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(43)

2002 - 0077804  
2002 10 14

(21) 10 - 2002 - 0011830  
(22) 2002 03 06

(30) JP - P - 2001 - 00106283 2001 04 04 (JP)

(71)	가	가				
	가	가	가	가	4	1-1

(74)

1

(54)

, , 가

1 2 , (20, 22) , 1 1 2 (12) ,  
 2 (26) , 1 1 2 (24)  
 26A) 가 , 1 2 (20A, 22A) 2 (24A,  
 , , , , , , , ,  
 가

1

, , , , , ,

1 1

2 1

3 2

4 3 A

5 2

6 5

7

8 7

9 8

10

11 9

12

13 11

14 13 A

15 ( /4) , (a) 1 1 2 , , 1 2 , , 2 (2)

16 (retardation) /2  
17 /4 ( /4)  
18  
19 1 2  
20 21  
22  
23  
24  
25 24  
26  
27  
28 (魚骨)  
29  
30 29  
31 2  
32 31  
33  
34 33  
35  
36 33  
37 3  
38 37  
39 37  
40 37

41 37  
42 37  
43 37  
44 37  
45 37  
46 37  
47 37  
48 37  
49 37  
50 37  
51 37  
52 37  
53 37  
54 37  
55 54  
56 4  
57 56  
58  
59 56  
60 56  
61 5  
62 61  
63 63 (droplet)  
64 63  
65

66 6

67 66

68 66

69

70 66

\*

10 :

12 :

14, 16 :

18 :

20, 22 :

24, 26 :

30, 34 :

38 :

48, 50 : (補償)

52, 54, 56 :

60 :

62 :

70 :

72 :

74 :

76 :

, ( ), 가

1 - 270024 2000 - 29010 , ,  
1 2 , 1 /4 ,  
2 /4 /4 , ,

, /4 , , , 가  
가 .

가 , , , , , 1

가

2 가

가  
11 - 352489

2945143  
2000 - 347174

가 1  
가 1

가 45°

가

1 , , 1 2 , , 1 1 2 ,  
1 , 2 가 2 가 /4 , 1 1 2 2 45°  
, 1 2 , 가 ,

3 , , 1 2 , , 1 1 2 ,  
1 , 2 가 가 /4 , 1 1 2 2 45°  
, 1 2 ,

가  
가 120nm 160nm

가

5 , , 1 2 , , 1 2 , , 1 2 ,  
1 2 , 2 , 2 , 1 2 , 2 ,  
가 가 /4 , 1 2 , 2 , 45°

가

가

1 1 . . . (10) (12) . . .  
   (12) (10) (12) (14, 16) 1 2 (20, 22) , (18) (12) 1 (20)  
   1 (24) (12) 2 (22) 2 (26)  
  
   1 2 (24, 26) , (24A, 26A) 가 가 /4  
   1 (24) (24A) 2 (26) (26A) . 1 2 (2)  
0, 22) (20A, 22A) 1 2 (24, 26) (24A, 26A) 45°  
  
   (12) (18) , (12) 가 가

2 1 (12) . 1 (14) (28) (28) (28) , 3 2 (12) ( ) (3)  
 0) . 2 (16) (32) (32) ( ) (18) ( ) (34) .  
 , 1 (14) 2 (16) (16) (32) (18) , (18)  
 . 1 (14) (28) 2 (16) (32) , TFT

$$1 \quad (14) \quad (28) \quad 2 \quad , \quad , \quad , \quad 3 \quad , \quad 2 \quad (16) \quad (28)$$

$$(32) \quad 1 \quad , \quad , \quad , \quad , \quad , \quad , \quad (32)$$

가 (18X), 가 (18Y)가, 1

4 3 A . , , , 가 1  
(30, 34) . , , 가 ,

가 1 (30, 34)  
 가 . , (30, 34) (18X) (30, 3  
 4) (18Y) (18X, 18Y)  
 . (30, 34) (18P, 18Q) (18P, 18Q) (30, 34)  
 . (18P, 18Q) (18R, 18S) (30, 34) , , 45 °

4 (20, 22) (20A, 22A) 가 45 °  
                   (18X, 18Y, 18P, 18Q) (20A, 22A) 45 °  
                   (18R, 18S) (20A, 22A) ,  
                   . 36 . , 가

, (30, 34) (18R, 18S), 가 (30, 34) (18R) (18S), . 가 , (18R) (18S), 4 (30, 34) (18R, 18S),

S) , (18R, 18S) 가 , (異常)

$$(30, 34) \quad , \quad (30, 34)$$

(30, 34) (18R, 18S)

(30, 34) (18X, 18Y)

기

$$(\sqrt{-1}/4)(24) \quad 2 \quad (\sqrt{-1}/4)(26) \quad \cdot \quad , \quad 1 \quad , \quad 1$$

15 ( /4)(24) . 15 (a) , 1 2 (20, 22)  
 (20A, 22A) , 1 2 (24, 26) ( ) (24A, 26A)  
 1 2 (20, 22) (20A, 22A) 1 2 (24, 26) ( ) (24A, 26)  
 A) 45 ° . 15 (a) , 1 (24) (24A, 26A) y  
 , 2 (26) (26A) x . (18) (1)  
 8D) , 1 2 (20, 22) (20A, 22A) (18) (18D)  
 45 ° .

15 (b) 1 (20), 1 (24), (18), 2 (26), 2 (22)  
           . 1 (20)  
           , (18)  
           , 2 (22)  
 (26) 2 (22)  
       , (18) /2 .

16 (18) /2 , (a) (18) (18D1)가 y , (18D2)가 x , (c) (18) (18D3)가 x 4  
 b) (18) 16 , (18) (18) (18) (18) , (18)  
 5° . 2 (22)  
 (18) (18D) .

17 (18) /4 . (a) (18) (18D1)가 y , (18D2)가 x , (c) (18) (18) (18D3)가 x 4  
 b) (18) . (a) , (18) /4 , (18) (18D1)가 y  
 5° , 1 (24) (18) .  
 2 (26) , y (L22) 2 (22) .

$$(b) \quad (24), \quad (18) \quad /4 \quad (18) \quad (18D2) \nmid x \quad 2 \quad (26)$$

$$(18) \quad (L22) \quad 2 \quad (22)$$



7 9 , 1 (14) (28) (28) ( ) ( )  
 30) , 2 (16) (32) (32) (32) (34) .  
 1 (14) (30) , 2 (16) (34) 1 (14)  
 (30) (18A, 18B, 18C, 18D) 4 . , 4  
 (18A, 18B, 18C, 18D) . , 1  
 2 (20, 22) (20A, 22A) (30, 34) , (30, 34) (18P, 18Q) 가 (30, 34) (18P, 1  
 8Q) (36) , 1 2 (24, 26) ,  
 ,

10 11 , 1 (14) (28) , 2 (16)  
 (32) (32) (38) (38) (38a)  
 (38b) . (18A, 18B) (18R) (38a)

12 14 , 1 (14) (28) , 2 (16)  
 (32) (32) (38) (38) (38a)  
 (38b) . (38b) (18A, 18B)  
 . (18R) (38a) .

21 (12) (18) , 1 2 (12) 1 (14) 2 (16)  
 (12) (15) XGA (1) . 1 (14) (24, 26) 1 2 (20, 22)  
 (12) 297 $\mu$ m TFT .  
 .

1 (19) (32) 1 (14) (30) , 2 (16) (3)  
 8) . , 4 (30) (30) 10 $\mu$ m, 1.2 $\mu$ m (38) (38) 10 $\mu$ m  
 ( , JSR , PC - 335) (19) , (19) (38) (38) (38) (38)  
 斷續的)

(30) (38) 25 $\mu$ m (12) 4.64 $\mu$ m 1 2 ( )  
 /4 (24, 26) PC( , , (日東電工) NRF - RFO1A) 1 2  
 140nm . , ( , ) . , 1  
 2 (20, 22) G1220DU .

(20, 22) (21 (20A, 22A) , (2 21 45° ) (20A, 22A) 6.43% , (2  
 0A, 22A) (20, 22) 45° ( , 21 (20, 22) (20A, 22A) 45° , )  
 , 6.58% , (24, 26) , , 5.  
 05%

1	2	(30) (/4)(24, 26)	(38)	(間隙)	25 $\mu\text{m}$	,	가
가	.	,	가	,	,	,	가
,	,	,	,	,	,	,	.
22							.
(30)	,	2	(16)	(38)	1	(19)	1
, 4			.	.	(30)	(38)	6
6 $\mu\text{m}$ ,		15 $\mu\text{m}$	.	.	.	.	10 $\mu\text{m}$
22							.
(12)	가	4.26 $\mu\text{m}$	,	(12)	21	.	(20,
,	,	5.88%	.	5.74%	,	(20, 22)	45°
,	,	4.47%	.	(24, 26)	가 21	,	(20, 22)
,	,	.	,	.	,	,	(18)
,	,	.	,	.	,	,	21
23							.
16)	(38)	.	(30)	(38)	1	(14)	(30)
34)	.	.	.	(30)	7	9	(12)
4.02 $\mu\text{m}$	.	(20, 22)	.	.	8 $\mu\text{m}$ ,	0.75 $\mu\text{m}$	(38)
,	,	5.78%	.	,	,	5.86%	(20, 22)
4.48%	.	.	,	,	(24, 26)	.	45°
24							.
2	.	(38A, 38B)	.	.	11	.	(38)
2)	45°	,	,	,	3.86 $\mu\text{m}$	.	21
,	,	,	,	,	6.26%	.	,
,	,	,	,	,	(24, 26)	,	(20, 2
25	24	.	,	,	,	,	.
24	.	,	,	,	,	,	.
ms,		,	,	,	,	,	.
ms,		,	,	,	,	,	.
(25%)		90ms		가			.
20		.	,	,	,	,	.







47	37	.	.	(20, 22)	(24, 26)	,	,	,
6)	(26A) 75 °	,	.	(22)	(22A) 120 °	,	,	(2
20)	(20A) 30 °	.	.	(24)	(24A) - 15 °	,	,	(
48	47	.	.	(12)	(24, 26)	,	,	(4
8, 50)	TAC	.	.	(22)	(22A) 155 °	,	,	(26)
	(26A) 20 °	,	.	(24)	(24A) 110 °	,	,	(20)
	(20A) 65 °	.	.		,			
49	37	.	.	(18)	,	,	,	(20, 22)
	,	(24, 26)	.			.	.	
(22)		.	(22)		(22A) 135 °	,	,	/4
(26)	(26A) 0 °	,	,		4			45, 1
35, 225, 315 °	,	.	,		(18)			
가		(52)	(	nd	nd),			
(24A) 90 °	,	,			1			/4 (24)
		) (54)	,		가 140nm			
A) 135 °	,	(20)	1	(20A) 45 °	(56)	,	,	(56)
		10		45 °	50 °	.	.	
						,	,	
		(52)	(18)					± 10%
			가					
50	49	.	.	49	(20, 24)	,	,	,
/4 (26)	(22)	45 °	.	(22)	0 °	,	,	,
135, 225, 315 °	,	,	,	4	(12)			45,
가		(52)	(	(18)				
(24A) 135 °	,	,		nd	nd),			
		) (54)	,		1			/4 (24)
(56A) 0 °	,	(20)	1	(20A) 90 °	1			
가 가				45 °	가 140nm			
					(56)	,	,	
								가 5
		75 °						
51	37	.	.	49	4	,	,	,
2		49	,		90 °, 270 °	2	,	,
,	(20, 22),		(52, 54, 56),	/4	49	,	,	,
,			,	4	49	,	,	,
T - V	,	가	T - V		49	,	,	,
			,	2	4			
52	37	.	.	50	,	,	,	(52, 5
4, 56)	,		(12)	2				90 °, 270 °

53 37 . , /4 (24, 26) 1 (延  
 伸) , , 1 , , /4 (24, 26)  
 (b)) ( = (nx+ny)/2 - nz) 가 0 ( ) ( 53  
 10 , , 80°  
 . 가 0 , NZ , 가 (住友化學)  
 SZ , , ( = (nx+ny)/2 - nz)  
 0 ± 20nm  
 (56) (20) . , (56) , , 60  
 nm 160nm ( 140nm) , ,  
 (52) /4 (26) (22) , ,  
 80nm 300nm , , 90nm ± 10nm , , 53 (b)

54 4  
18I 18J TFT ,  
8K 18L CF ,  
18C, 18D, 18E, 18F ,  
18M , , ,  
18C, 18D, 18E, 18F  
18M , , ,  
( ) ,  
55 ,  
/4  
가

58 4 (18c, 18d, 18e, 18f) 가  
 . 58 (a) , 58 (c) (V1) 가  
 (18c, 18d, 18e, 18f) , 58 (b) (V1) 가  
 (18c, 18d, 18e, 18f) . 58 (c)  
 , TA 58 (b) (18c) T - V , TF 58 (b) T - V  
 (18f) T - V , TN 58 (a) (V1) 가  
 . 58 (c) , (V1) 가  
 . 가 . (V1) 가 ,  
 ,  
 (62) 가 .

57 (a) (60) (10) , 57  
(b) (60) (10) . 57 (a)  
a) , (12) , (60) (60)  
가 . 57 (b) , (12) (12) (12)  
 , (12) (12) (12)  
 (12) (60) (20) 가 , .

(62) , , ( /4 )(24, 26) , (20, 22) ( /4 )  
 )(24, 26) . , 56  
 , (62) (14) , (16) . ,  
 (62) 39 53 (48, 50, 52, 54, 56) 偈 . ,  
 (62) 1 , 2 , .

59 56 , (60)  
(20) 가 , (62) (14) 가 , 56 , (60)  
(60) (14) 가 , (62) (20) 가  
59

61	5	.	.	62	61	.	.
1	2	(24, 26)	.	1	2	(10)	(12)
(24A, 26A)	가	가	/4	1	(24, 26)	,	,
(26A)	.	1	2	(24)	(24A)	2	(26)
(24A, 26A)	45°	.	(20, 22)	(32)	(20A, 22A)	1	(24, 26)
			(28)		가	2	.

$$\begin{array}{cccccccccc}
 (12) & 1 & (14) & 2 & (16) & & & (18) & . & (18) \\
 (70) & (72) & & . & & (70) & (72) & & (18) & \\
 (18) & & (70) & (72) & & , & & & & ;
 \end{array}$$

64 63 가 , (20, 22) , /4 ,

65 (20, 22) (24, 26)  
3 , (70a)  
22) (20A, 22A) , 偈 (20A, 22A)  
, . 4 9 (36) .  
, (24, 26) , 65 , 64

66	6	.	.	67	66	.	.	.	.	.	.
1	2	(24, 26)	.	1	2	(10)	(12)	1	2	(20, 22)	.
(24A, 26A)	가	가	/4	.	1	(24)	(24A)	,	2	(26)	.
(26A)	.	1	2	(20, 22)	.	(20A, 22A)	1	2	.	(24, 26)	.
(24A, 26A)	45°	.	.	(28)	(32)	.	가	.	.	.	.



69							X
1.8	%	,	Y	(76)			
70	66						
	(28, 32)		(29, 33)				(14) TFT (16)
	70		(29, 33)				,
	(40)		(46)				,
70	(a)	,		(30, 34)	(38)		
		(40)		(46)			
	(14)		(30)				70 (b),
							,
70	(c)	,		(14)	(30)	, TFT	(16) (34)
			(30)				,
	(40)			(46)			(34)
				,			
70	(d)	,		(14)	(30)	, TFT	(16) (38)
			(30)				,
			(38)				
			38				

1 2 ,

1 1 2 2

,

1 2 , 가 가 /4 , 1  
2 ,

1 2 1 2 45° ,

가 , 가

3.

1 2 ,  
가 45°

4.

1 2 ,  
,

, 가

5.

4 ,  
가 가

6.

,  
1 2 ,

1 1 2 2

,

1 2 , 가 가 /4 , 1  
2 ,

1 2 1 2 45° ,

가

7.

1 2 ,

1 1 2 2 ,

1 2 , 가 가 /4 , 1  
2 ,

1 2 1 2 45° ,

가

가 120mm 160mm

8.

7 ,

가 5° ,

9.

7 ,

1

10.

가

11.

10

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, 1

, 2

,

12.

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1

2

,

1

1

2

2

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1 2

,

가

가

/4

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1

1 2

1 2

45°

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13.

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1

2

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1

1

2

2

,

1 2

,

가

가

/4

,

1

1 2

1 2

45°

,

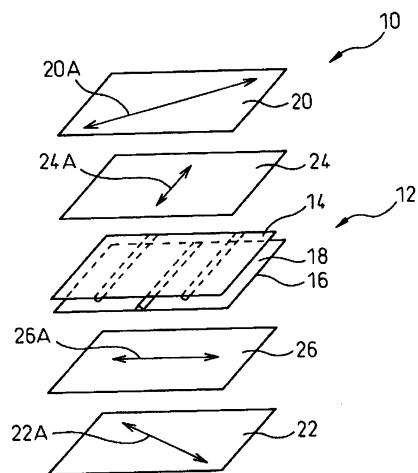
,

가

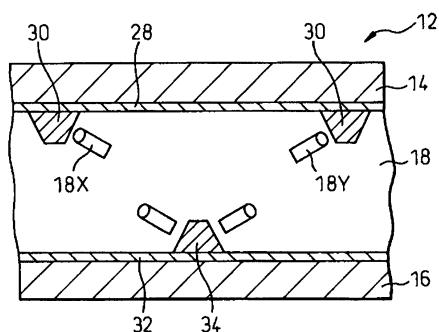
,

가

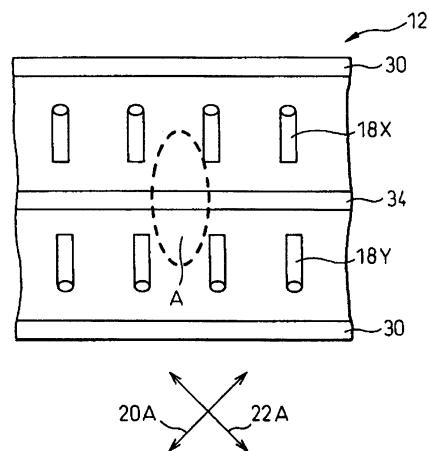
1



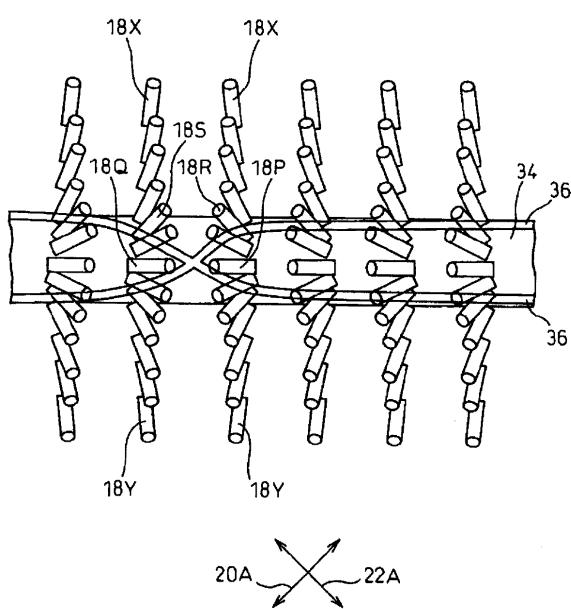
2



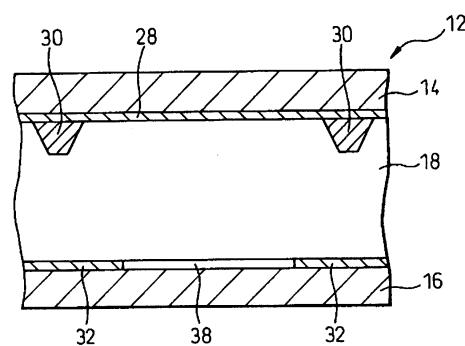
3



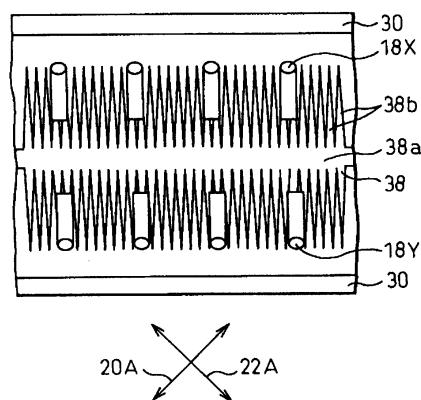
4



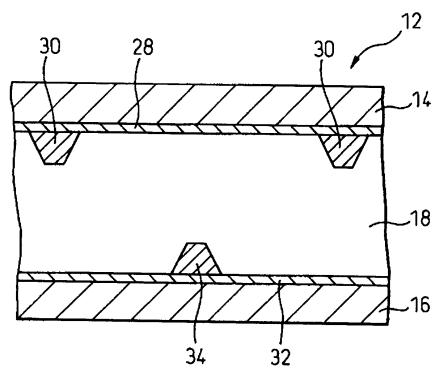
5



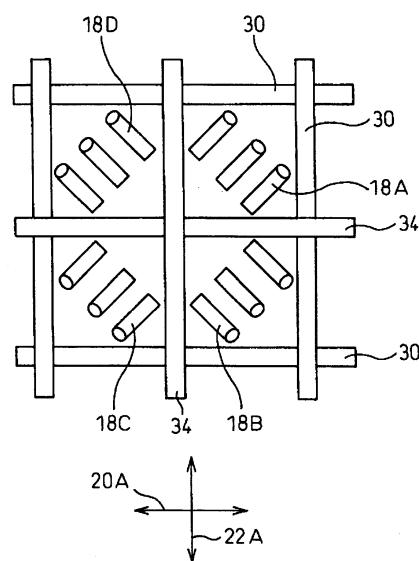
6



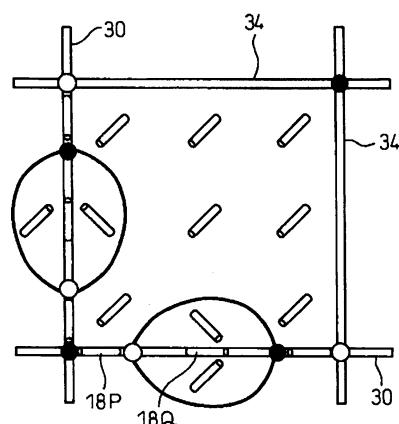
7



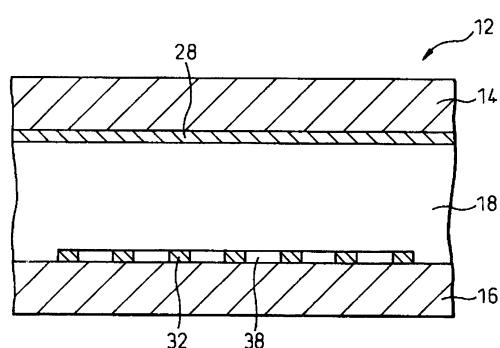
8



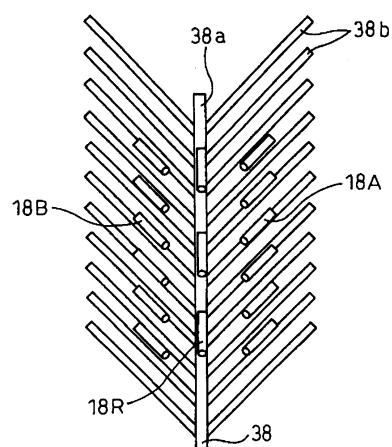
9



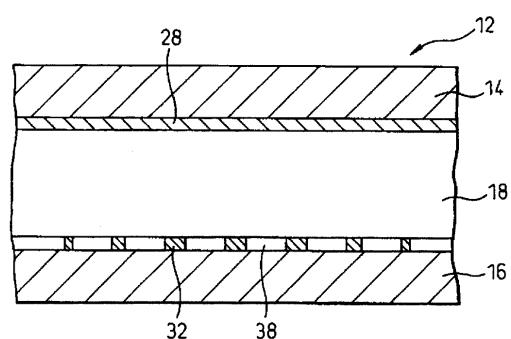
10



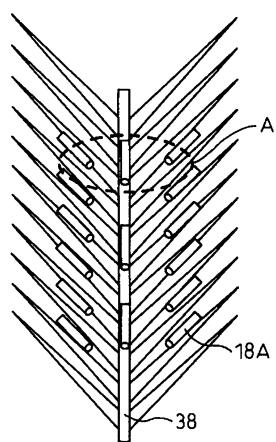
11



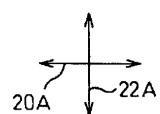
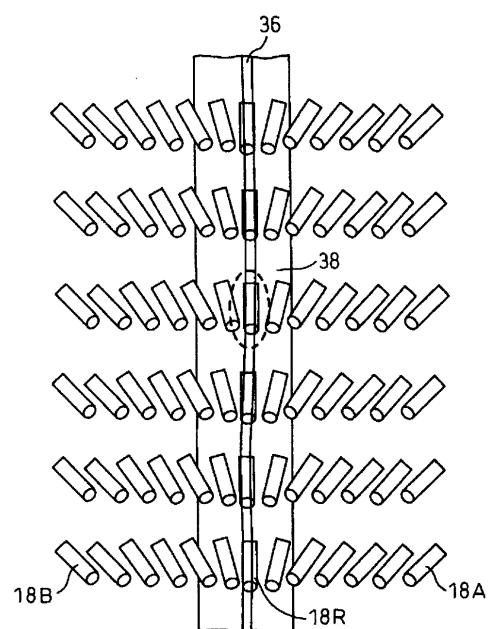
12



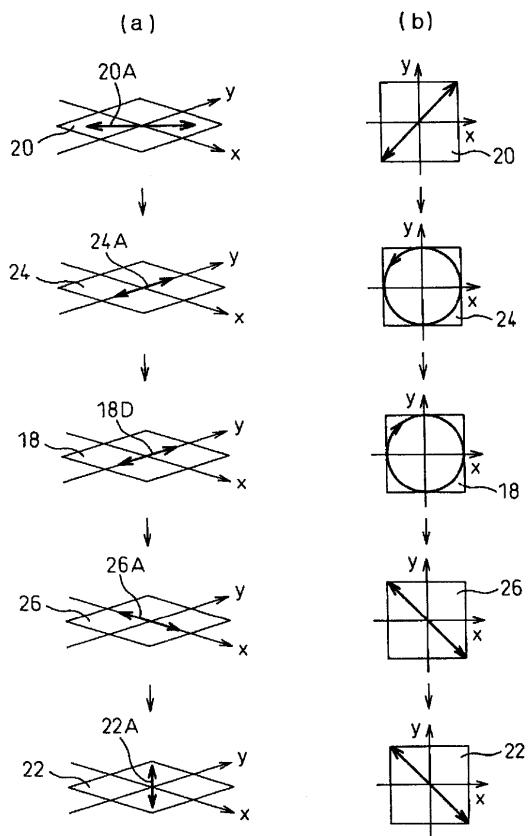
13



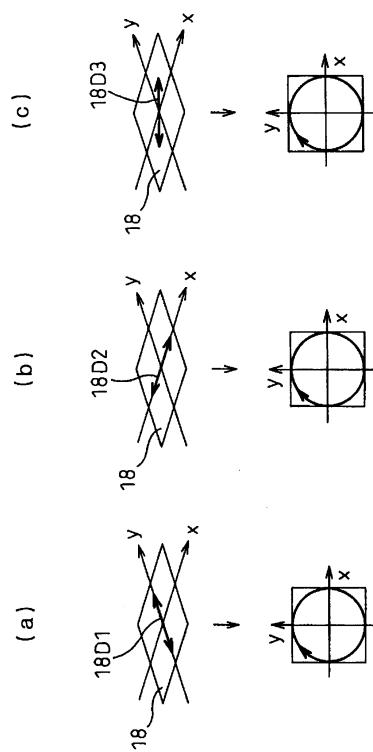
14



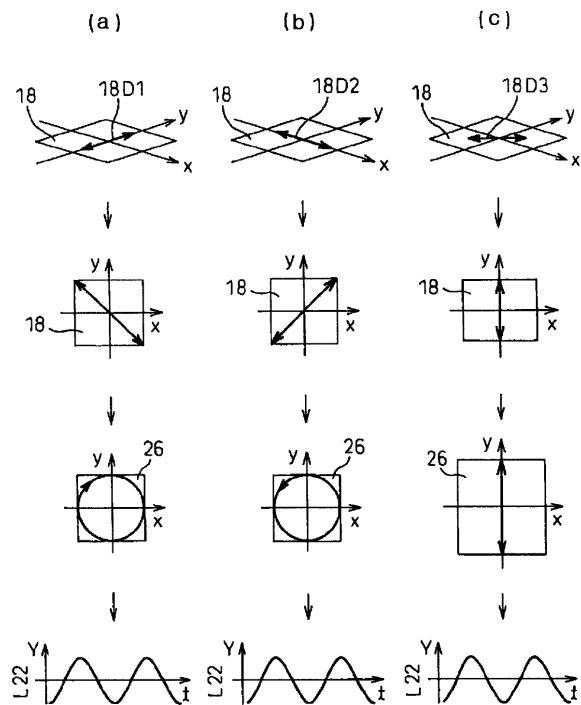
15



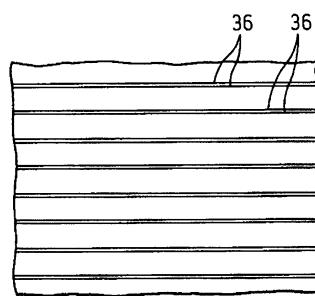
16



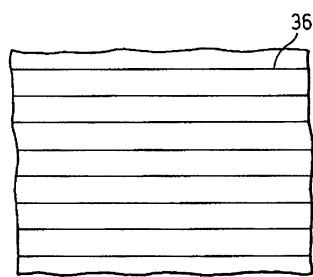
17



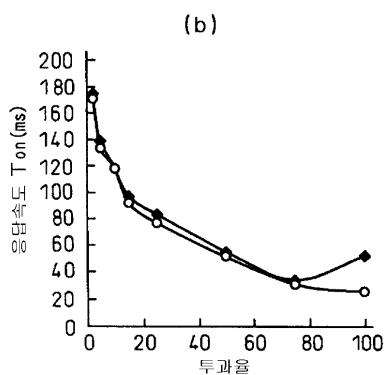
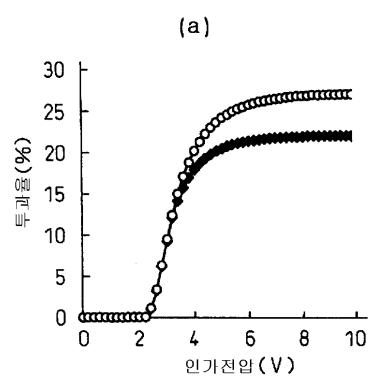
18



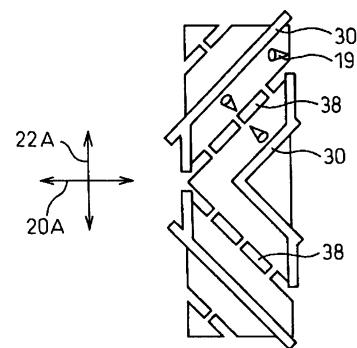
19



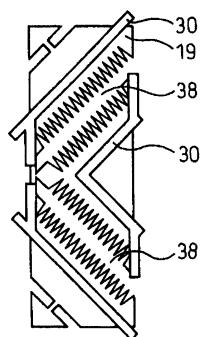
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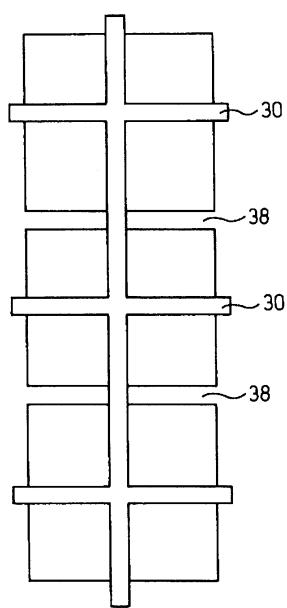
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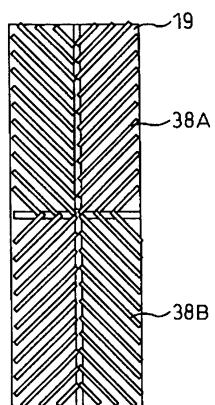
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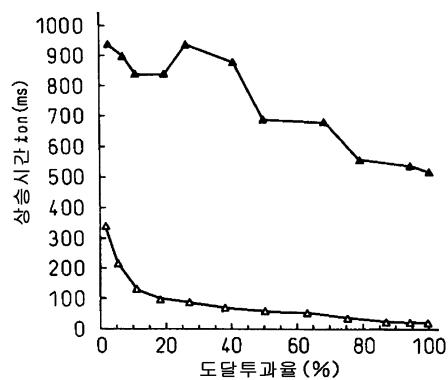
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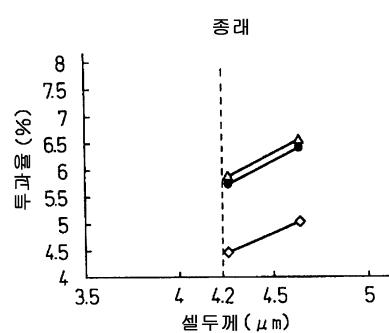
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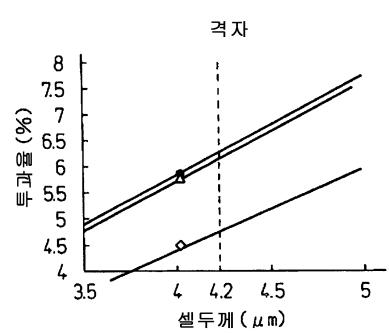
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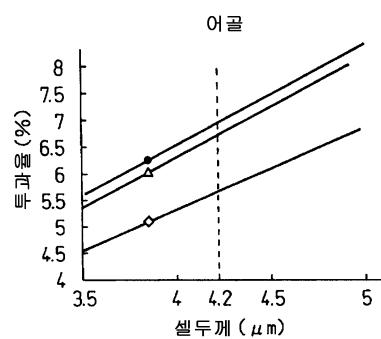
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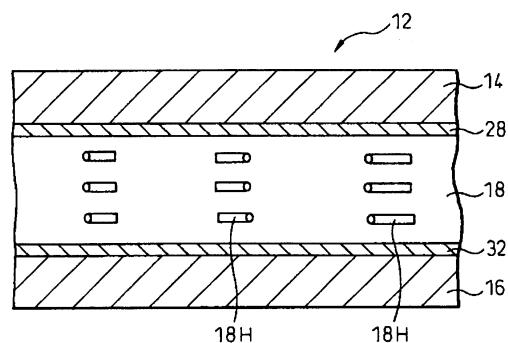
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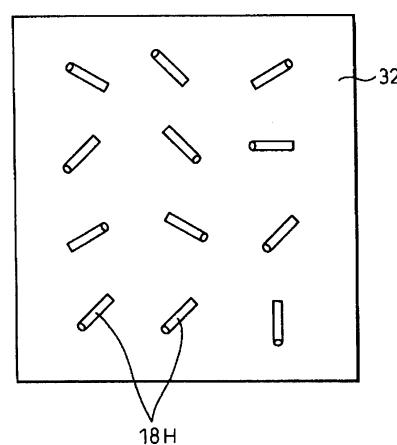
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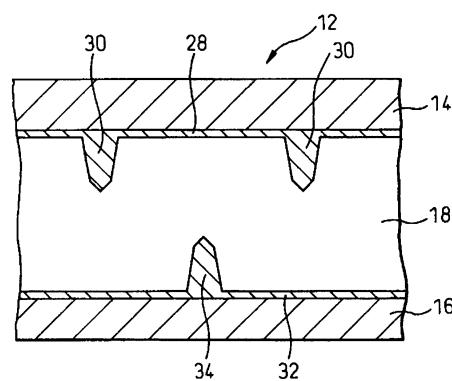
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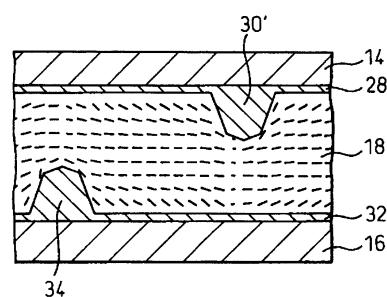
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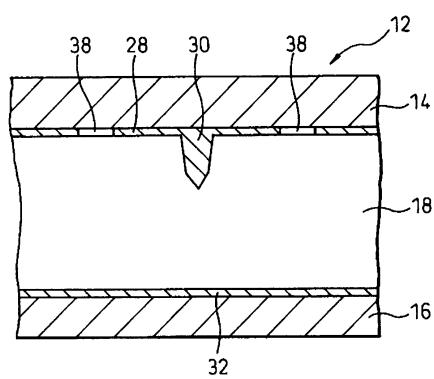
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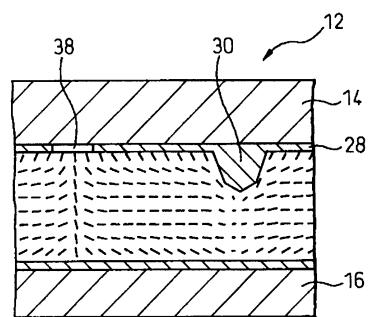
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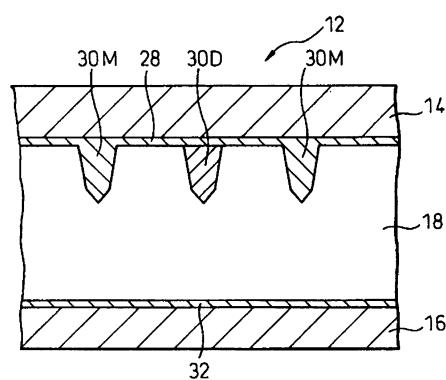
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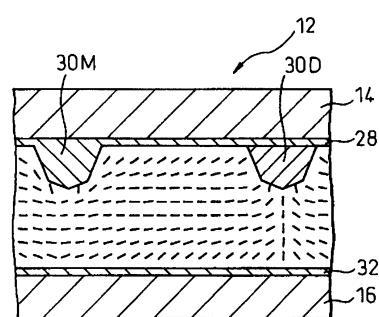
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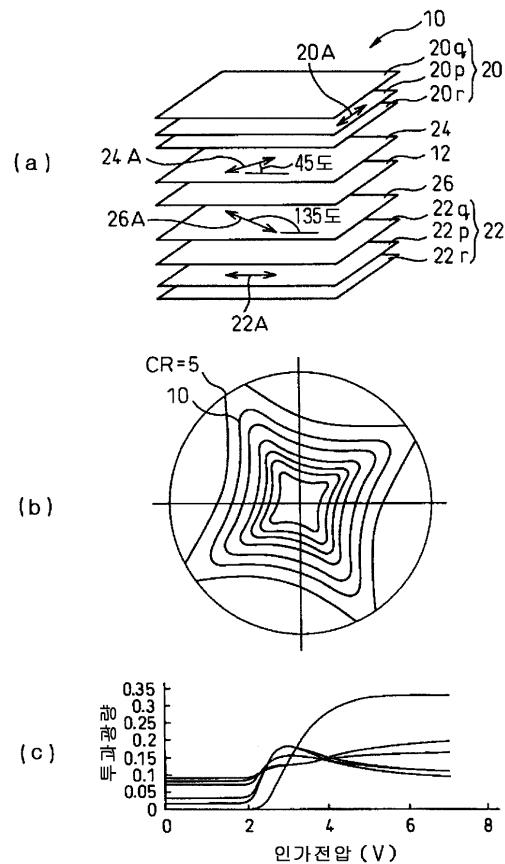
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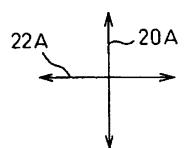
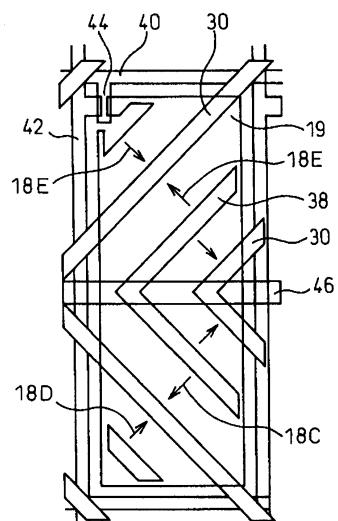
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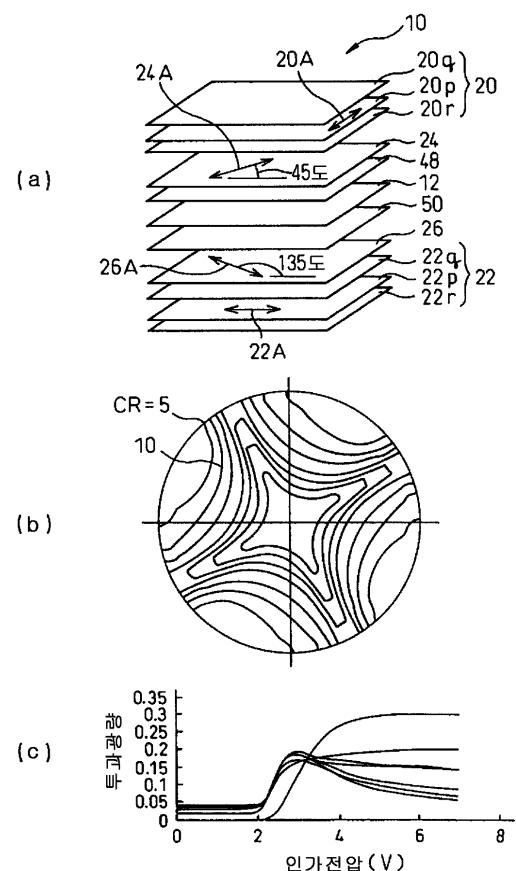


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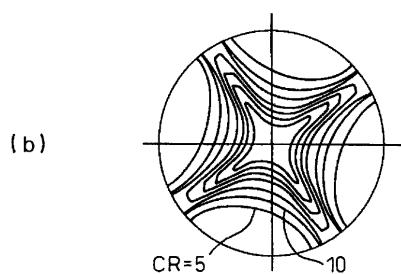
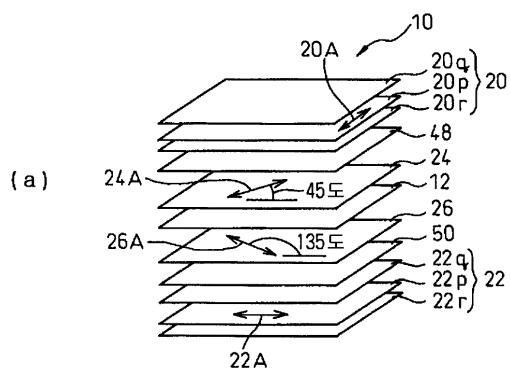


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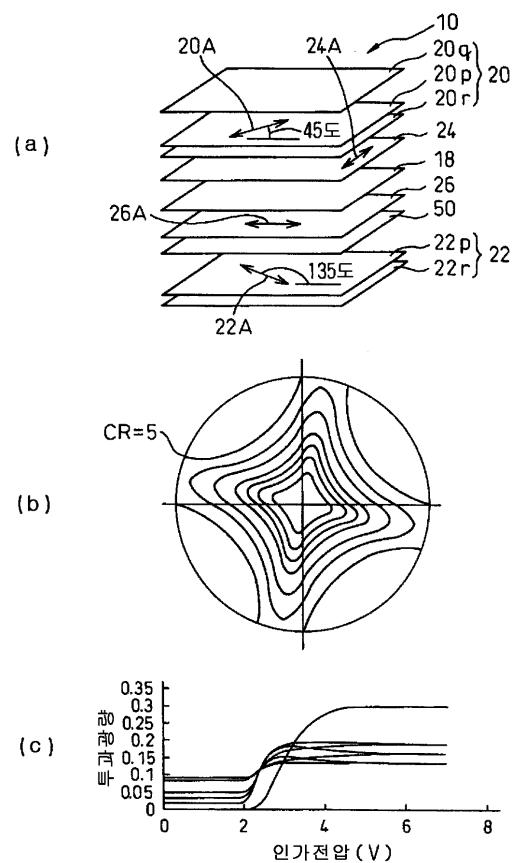


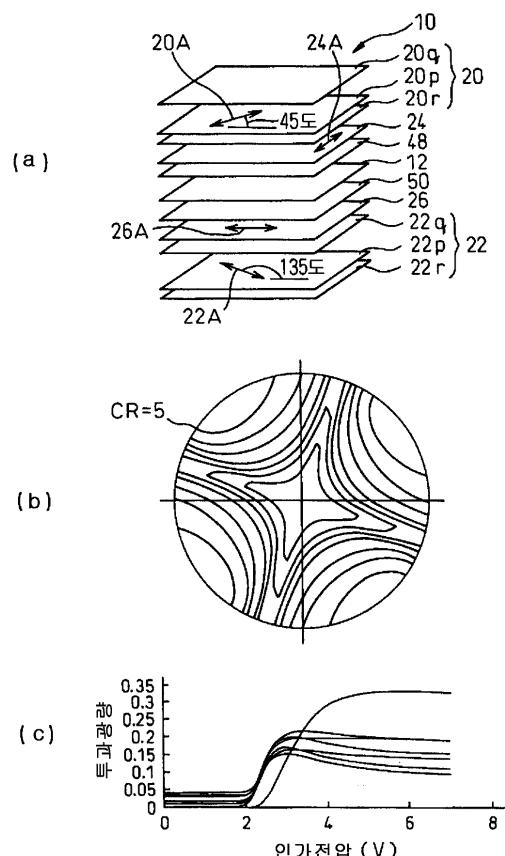


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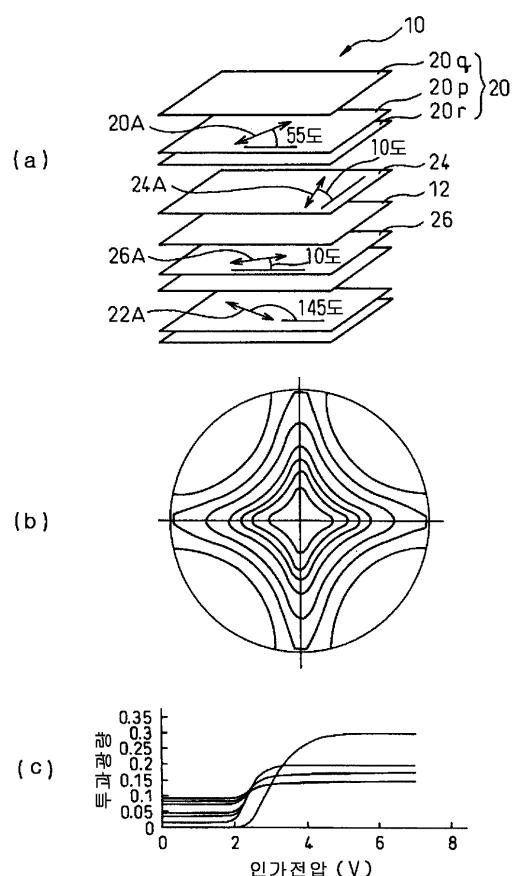


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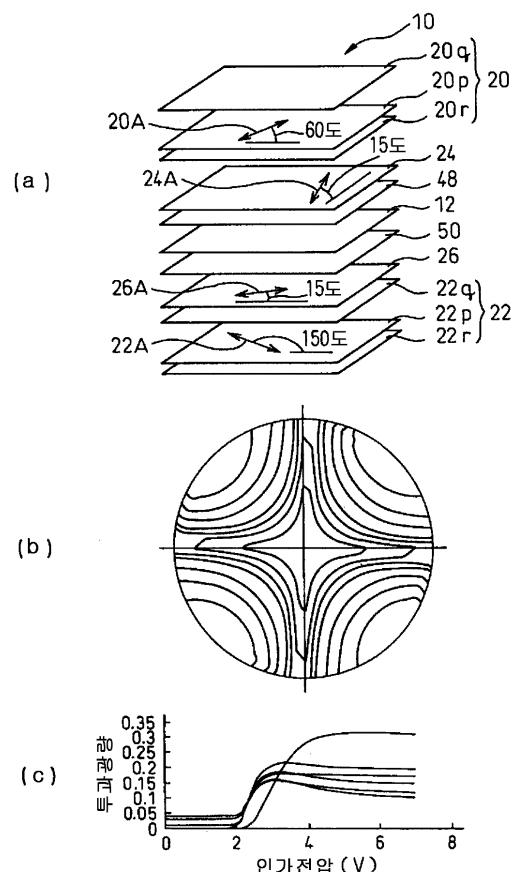




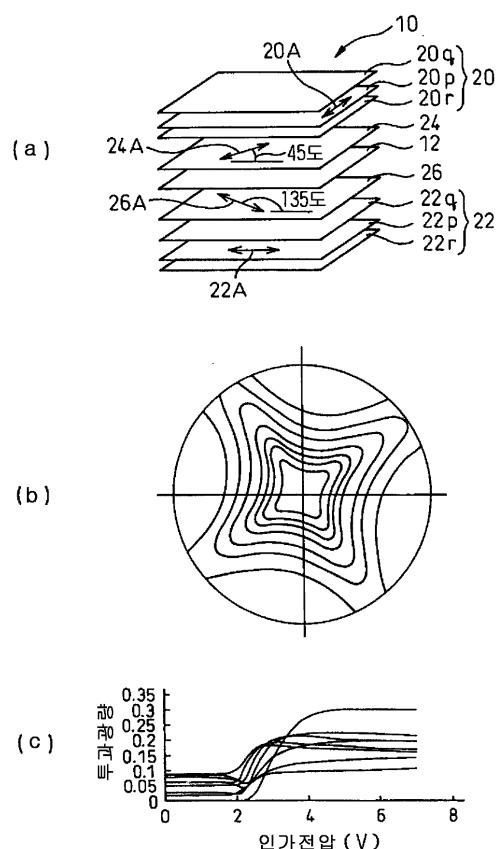
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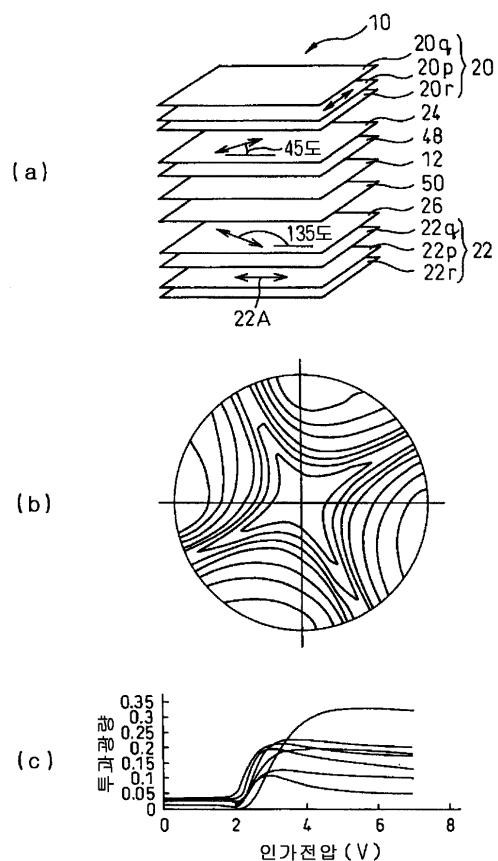


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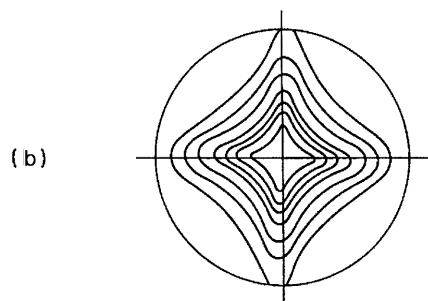
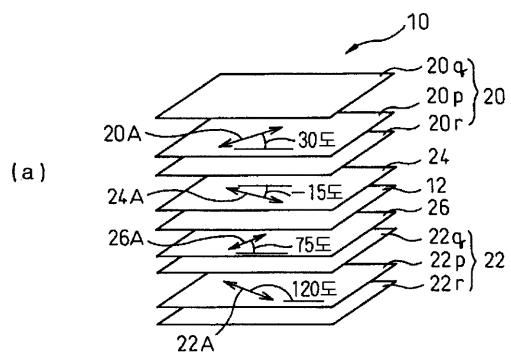


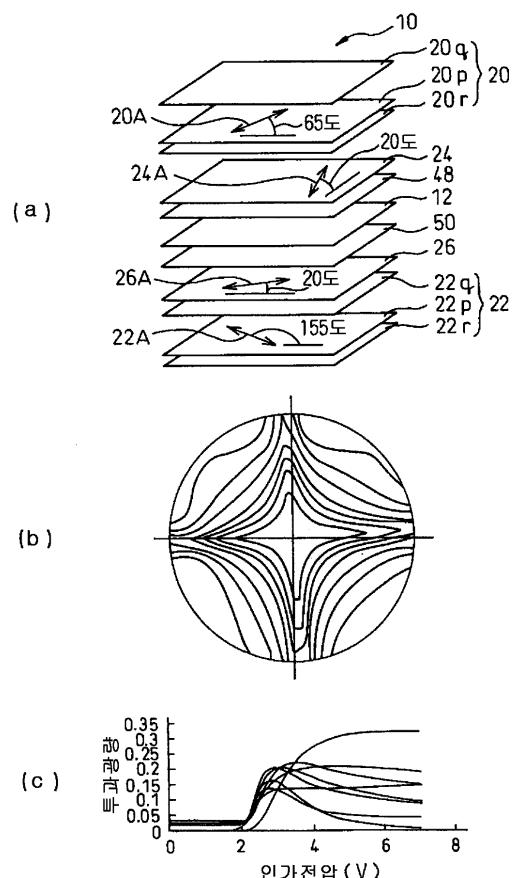
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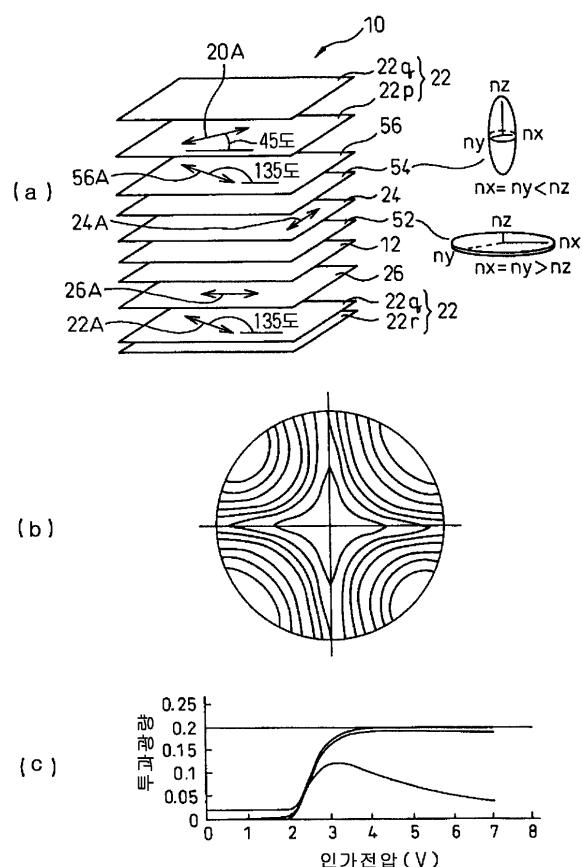


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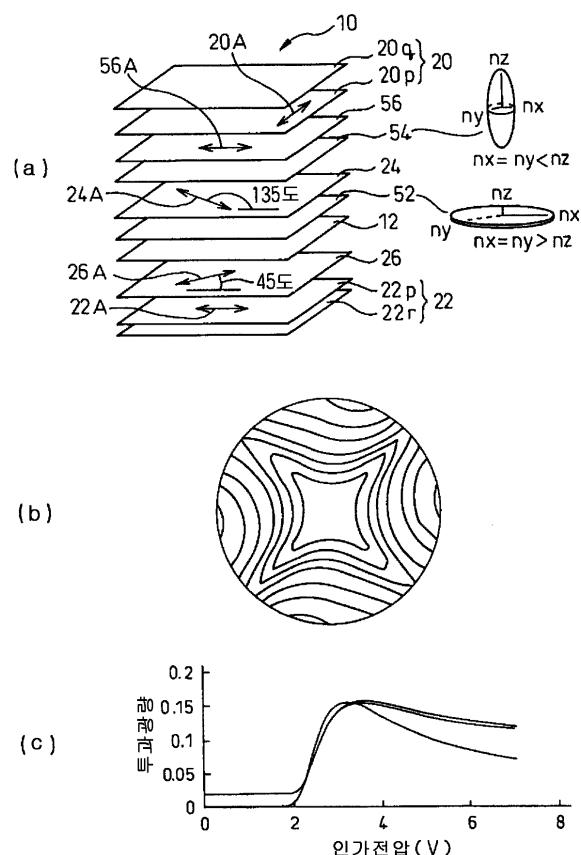


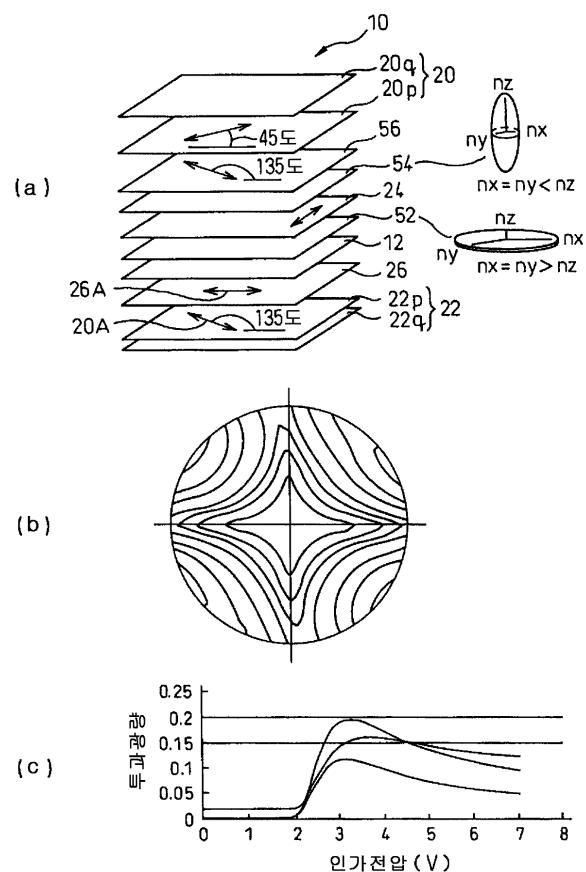


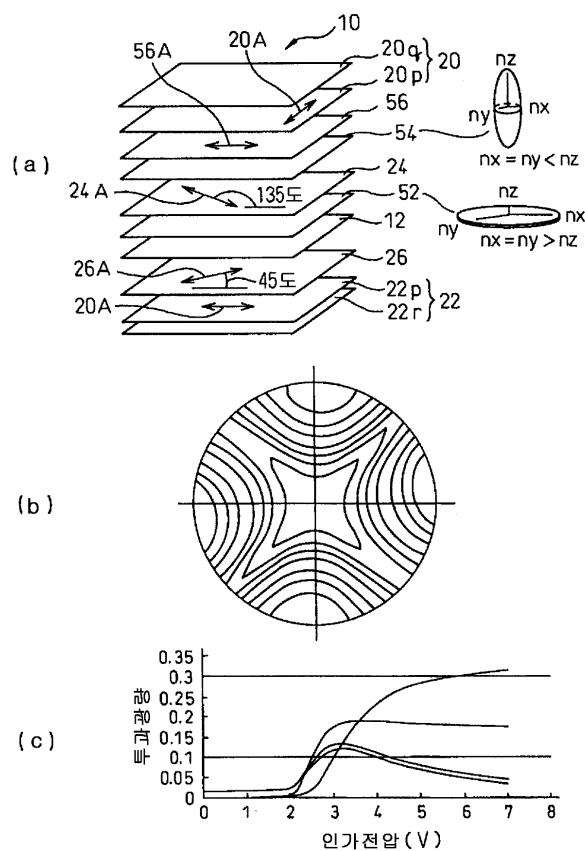
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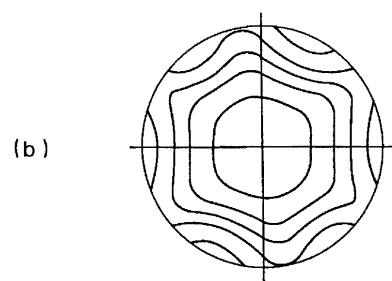
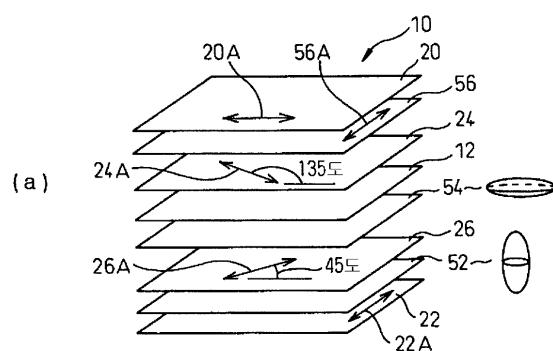
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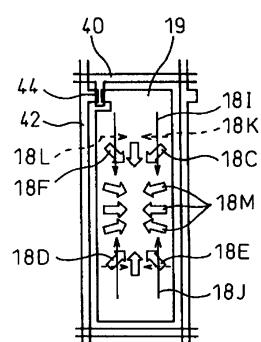




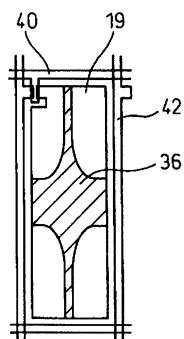
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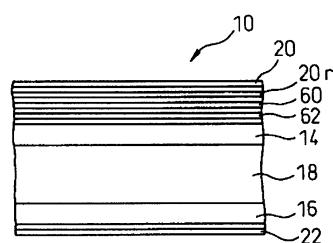
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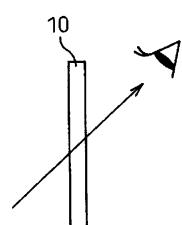


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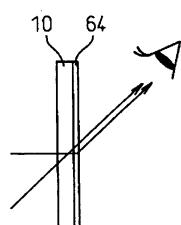


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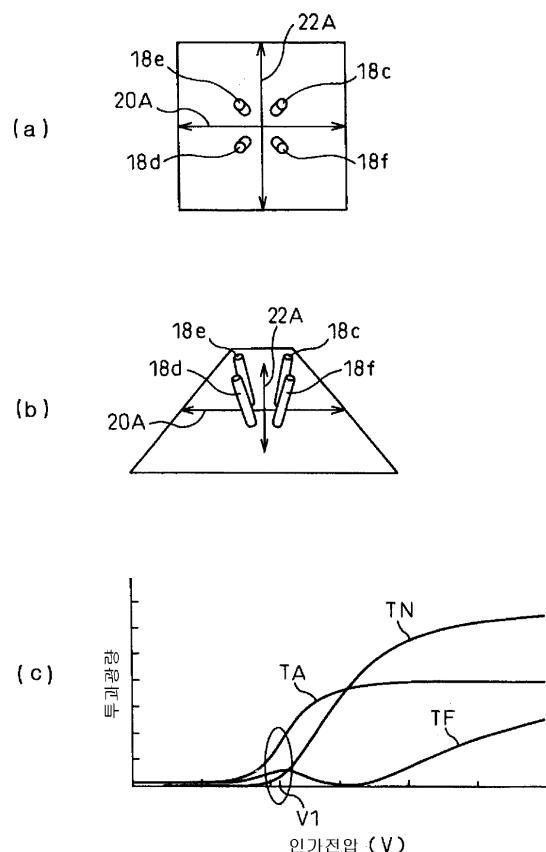
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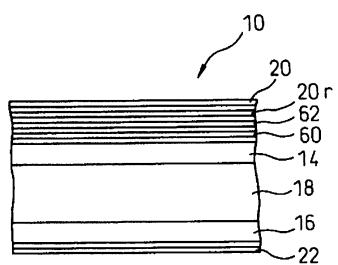
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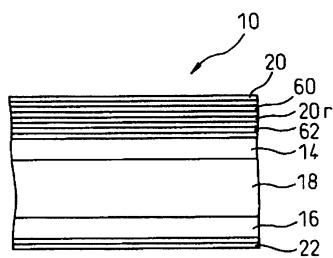
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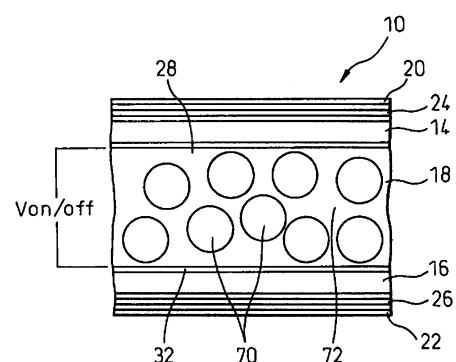
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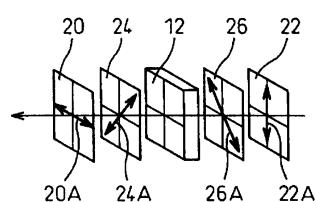
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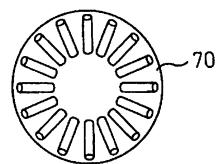
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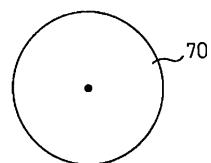
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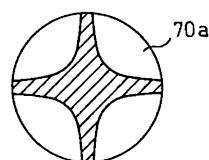
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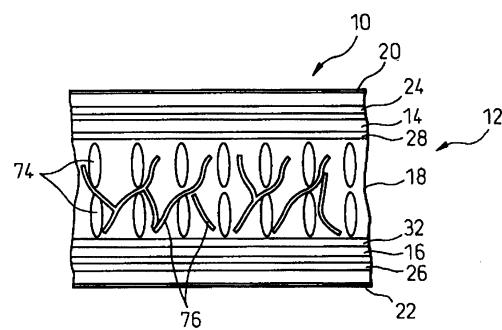
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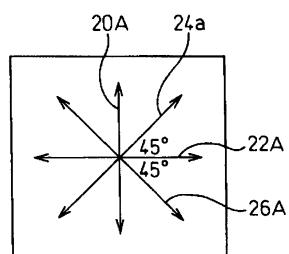
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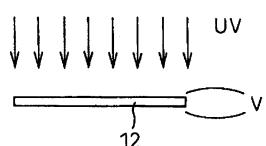
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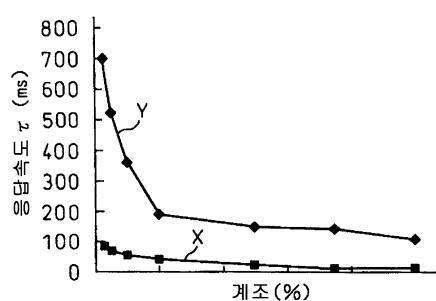
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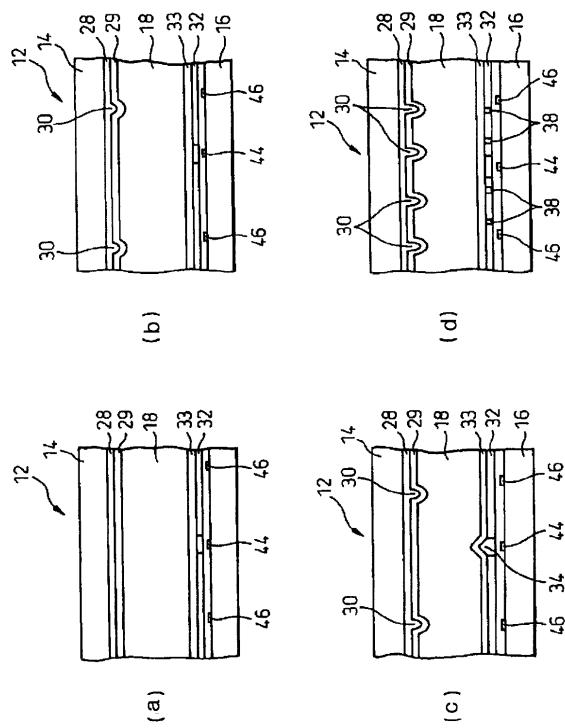
68



69



70



专利名称(译)	液晶显示器		
公开(公告)号	<a href="#">KR1020020077804A</a>	公开(公告)日	2002-10-14
申请号	KR1020020011830	申请日	2002-03-06
[标]申请(专利权)人(译)	夏普株式会社		
申请(专利权)人(译)	夏普株式会社		
[标]发明人	YOSHIDA HIDEFUMI 요시다 히데후미 OKAMOTO KENJI 오카모토 겐지 CHIDA HIDEO 치다 히데오 SASAKI TAKAHIRO 사사키 타카히로 HANAOKA KAZUTAKA 하나오카 가즈타카 TANUMA SEIJI 다누마 세이지 NAKANISHI YOHEI 나카니시 요헤이 INOUE YUICHI 이노우에 유이치		
发明人	요시다 히데후미 오카모토 겐지 치다 히데오 사사키 타카히로 하나오카 가즈타카 다누마 세이지 나카니시 요헤이 이노우에 유이치		
IPC分类号	G02F1/1335 G02B5/30 G02F1/13363 G02F1/1337 G02F1/139		
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代理人(译)	Munduhyeon Mungisang		
优先权	2001106283 2001-04-04 JP		
其他公开文献	KR100763500B1		
外部链接	<a href="#">Espacenet</a>		

## 摘要(译)

液晶显示装置本发明涉及一种液晶显示装置，本发明的一个目的是提供一种液晶显示装置，它能在宽视角范围内显示良好的显示并具有高亮度。 - 1 - 本发明的液晶显示装置包括液晶单元12，液晶单元12具有夹在一对基板之间的液晶层，第一和第二偏振器20和22设置在液晶单元的两侧，设置在第一偏振板之间的第一延迟板(24)和设置在液晶单元和第二偏振板之间的第二延迟板(26)，其中第一延迟板每个在平行于基板表面的平面中具有光轴24A和26A并且具有大约 $\lambda/4$ 的相位差，第一延迟板的光轴20A和22A与第二延迟板的光轴正交，第一和第二偏振片的偏振轴相对于第一和第二延迟片的光轴成45度排列，液晶盒12具有液晶分子的

排列并且通过极角改变和方位角改变来改变状态。1指教方面 液晶盒，  
基板，液晶层，偏振片，

