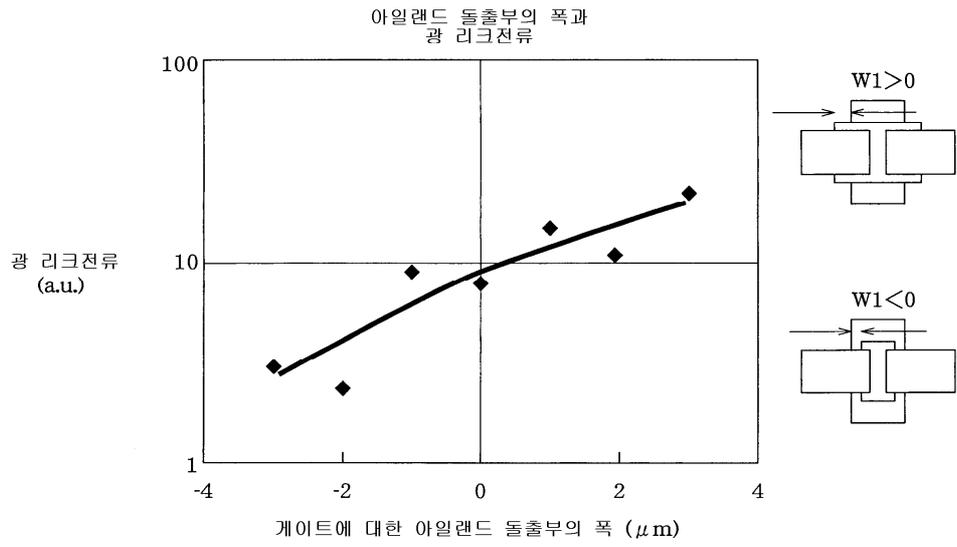
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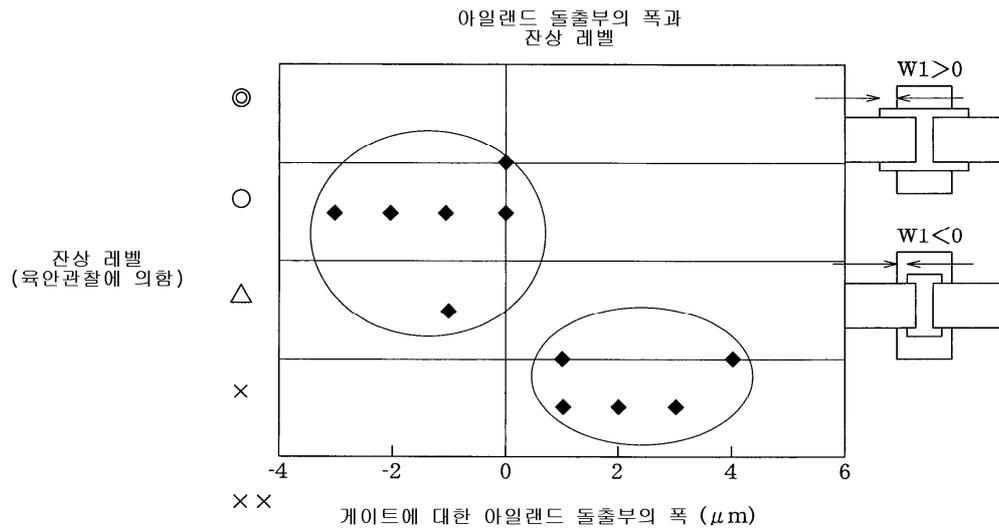
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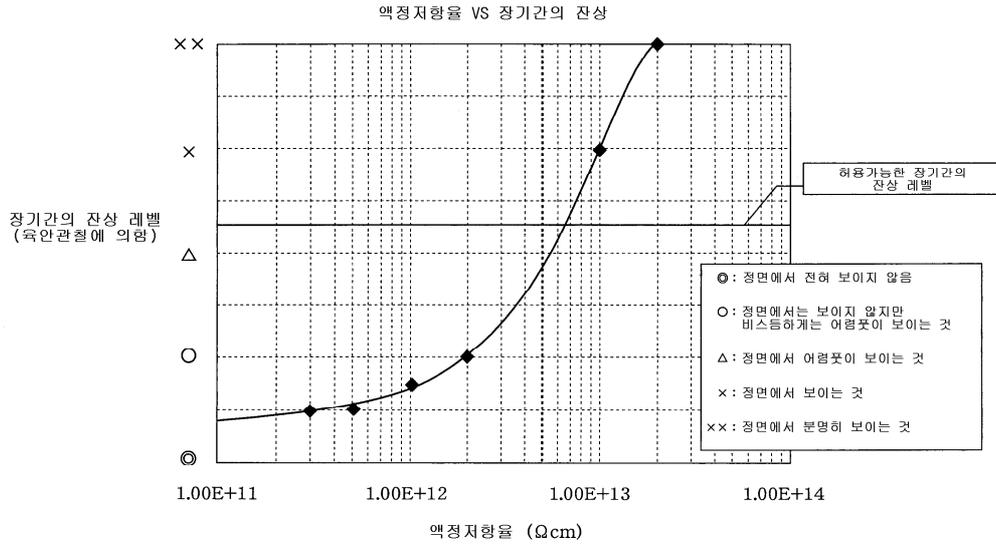
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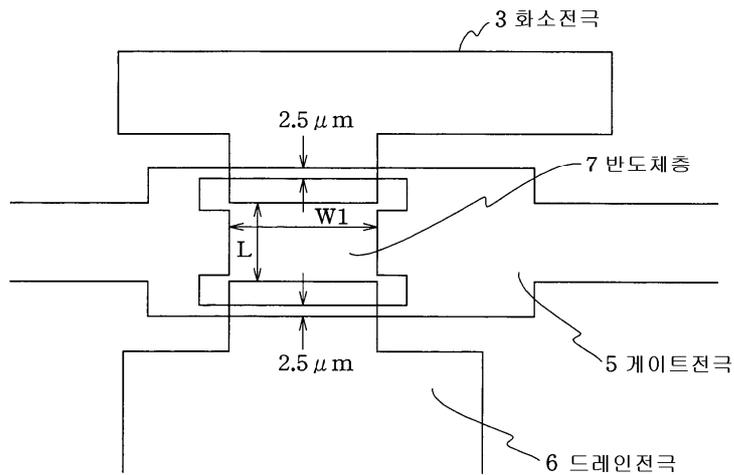
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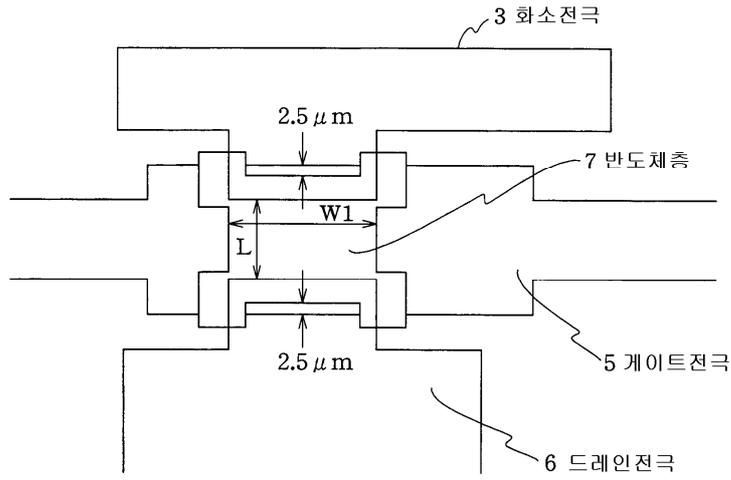
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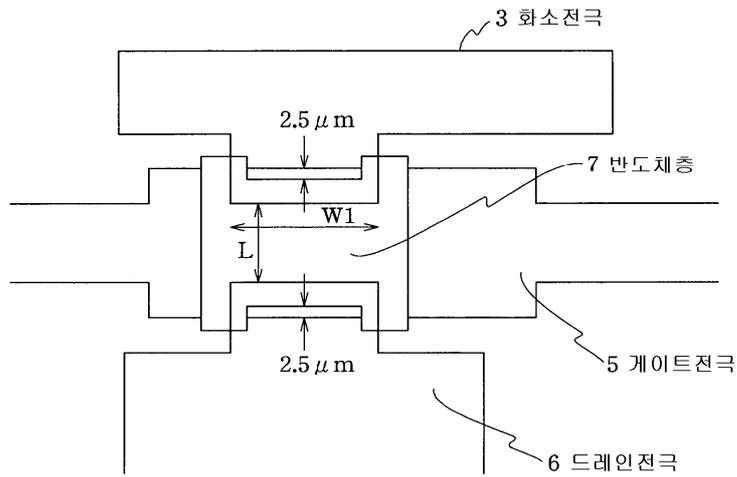
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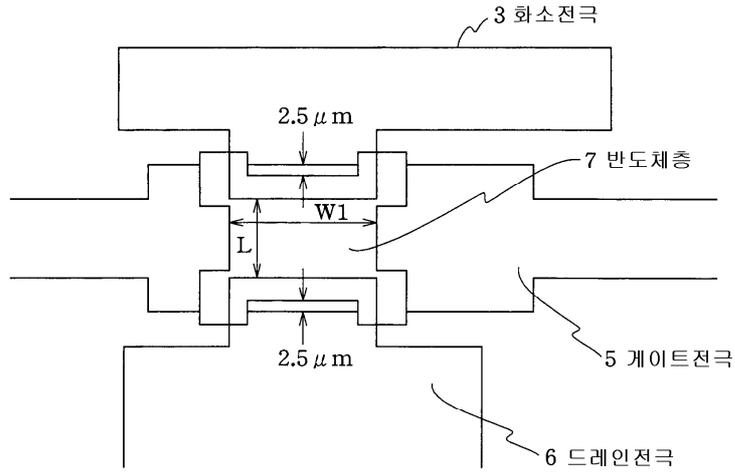


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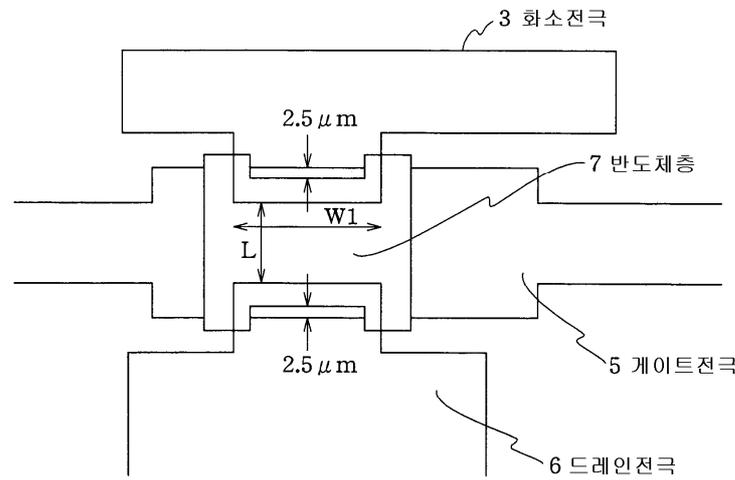




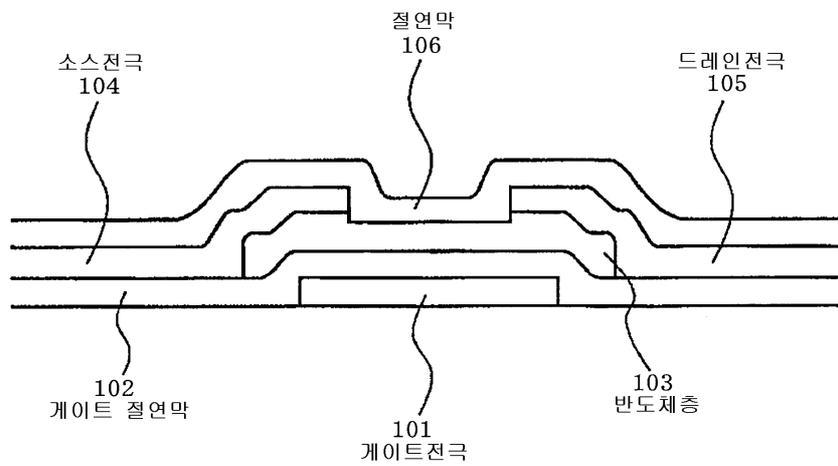
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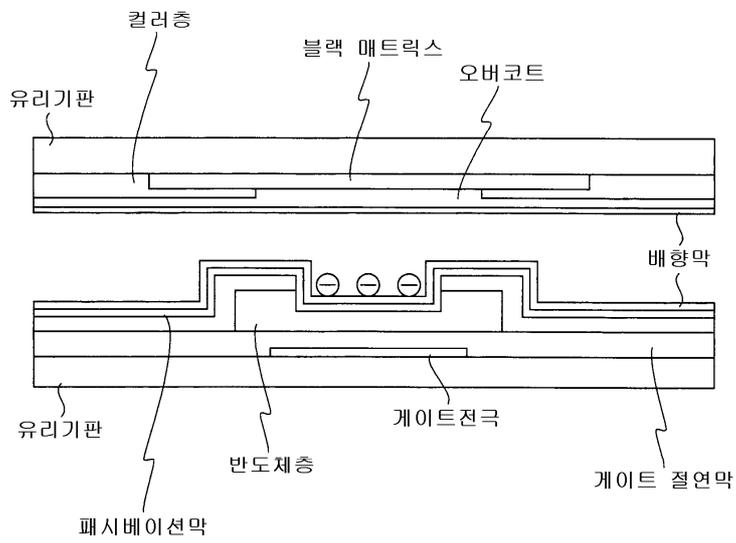
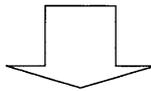
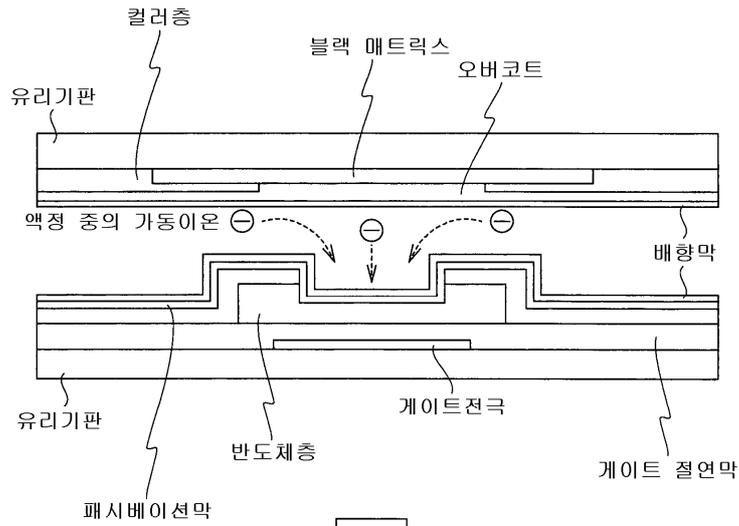


23



24





专利名称(译)	液晶显示器		
公开(公告)号	<a href="#">KR100394838B1</a>	公开(公告)日	2003-08-19
申请号	KR1020000079192	申请日	2000-12-20
[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	HANNUKI TAKAHISA 한누키타카히사 NISHIDA SHINICHI 니시다신이치 IHIDA SATOSHI 이히다사토시 KUROHA SHOUICHI 쿠로하쇼우이치 TAKAHASHI RYUJI 타카하시류지 MIURA SATOSHI 미우라사토시		
发明人	한누키타카히사 니시다신이치 이히다사토시 쿠로하쇼우이치 타카하시류지 미우라사토시		
IPC分类号	G02F1/1368 G02F1/139 G02F1/1343 H01L21/336 G02F1/137 H01L29/786 G02F1/136		
CPC分类号	G02F1/134363		
优先权	2000321784 2000-10-20 JP 1999364544 1999-12-22 JP		
其他公开文献	KR1020010062554A		
外部链接	<a href="#">Espacenet</a>		

#### 摘要(译)

本发明提供一种横向电场驱动型液晶显示装置，包括阵列基板，该阵列基板包括多个TFT，每个TFT具有栅电极，栅绝缘膜，半导体层和形成在其上的源电极/漏电极。透明基板和相对基板布置成与阵列基板相对，其中半导体层在栅极长度方向上的宽度与栅极长度相同。

