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(12)

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(A)

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(74)
:

(54)

, 가 , .
1 (10) 2 (20) (30) . 1 (10) 1 (12)
, 2 (20) (30) 2 (22) . 1 (10)
, (30) , 가 1 1 (16) (30) 가 ,
1 (16) (30) 가 1 , 가
(30) 가 .

| | | | | | | |
|----|---------|------|------------|-------|---------|-------------|
| 1 | , (b) | (a) | 1B - 1B' | (100) | 1 | , (a) |
| 2 |) | (31) | | (110) | , (a) | 가 , (b) 가 (|
| 3 | , (b) | (a) | 3B - 3B' | (120) | 1 | , (a) |
| 4 | , (b) | (a) | 4B - 4B' | (130) | 1 | , (a) |
| 5 | , (b) | (a) | 5B - 5B' | (150) | 1 | , (a) |
| 6 | 5 | (b) | | (30) | 가 | (EQ) |
| 7 | (a)~(d) | | (31) | | | |
| 8 | 31) | | (150) | , (a) | 가 , (b) | 가 () (|
| 9 | , (b) | 가 | (150) | (31) | , (a) | 가 |
| 10 | (a)~(c) | | | (16) | (12a) | |
| 11 | , (b) | (a) | 11B - 11B' | (160) | 1 | , (a) |
| 12 | | | (160) | (30) | 가 | (31) |
| 13 | , (b) | (a) | 13B - 13B' | (170) | 1 | , (a) |
| 14 | 13 | (b) | | (30) | 가 | (EQ) |
| 15 | | | (170) | (30) | 가 | (31) |

| | | | | | | | | |
|----------|---------|-----------|------------|-------|----------------|--------|------------|------------|
| 16 | 1 | | (180) | 1 | | | | , (a) |
| | , (b) | (a) | 16B - 16B' | . | | | | |
| 17 | 2 | | (200 | 200') | 1 | | | , |
| (a) | | | (200) | , (b) | | (200') | , (c) | (a) (b) 17 |
| C - 17C' | | | . | | | | | |
| 18 | 2 | | (210) | 1 | | | | , (a) |
| | , (b) | (a) | 18B - 18B' | . | | | | |
| 19 | 2 | | (220) | 1 | | | | , (|
| a) | | , (b) (a) | 19B - 19B' | . | | | | |
| 20 | (a) | | (210) | , (b) | | (220) | . | |
| 21 | (a)~(d) | 2 | | | (240, 250, 260 | 270) | 1 | |
| | | | . | | | | | |
| 22 | 2 | | (280) | 1 | | | | , (|
| a) | | , (b) (a) | 22B - 22B' | . | | | | |
| 23 | 2 | | (300) | 1 | | | | . |
| 24 | 2 | | (310) | 1 | | | | . |
| 25 | | | (310) | 1 | | 24 | 25A - 25A' | |
| | | | . | | | | | |
| 26 | 2 | | (320) | 1 | | | | . |
| 27 | 2 | | (300A) | 1 | | | | , |
| (a) | | , (b) | . | | | | | |
| 28 | 2 | | (300B) | 1 | | | | , |
| (a) | | , (b) | . | | | | | |
| 29 | 2 | | (300C) | 1 | | | | , |
| (a) | | , (b) | . | | | | | |
| 30 | 2 | | (300D) | 1 | | | | , |
| (a) | | , (b) | . | | | | | |
| 31 | | | (300D) | (330) | 가 | (31) | | |
| | | | . | | | | | |
| 32 | 2 | | (300E) | 1 | | | | , |
| (a) | | , (b) | . | | | | | |
| 33 | 2 | | (300F) | 1 | | | | , |
| (a) | | , (b) | . | | | | | |

| | | | | | |
|------------|---------|------------|-------------|--------|---------------|
| 34 | 2 | | (300G) | 1 | , |
| (a) | , (b) | . | | | |
| 35 | 2 | | (300H) | 1 | , |
| (a) | , (b) | . | | | |
| 36 | 2 | | (300I) | 1 | , |
| (a) | , (b) | . | | | |
| 37 | 2 | | (300J) | 1 | , |
| (a) | , (b) | . | | | |
| 38 | 2 | | (300K) | 1 | , |
| (a) | , (b) | . | | | |
| 39 | 2 | | (300L) | 1 | , |
| (a) | , (b) | . | | | |
| 40 | 2 | | (300M) | 1 | , |
| (a) | , (b) | . | | | |
| 41 | | | | (16') | , (a) (b) |
| , (c) | (a) (b) | 41C - 41C' | . | | |
| 42 | | | | | |
| 43 | | | | | 가 (V) |
| 44 | | 가 (31) | | | , (a) |
| 가 | | , (b) | | 가 | , (|
| c) (a) (b) | | 44C - 44C' | . | | |
| 45 | | 가 (31) | | | , (a) |
| 가 | | , (b) | | 가 | . |
| 46 | (a) (b) | | | (16') | . |
| 47 | 2 | | (290a 290b) | 1 | |
| , (a) | | (290a) | , (b) | (290b) | . |
| 48 | 2 | | (290c 290d) | 1 | |
| , (a) | | (290c) | , (b) | (290d) | . |
| 49 | 2 | | (330) | 1 | . |
| 50 | | (330) | 1 | | 49 50A - 50A' |

51 2 (340) 1 .

52 2 (350) 1 .

53 (350) 1 , (a) 52 5
 3A - 53A' , (b) 52 53B - 53B' .

54 2 (360) 1 .

55 (190) 1 ,
 (a) , (b) (a) 55B - 55B' .

56 (370) 1 .

< >

10 : TFT

11, 21 :

12 :

16, 16' :

16s :

16t :

20 :

30 :

31 :

100 :

가 , 가
 (TN) , (STN)
 가 .

TN STN , 가 , 가
 , 가
 , DAP(Deformation of vertical Aligned Phase)
 , (ECB: electrically controlled birefringence)

DAP , 가 TN
 , 가
 () ,
 , 가
 (rubbing streaks)

2000 - 47217) . 가 ()
 가 (6 - 301036
 가 가 ,
 가 가

가 , 1 , 1 , 2 , 1 2
 , 1 , 2
 가 1 1 가 , 1 2
 가 , 가 1 1
 가 , 가
 1 1 ,
 1 1 1 , 가
 1 1 1 가 , 1 1 , 1 1

2 , , 가 , , 가 , 1 2 2
가 , , 가 , 1 2
2 , 2 , 1 2

2 1 1 2 가 , , 가
1 1 2 , 1 2 2 ,
1 2 2 ,

2 1 2 가 , 1 2 1 2

1 2 , 2

1 1 1 ,

1 1 1 ,

1 1 1 , 1 2

1 2 가 , , 2
1 , 2

1 1 1 ,

1 2 2 ,

1 2 2 ,

1 1 1 , 1 1 ,

1 1 1 , 1 1 ,

1 2 2 , 2 2 ,

1 2 2 , 2 2 ,

50 1 1 , 5 85 ,

50 2 2 , 5 85 ,

가 () , 가 , 1 2
 1 1 1 2
 1 , 1
 1 , 2
 2 , 2
 1

가 (TFT) ,
 가 ()

가 (anchoring effect)
 가 가 가 가 가
 가 가

1 ()
 2 가

가 가
 ()

가 ()
 , 가
 , 가
) 2 , 4 (

(crossed Nicols state)
 2) (

()

가 ()
 1
 가

/ 가
 , (4)
 () ()

(/) 가 /
 , 가 / / 가
 , 가

/ /

1 (a) (b) , 1 (100) 1
 , 1 (b) 1 (a) 1B-1B' . 1 (a)
 . 1 (b) 가

(100) , ('TFT') (10) , (' ')
 (20) , TFT (10) (20) (30) . (30) (31)
 가 , TFT (10) (20) (30) ()
 , (30) 가 , 1 (b) (30) (31) ,
 , (30) (' ') 85 가

(100) TFT (10) () (11) (12)
 (20) () (21) (22) (30)
 0) 가 . (12) (22) 가 , (3) (30)
 가 가 (30) , (30)

(100)가 (12) (16)가 (16) (16s)
 (16t) . (16s) (12) () (11) , ()
 . (16t) , (16)

(16) () (16) ()
 .), 1 (b) (31) (16s) (16t)
), (16) (16) (11) () 1 (a)
 (16) (16) . (31)

(30) 가 , (16) (16s)
 (31)가 , 가
 2 (a) (b) . (31) , 가

2 1 (16) (110) 2 (a)
 가 , 2 (b) 가 ((intermediate gray scale voltage)) (31)

2 (a) 가 , (31) (16) (31)
 (16) (SA) 가 , 2 (b)
 , 2 가, (16)
 (SB) (16) 2 (b) 2 (16) (SA) 2
 (SB) 1 (16)
 4 (16)가 , 4 (16)
 (SB) (31)

(16) , (16) (11)
 , 2 , 4

(16) (16s) () , 가 (31) 5 85
 (31) (16s)
 (16s) () 50 (16)

(16) (16s) (31)
 가
 (12a)
 3μm (16) (30) 가 3μm , 0.5μm~
 (16) (30) 1/6

3 (a) (b) , 1 (120) 1
 3 (a) 3 (b) 3 (a) 3B-3B'

(120) TFT (10) (30) 1 (16) 가 , (20)
 (30) 2 (26) 1 (16) 1 (16) (100) (16)
 , 2 (26) 1 (16)

3 (a) , 9 1 (16) 4 , 4
 2 (26)가 . 4 2 (26) 1
 (16) 2 (26) , 가 (30)
 가

2 (26) 1 (16)
 , 2 (26) , 1 (16)

4 (a) (b) , 1 (130) 1
 4 (a) , 4 (b) 4 (a) 4B-4B'

(130) TFT (10) (30) 1 (16) 가 , (20)
 (22) (22a) (22a) (ITO)
 (22) 가 1 (16) , (100) (16)
 (22a) (120) 2 (26) 가
 , 2 (26) , 가 (22a) 2 (26)
 가 (22a) . (22a) . 2 (26)
 (22a)

5 (a) (b) , 1 (150) 1
 5 (a) , 5 (b) 5 (a) 5B-5B'
 (150) (100 200) 가 , (20)
 TFT (10) , (16) (12)
 (12a)

5 (a) , 9 (12a)가 4 , (12a)
 (16)가 1 (12a) (12a) , (16) (12a)
 (12a) (16)

(30) 가 가 , 5 (b) , (16)
 () . 1 (b) (12a) (12)
 (16) 가 (12) (22) 가 , (12a)
 가 , (31) . (12a) 6~
 8

6 , 5 (b) (30) 가 (EQ)
 (EQ) , (12) (22) (30) , (12) ()
 22) (12) (12a) () (12) (12a)) (30) 가 ,
 (12a) () () (12a)) (30) , (31)
 (EQ) 가 . (31) , (31)
 (EQ) ()) (torque)가 .
 (12a) (31) , (12a) ,
 , () , (EQ)

7 (31) . (30) 가 ,
 가 (31) , (EQ) 가 가 .
 7 (a) (31) (31) (EQ) 가 가
 , (31) 가 (EQ) 가 가
 (31)가 . (30) , (31) ,
 (30) 가 가

6 (EQ) (150) (12a) , (31) (EQ) ()가 , 7 (b) (31) , (EQ) () (31) (EQ) 가 (31) , 7 (c) (EQ) (31) (EQ) (31) () ,

7 (d) , (EQ) 가 가 , (EQ) (EQ) (31)가 「 (EQ) 」 , 「 (EQ) (EQ) (150) (12a) (16)가 , 가 8 (a) 1)가 (31) , (3)

(30) 가 , 6 (EQ) 가 (30) , (12) (12a) (31)가 (16) (31) 가 , 가 (12a) , (31) (31) 가 (12a) (16) (31) (31) , (12a) (16) (8 (b) , 2 (b) 8 (b) , 2 (b)) .

8 (a) (b) (31) (20) 9 (a) (b) . 9 (a) 가 , (16) . 9 (a) .

가 9 (b) (31)가 (16) . (12) (10) 가 , (31)가 , (12a) 가

9 (b) , (150) 1 , 가 9 (16) 4 9 , 9 (16)가 4 , (31) () 4 . 13 ,

가 , 가 (가) , (가) 가 . 가 .

(16) 가 ,

(31)

1 (16) (150) (12a)가 (12) 2 (120))

(12) (12) (12)

(12) (12a) 가 (12a)

10 (b) (16) 10 (a) (12a) , 10
(c) (16) 가 (12a) (12) (12e)가
(16) (12) (12e)가
(16)

(31) 9 (b)

() 가
(30) (31) (31) (31) (31)
0) (30) () , 1 (3)

(12a) 가 , 가 (31) ,

(31) 가 , (31) , (unevenness)
(30) 가 가 (31)

(30) 가 , (31)

(30) (31)

(31) , (消光)

(30) (31) (31) , (旋光性) 가 90

(12a) (16) / (26) (12a) , 11 (a) (b) , 1 (160) 1 11 (a) , 11 (b) 11 (a) 11B - 11B' (160) , (120) TFT (10) (150) TFT (10) (120) (20) (20) TFT (10) (12) (12a)가 (12a) 1 (16)가 1 (20) (30) 2 (26)가 , TFT (10) 1 (16)((12a))가

가 (160) (20) (31) 가 12 (16) 1 (16)((12a)) , (160) 1 (16)가 4 (12a)) 2 (26) , 9 1 (16)가 4 (31) () .

(160) TFT (10) , 1 (16) (12a)가 , 3 (120) 13 (a) (b) , 1 (170) 1 13 (a) , 13 (b) 13 (a) 13B - 13B'

(170) (160) 2 (26) , (22) (22a) 4 , (160) 2 (26) 가 (22a) 14 .

14 13 (b) (30) 가 (EQ)
 . 14 (12a) (22a) 가 .
 (22a) (26) , (26) , 가 ,
 (26) 가 , 2 (26) , 가 ,
 . (22a) , 2 (26) 가 .
 . 2 (26) (22a)

가 (170) (20) (31)
 15 . 15 , (170) 1
 가 , 9 1 (16)((12a)) 9 , 9 1
 (16)가 4 (22a) 4
 . 13 , (31) () .

(20) 16 (180) (22)
 (22a) , (22a) 2 (26) .
 (2)

, , , 1 가 , , 가 .
 , 가 , , 가 .
 가 가 .

2 (" ")

17 (a), (b) (c) 2 .
 17 (a) (200) , 17 (b) (200') , 17 (c)
 17 (a) (b) 17C - 17C' ,
 , TFT .

(200 200') (212) (212t) (212r) (212t)
 (T) , (212r) ()
 R) . (212t) ITO , (212r)
 . (212r)

(T) (30) , (R) (30) (T)
 (30) (R) (30)
 , (T) (30) (R) (30) 2 .

213) (30) , (212r) (213) , (212t) (213a) (212t) TFT() (212r) (213) (213a) (212t) (212r) (213a)

(T) (200 200') , 17 (a) (b) , (R) () 가 TFT 가 (T) (R) 가 ,

(216) TFT (200 200') (212r) (212a) , (212t) 1 (222) (230) 2 (226) (230) 가 , 1

6) (212t) (216) , (212t) (213) (213a) , (21) (212r) 가 , 가 (212r) (212r)

30) (R) (212a) 2 (226) , 4 1 (1) 가 18 (a) (b) 2 (210) 1 (216) , 18 (b) 18 (a) 18B - 18B'

0') (T) , (R) (200 20 (212r) (212a) (R) (222) 6 2 (226)가 . 6 2 (226) 2 (216)가 . 1 (216) 2 (226) , 8

19 (a) (b) 2 (220) 1 (216)가 . 19 (a) , 19 (b) 19 (a) 19B - 19B'

(220) (210) (222) 2 (226)가 , 18

(226) , ,
2 (226)
1/4 ((1/4) × 4), 1/2
((1/2) × 2). (220) (210)

(220) () (226) , (226)

20 (a) (210) 20 (b) (220)
(220) (226)가 ,

(226) 가
21 (a), (b), (c) (d) , (240, 250, 260 270)

21 (a) (b) , () (212t)
) () (212r) ,
2 (226) (21 (a)),
(21 (b)). ()

() (212) , 21 (c) (d) (260 270) ,
() (212r))
21 (c) 2 (226) , 21 (d) 2
가 2 (226)
(226) 2 (226)
(226) (19 (b))

, 21 (a) (b) 2 (226) , (212)

TFT 1 (216) , 22 (a) (b) (280) ,
(T) 2 (226)

23, 24 25 (300 310)

(300 310) TFT(342) , TFT(342) (343) , TFT
 (342) (344) (312t) TFT(342)
 , (312r) (25 313) (312a) (312t)
 (312r) , TFT(342) (343) (344)
 (300 310) (345) , (345)
 (347) (312r)

23 (300) 2 (T)(25) 가 , 1
 (316)가 . 2 (326) , (343)
 (344)

24 25 (310) , (T) ((326)가 , 2 (32))
 300) . (347) 2 (326)가 . 2 (32
 6) , , 가 가
 (345) , 2 (326)(1 (316) (312a))
 , 2 (326)
 . 25 , (343) 2 (326)
 , (343)

TFT 1 (316) , 26 (320) ,
 (T) 2 (326)

1 가 ,
 () 가 ,

27 28 , 가 (300A 300B)

(300A) 27 (a) (b) , TFT 1 (316) , (316) (T) 1 (316) ,
 2 (326) . 1 (316) (T) , 2 (32)
 6) (R) . (312r) (306) (316)
 326)가 .

(T) 1 (316) , (R) 2 (326)
 . (T) (R) (306) (312r)
 (306) , (306)
 (T) (330)
 (R) (330)

28 (a) (b) (300B) , TFT 1 (316)가 ((R) , , 가 2 (326)가 (T) (30 0A) , , 가 .

29 30 , 가 (300C 300D) .

29 (a) (b) (300C) TFT 1 (316) (T) (R) , 30 (a) (b) (300D) (326) (T) (R) (300C 300D) , (312r) (306) 가 .

(T) , (R) (306) (300C 300D) , (306)가 ((312r)) (306)가 (T) , (R)

06) ()가 , 31 , (306) (3 (가, , 1 (316) (31 (31)) (T) (R) , (306)) (31) 3 .

1 가 () 가, () (T) (R) , , , , , .

가 , 가 90 가 (88 ~89) (pretilt angle) 가 가 .

32 33 (300E 300F) , (300E 300F) 32 33 (300E 300F) (R) (R) 가 , (R) .

32 (a) (b) (300E)가 2 (326) (T)
 , 33 (a) (b) (300F) , TFT 1
 (316) (T) .

33 (a) (b) (300F) , 가 ((1 (316))가 ,
 (306) TFT (T)) , (313a)
 (313) () , .

34, 35 36 가, ()
 (300G, 300H 300I) , (R)
 (330) 2 (326')가 3
 4, 35 36 , 2 (326') , TFT ()
 (312r) (322)) , (330)

가 , (330) 가 ,
 가 가 ,
 I) , 2 (326')가 가 (300G, 300H 300

34 (a) (b) (T) 2 (326) ,
 (R) 2 (326') , 가
 . 35 (a) (b) (T) 2 (326) ,
 (R) 2 (326') ,
 가 , 36 (a) (b) TFT
 a) 1 (316) (T) , (313) (313)
 1 (316) , 가 .

27~ 36 , (T) (R) , 37
 38 (300J 300K) , (R) (T)
 . 37 (a) (b) (T) 2 (R)
 38 (a) (b) (T) () , ,
) TFT (R) .
 가 가 (T) , (R) ,
 가 , .

39 40 (T) 2 (R)
 (300L 300M) .

39 (a) (b) (300L) , (T) 2 (R) ,
 2 (326, 326') , (R) 2 (326')

40 (a) (b) (300M) , TFT 1 (316) ((R))
 T) 가 , 2 (326') (R) . (R) T
 FT 2 (326') 1 (316) (T) , 가 .

41 (a), (b) (c) , ,
 (16')

41 (a), (b) (c) (16') (16s) (16t) 가 , (16s)
 (12) ((11)) () . (16t)

(30) (31) (16') , (16s) , (31)
 41 (a), (b) (c) (16')
 , 가 가 .

42 (16')
 (msec)
 42 가 (μm) , + ,
 42 오 , 가
 42 , 가

가 ,
 (31) ,

(16') , (16') ,
 가 , 가 ,

43 가 (V)
 43 ,

$I_+ / (I_+ + I_x)$, 45 I_x
 , 0.5가 , 가 , 0 1 .
 , 가 43 가 , 0.5
 , 가 가 가

0.5 가 , 가 0.5 . 43 , 가

가 , 가 (c) 가 (31) 44 (a), (b) (c) . 44 (a), (b) (16')가 , 44 (a) 44 (b) (16)가 , 44 (c) 44 (a) (b) 44C - 44C'

44 (c) 가 , (16s) (31) 가 (31)

가 , 가 44 (a) (가 1 (FD) 2 (SD)) (31) , 가 (31) 가

(31) 44 (b) , (16s) 가

(31) , 가

가 가 45 (a) (b) . 45 (a) (b) 가 (16)가 , 45 (b) (16')가

16s) (31) (16)가 , 가 44 (b) , (가 () (31) 가 , (16s) (31)가 , 45 (a) (30)

(31) (16')가 , 가 (31) 1 (FD) 2 (SD)) , 44 (a) 가 (30) 가 , (16s) 45 (b) (31) 가 45 가 (31) 1 (FD) , 45 2 (SD) (31)

가

(16') , 41 (a) (b)
 (16')
 가 46 (a) 4 1/4
 , 46 (b) 4 1/4 , 41 (a) (b)

TFT

47 (a) (b) (290a 290b) , (226')
 ((212t)) , 48 (a) (b)
 (290c 290d) , (226') ((212t)) ((212r))
 , 47 (a) (b) 가 ,
 48 (a) (b) 가

47 (a) 48 (a) 가
 (226') , 47 (b) 48 (b)
 가 (45) (226') ,
 가 , (226') (가)

49, 50 51 (326')
 (330 340) , 49 (330)
 , 50 49 50A - 50A' , 51 (340)
 23, 24 25 (300 31
 0)

49, 50 51 (330 340) , 2 (T) 가 ,
 (322) (326')가

49 50 (330) , 가
 (326') , 51 (340) ,
 가 (45) (32
 6')

49, 50 51 (330 340) (T) (326')

, (R) (326') , 52, 53 (a) (b)

(350) , (T) (R) (326')

52, 53 (a) (b) (350) , (326')

, 54 (360) , (326')((326')

) 가 (326')

() 가 , (TFT) 가 ,

55 (a) (b) 1 (16) 2 (26')

, 55 (b) 55 (a) 55B - 55B' 55 (a) (190)

(190) TFT (10) (30) 1 (16) , (20)

(30) 2 (26') . 1 (16) 가 , 2

(26')

55 (a) 9 1 (16) , 4 , 4

2 (26')가 . 4 2 (26')

1 (16) 2 (26')

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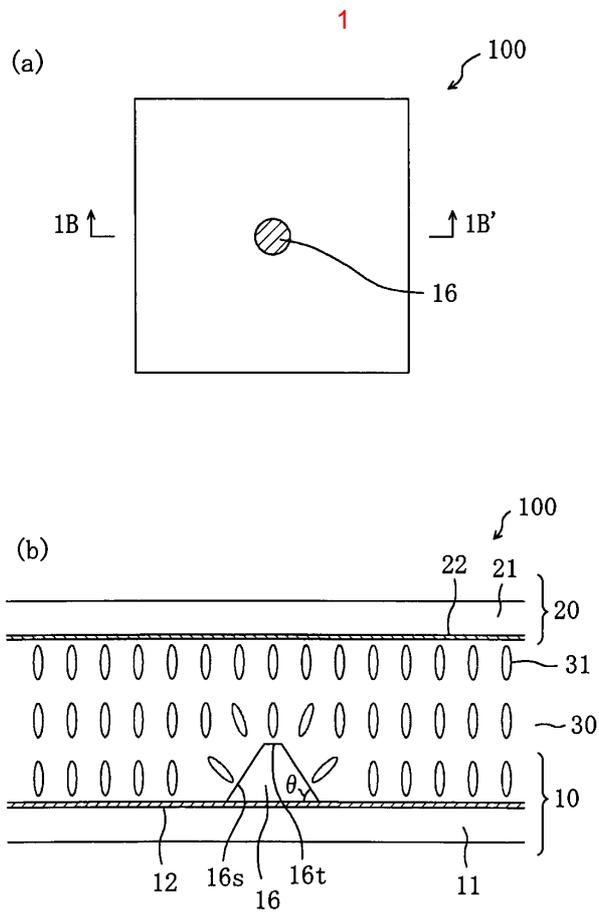
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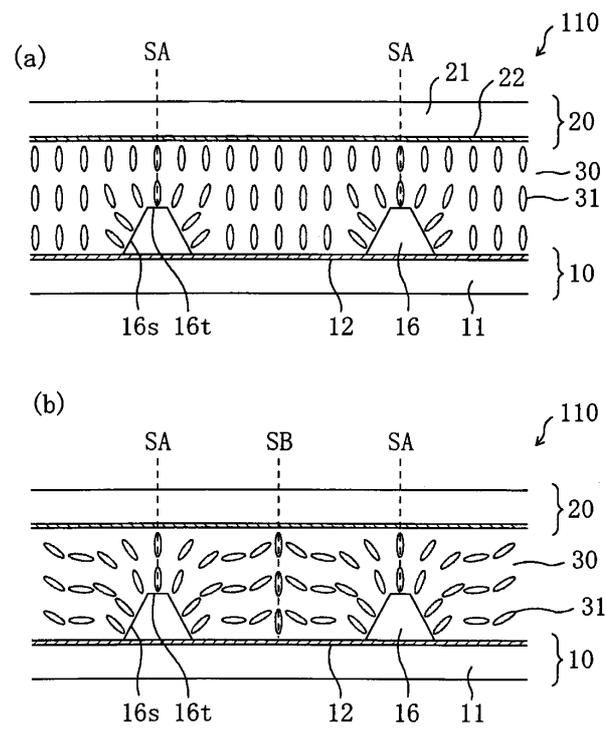
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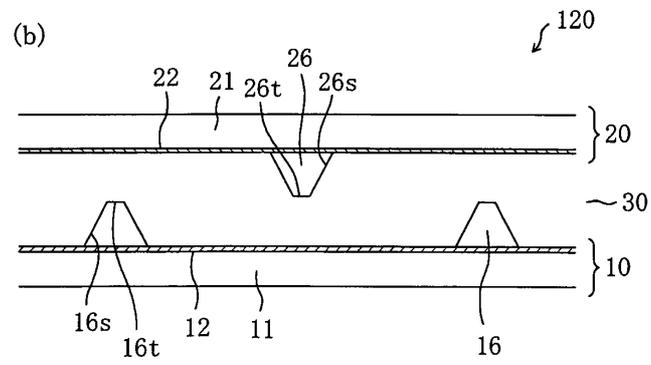
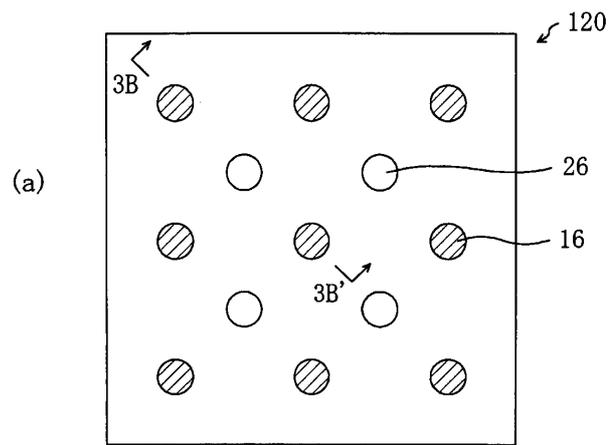
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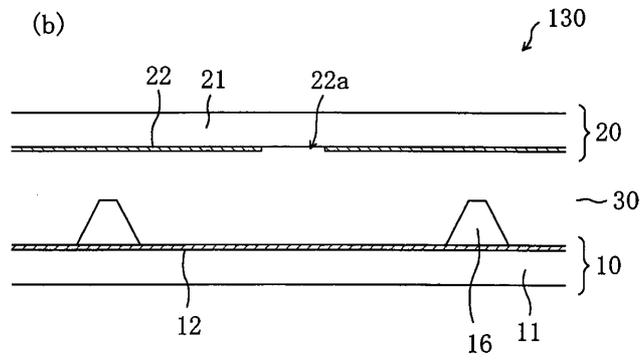
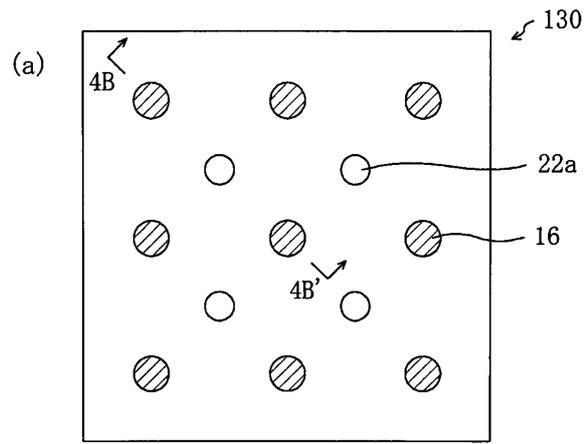
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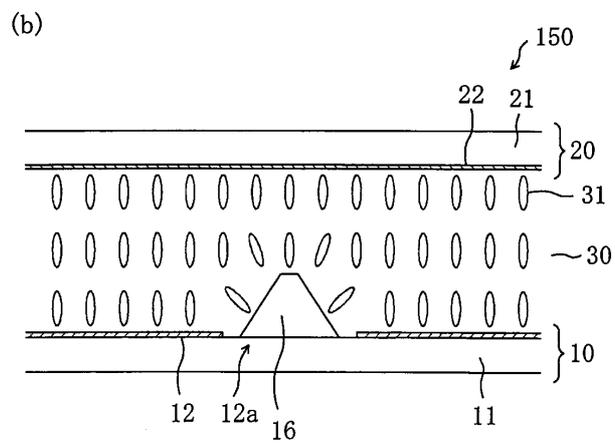
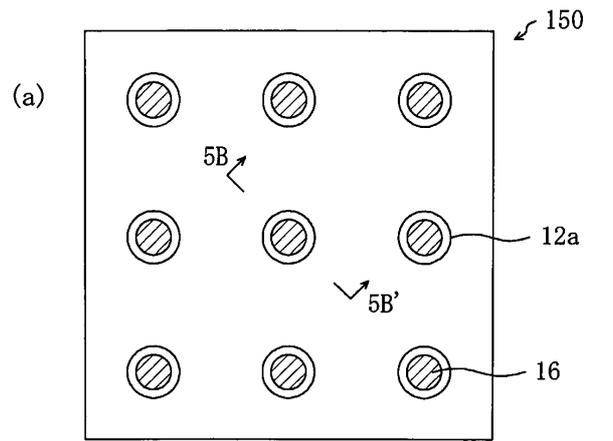
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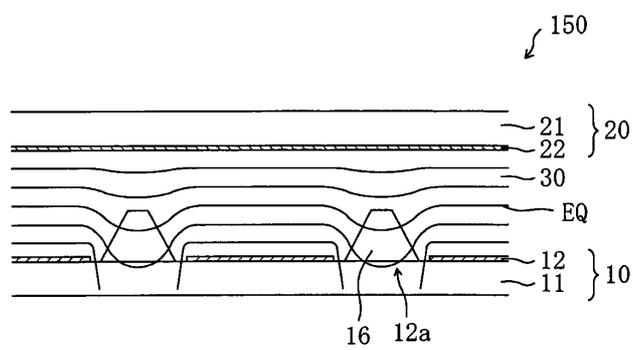
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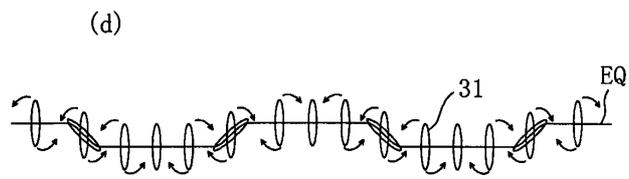
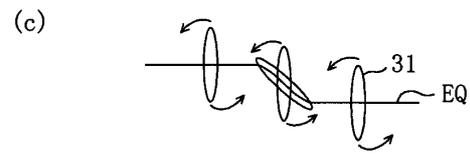
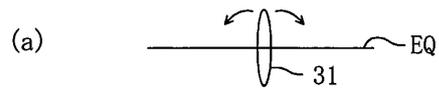
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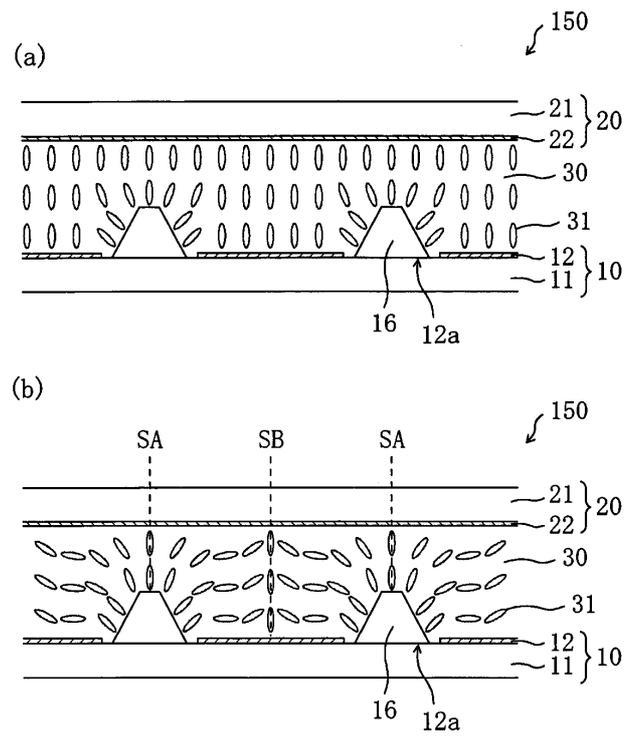
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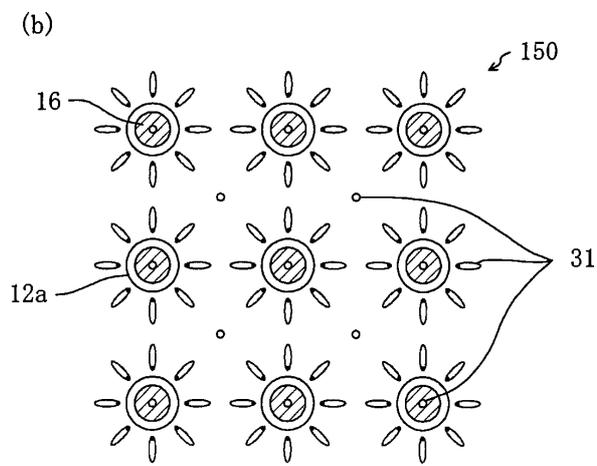
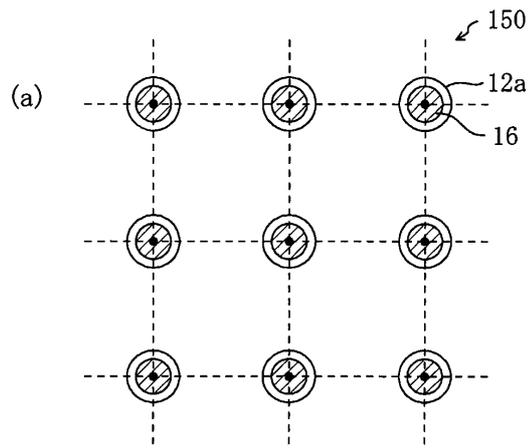
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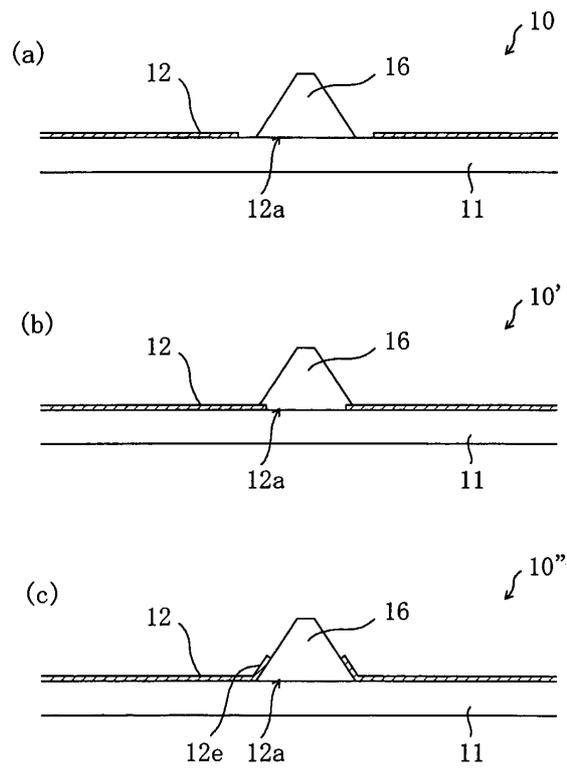
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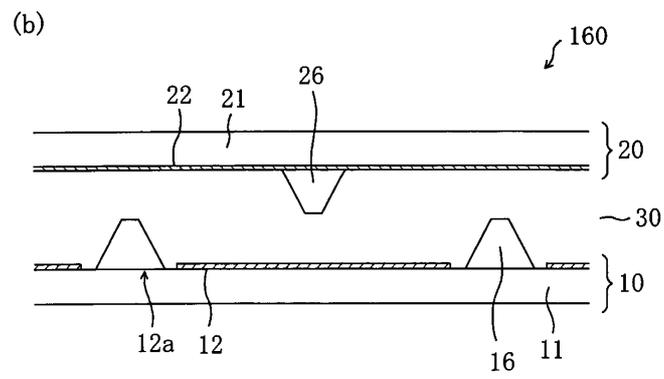
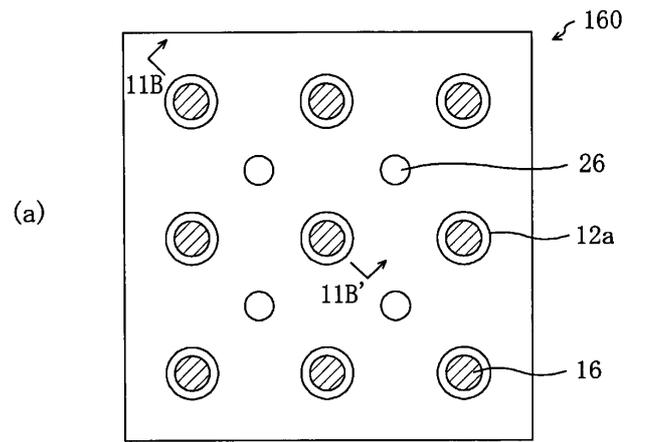
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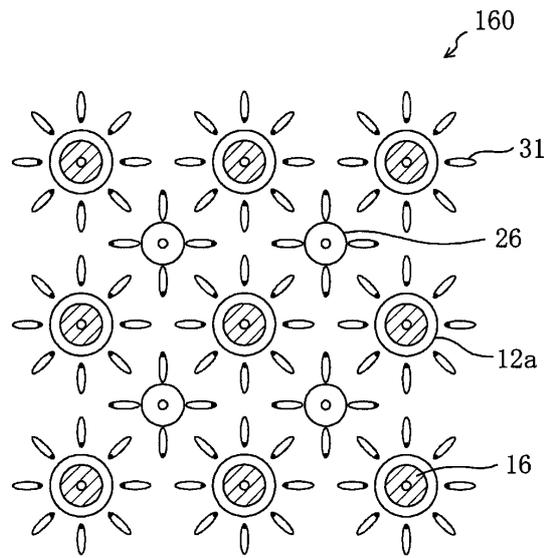
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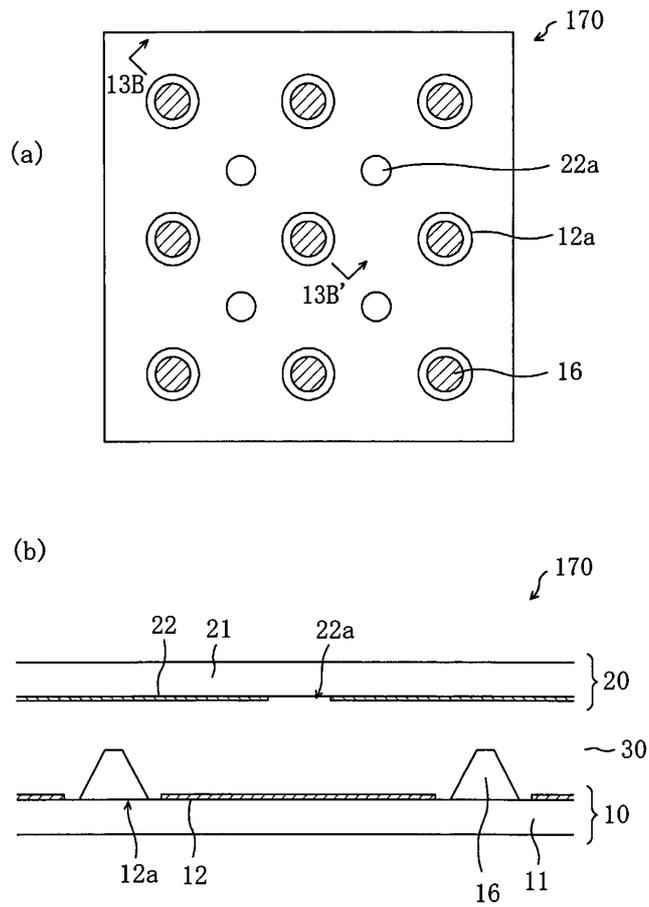
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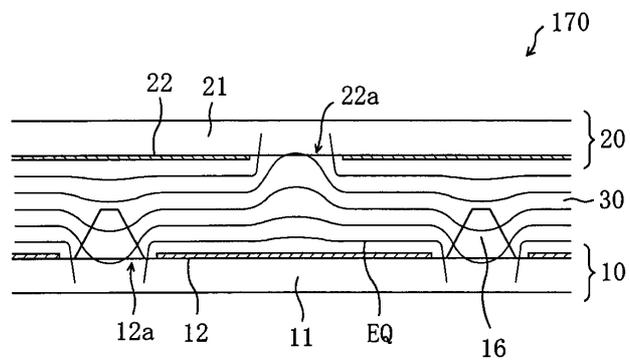
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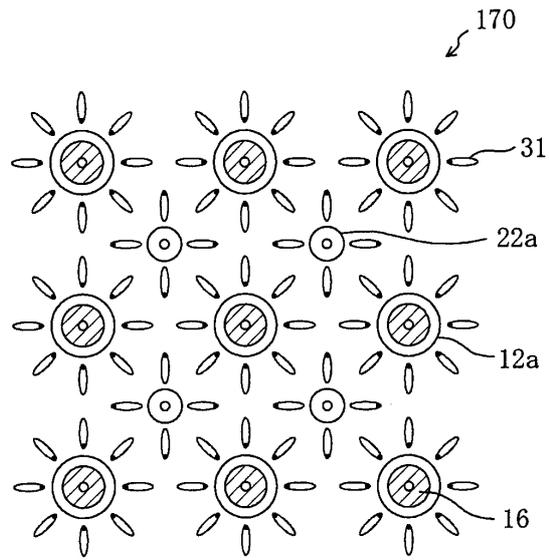
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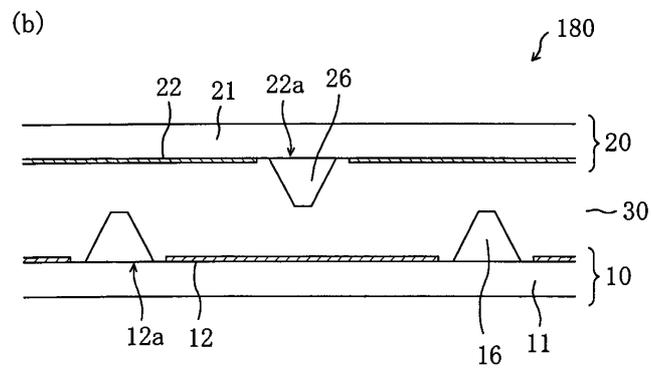
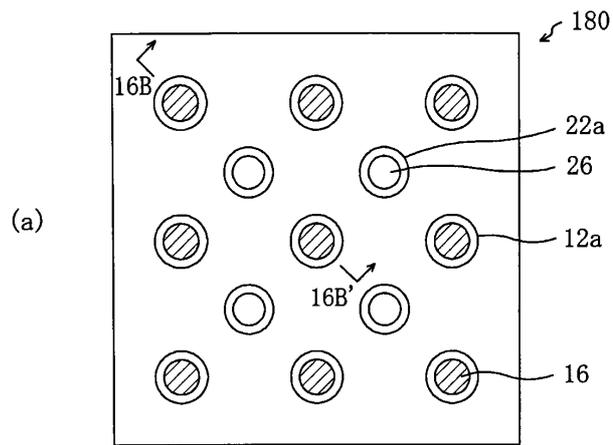
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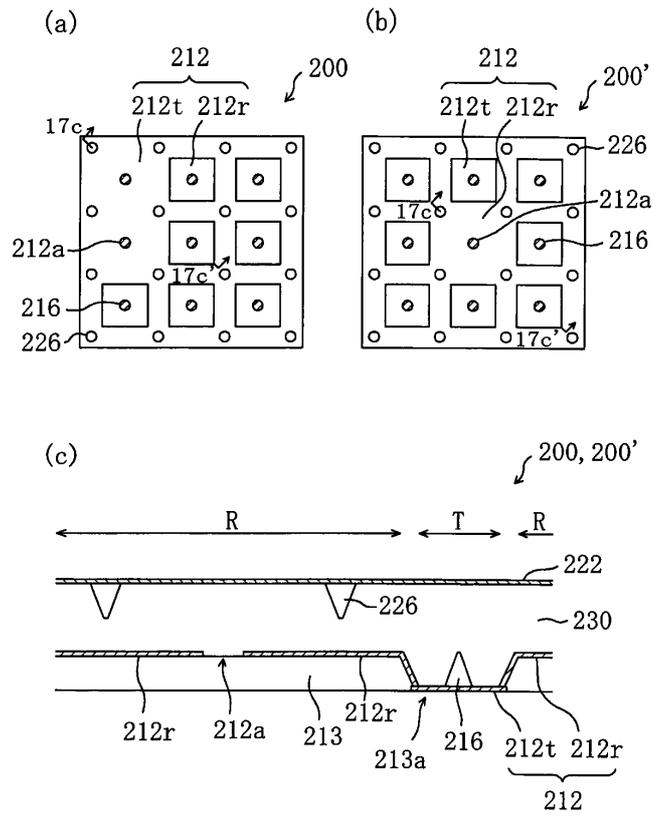
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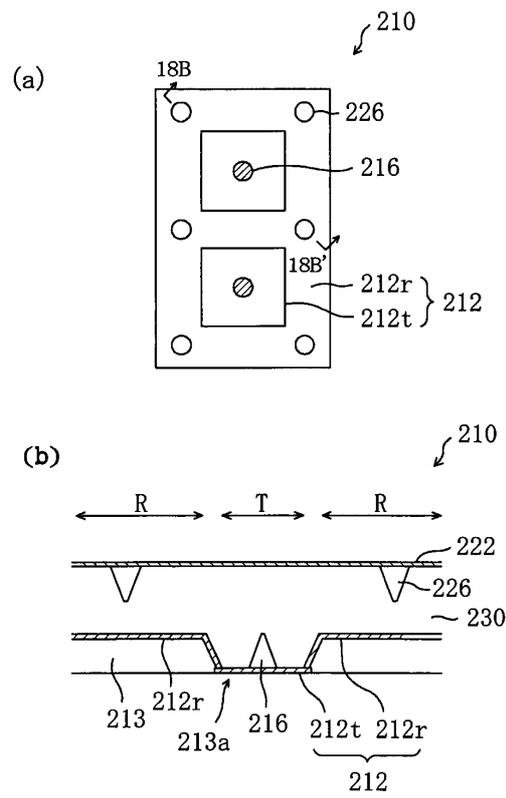
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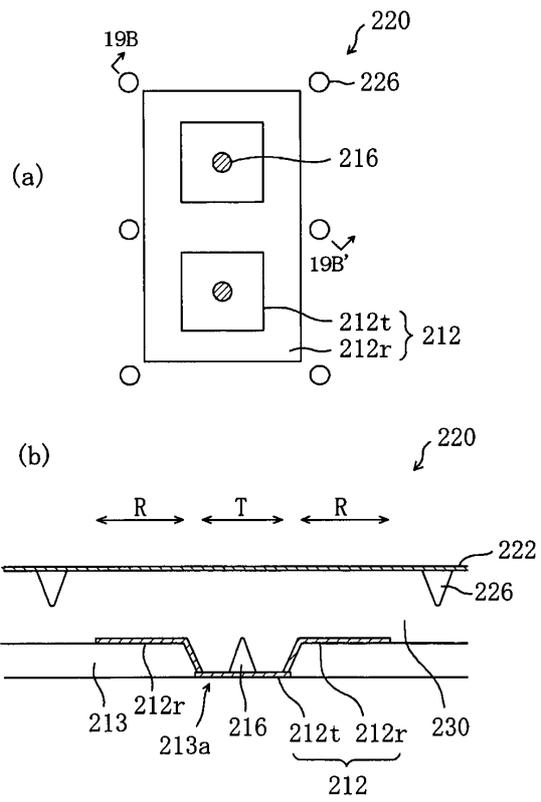
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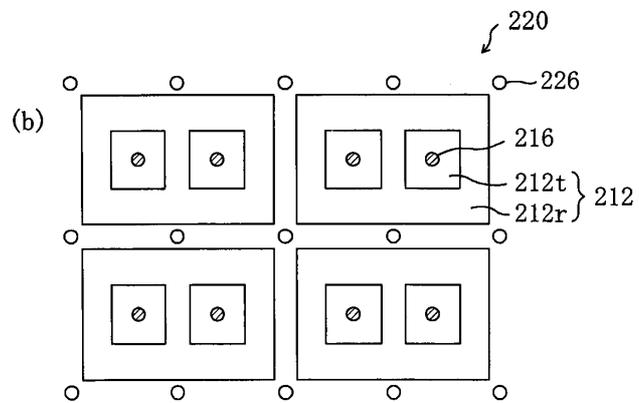
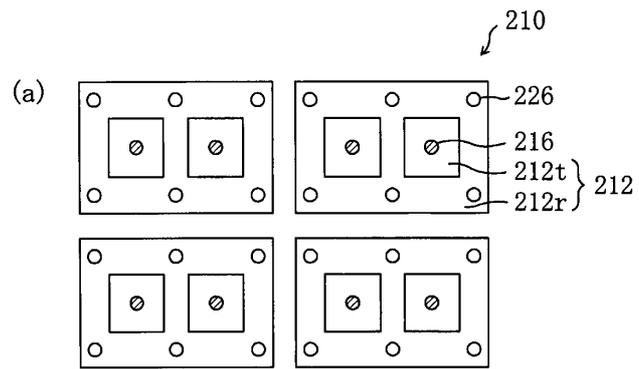
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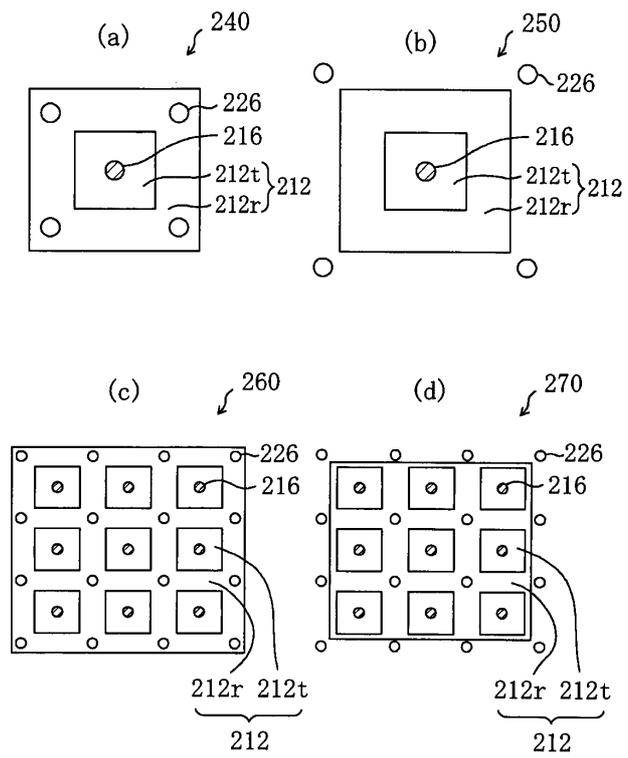
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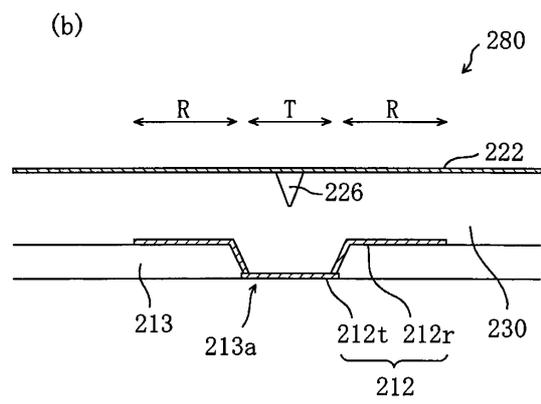
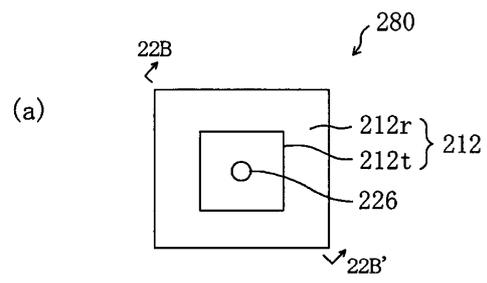
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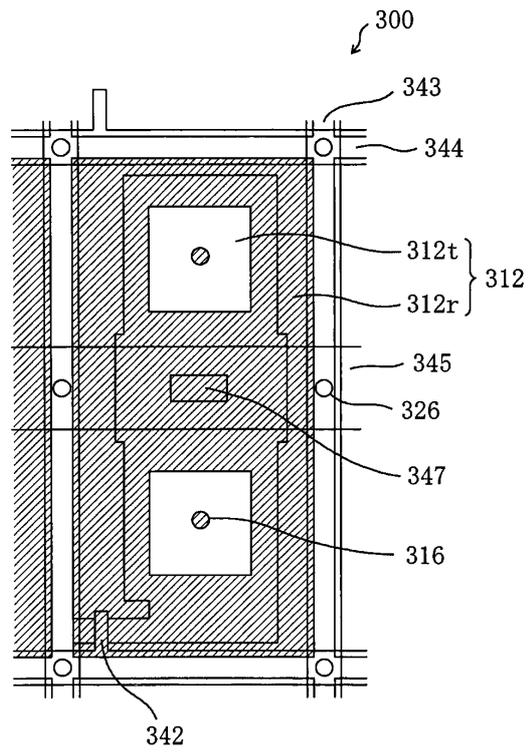
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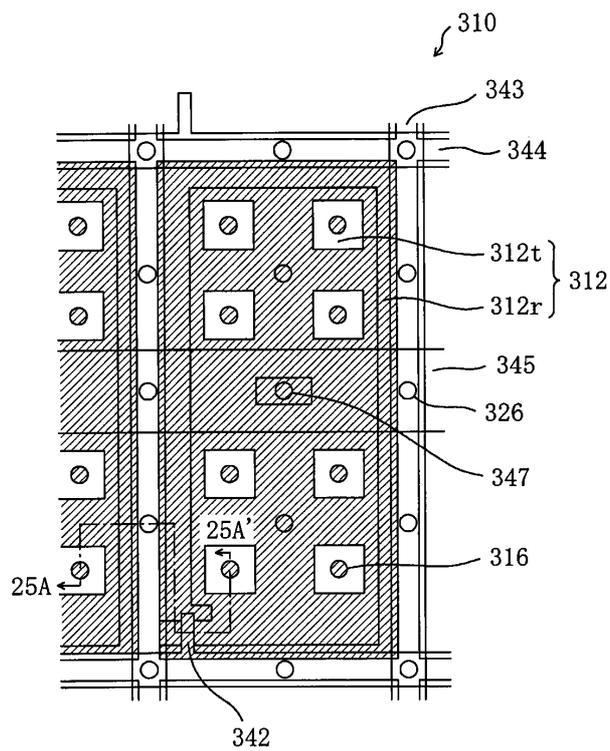
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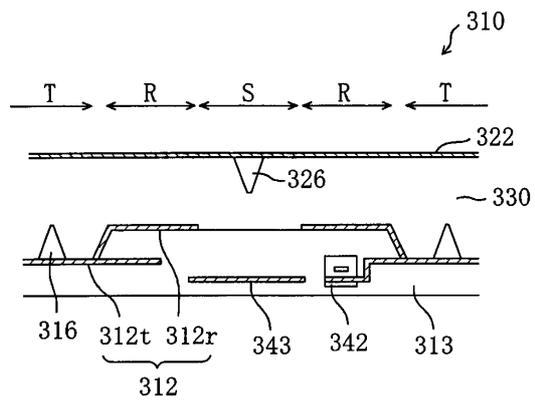
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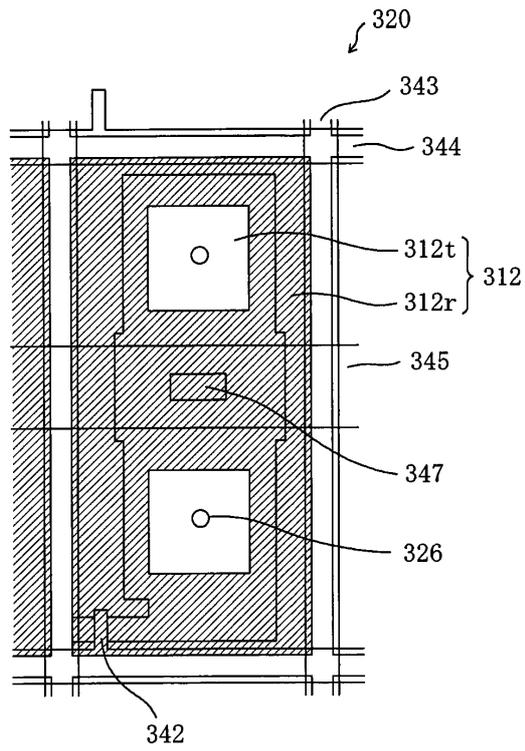
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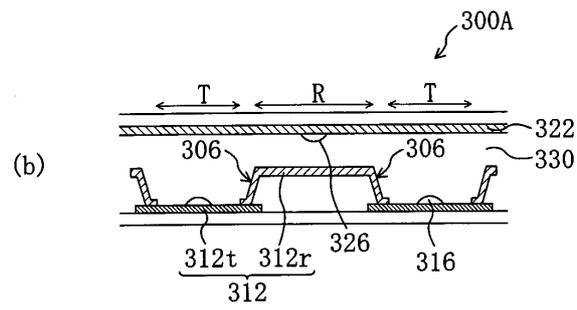
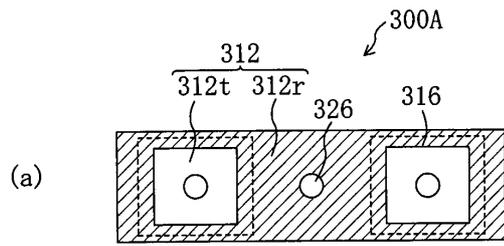
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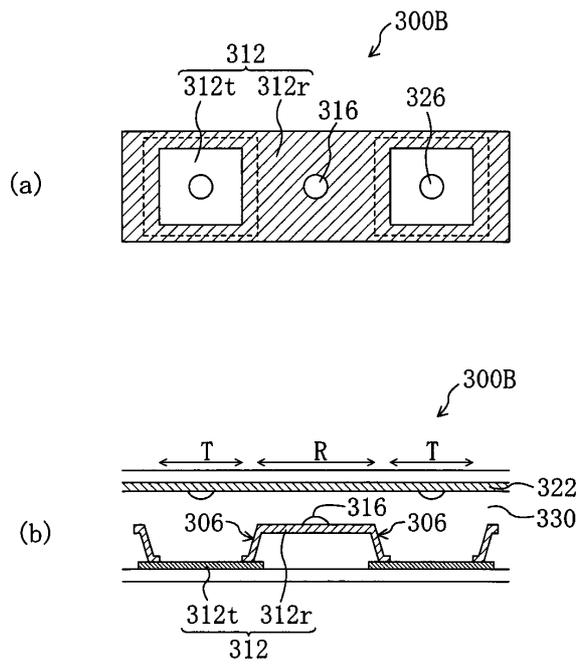
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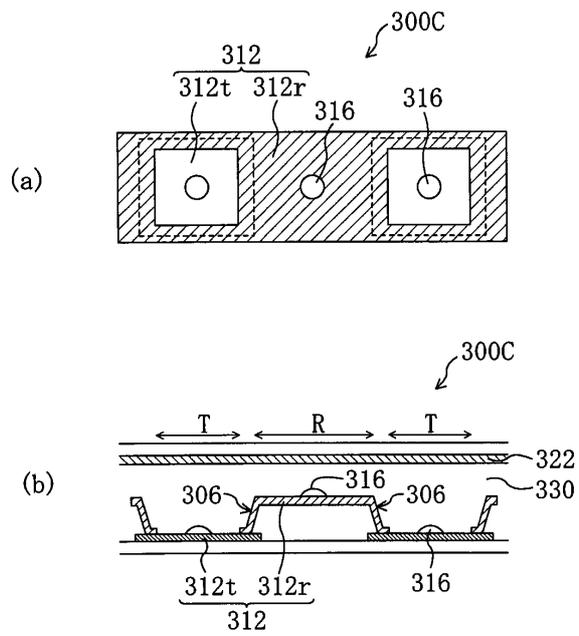
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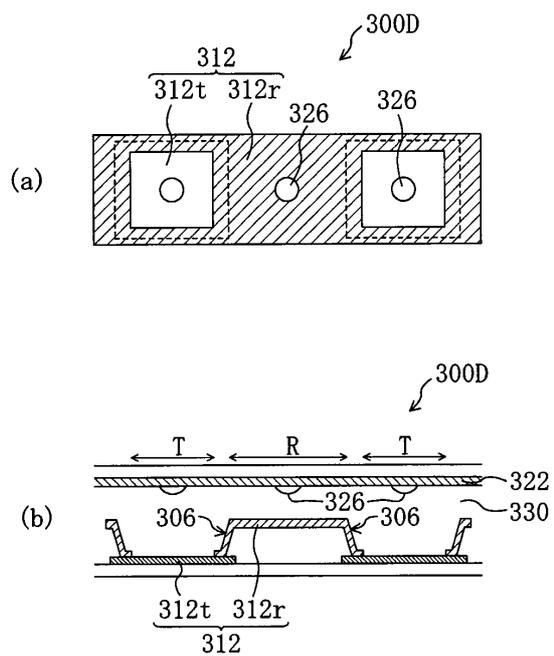
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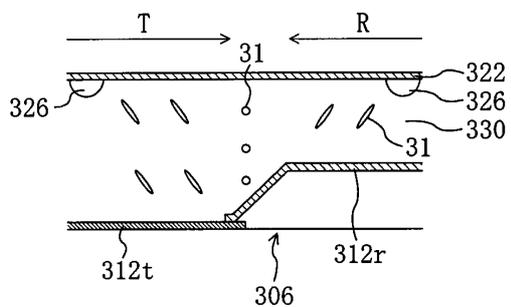
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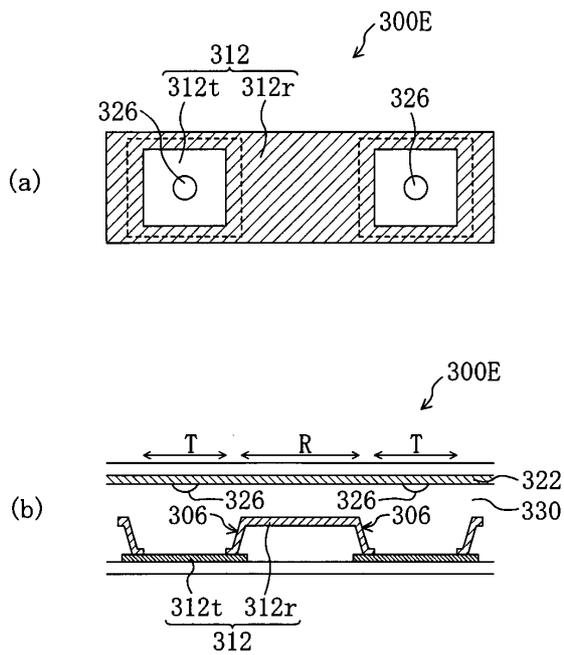
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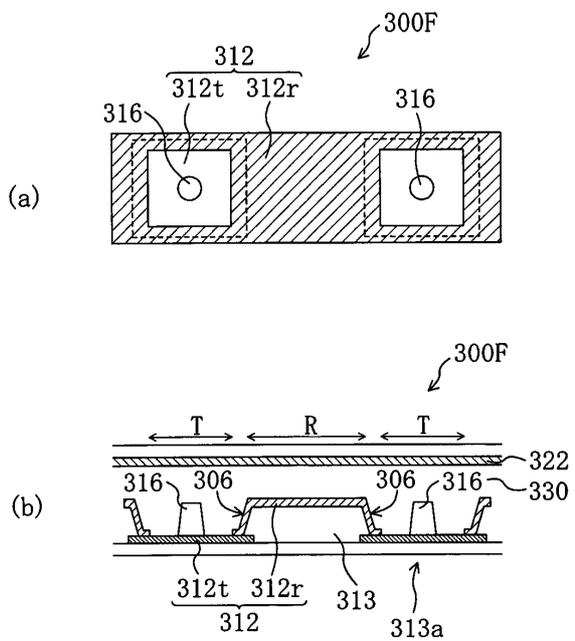
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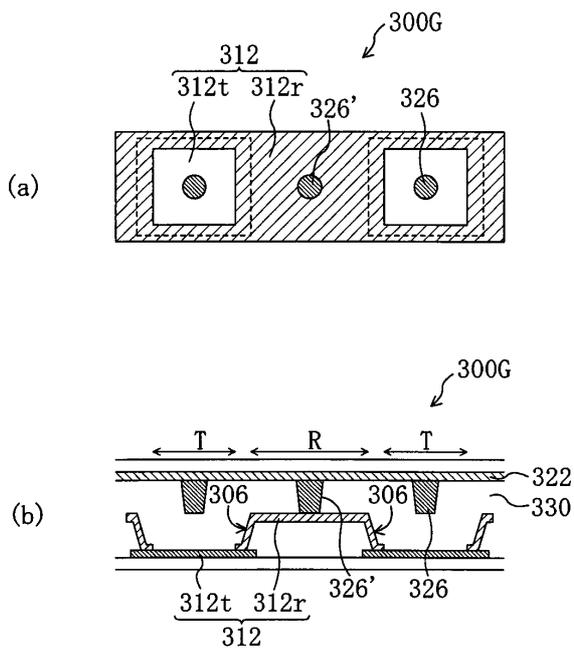
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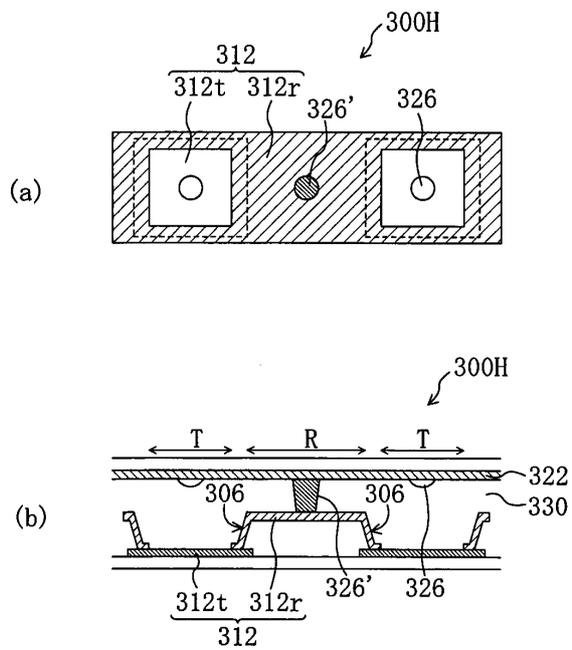
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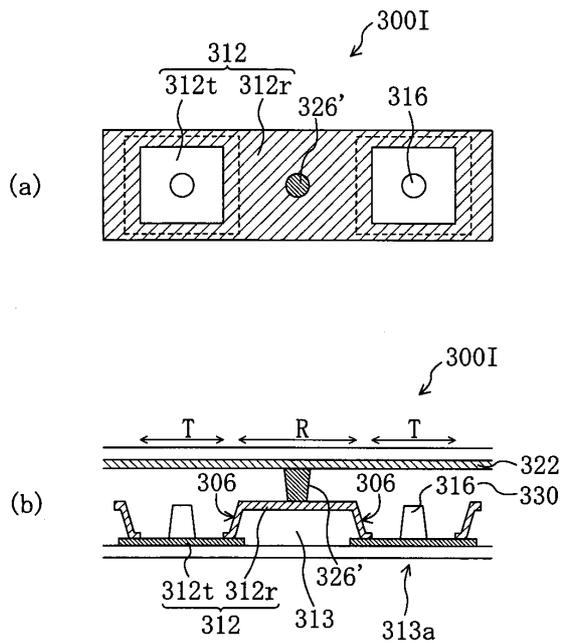
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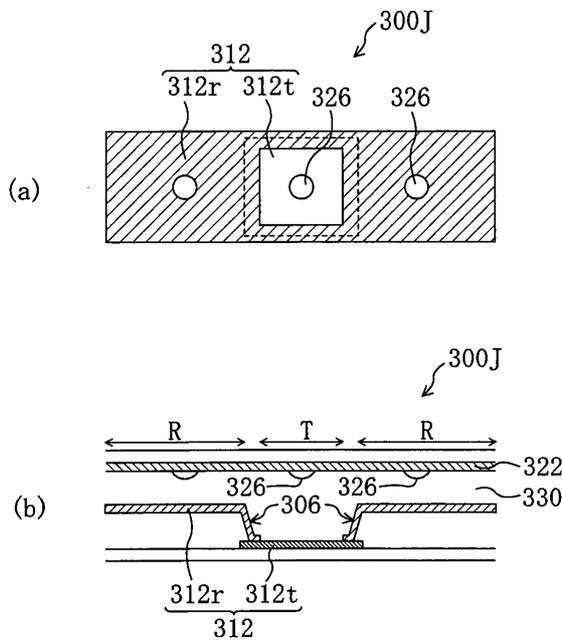
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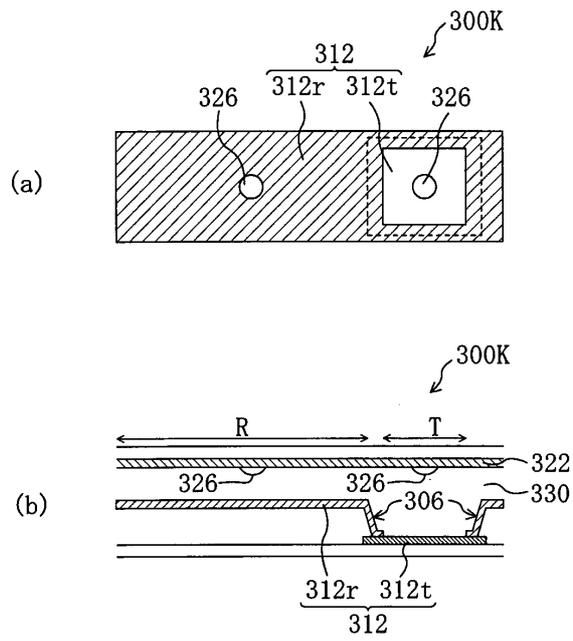
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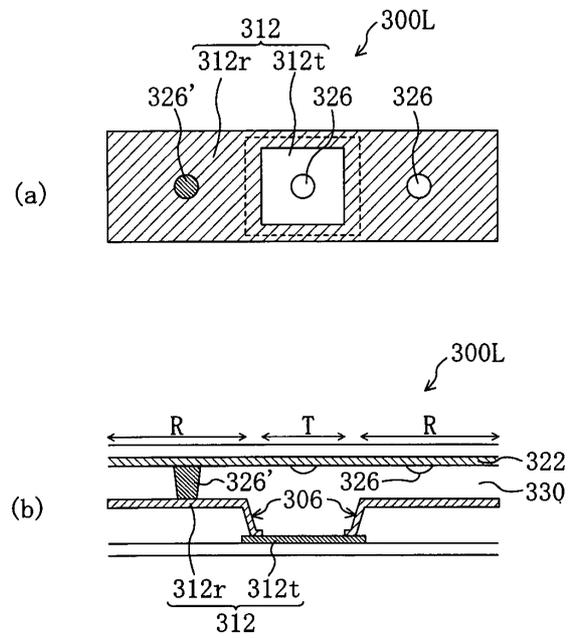
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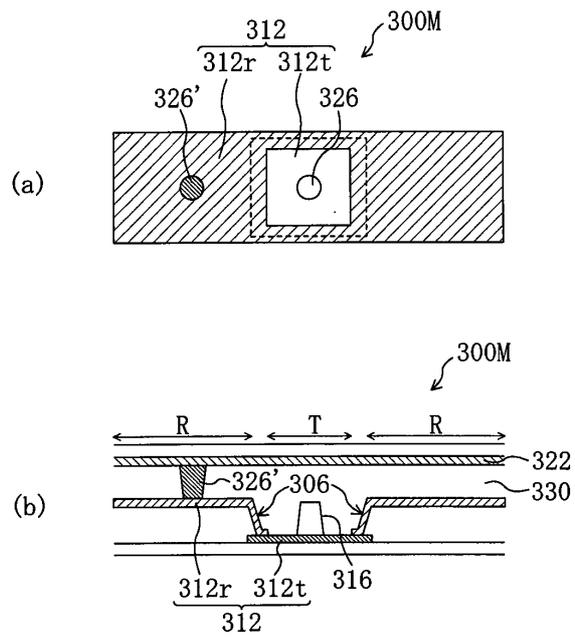
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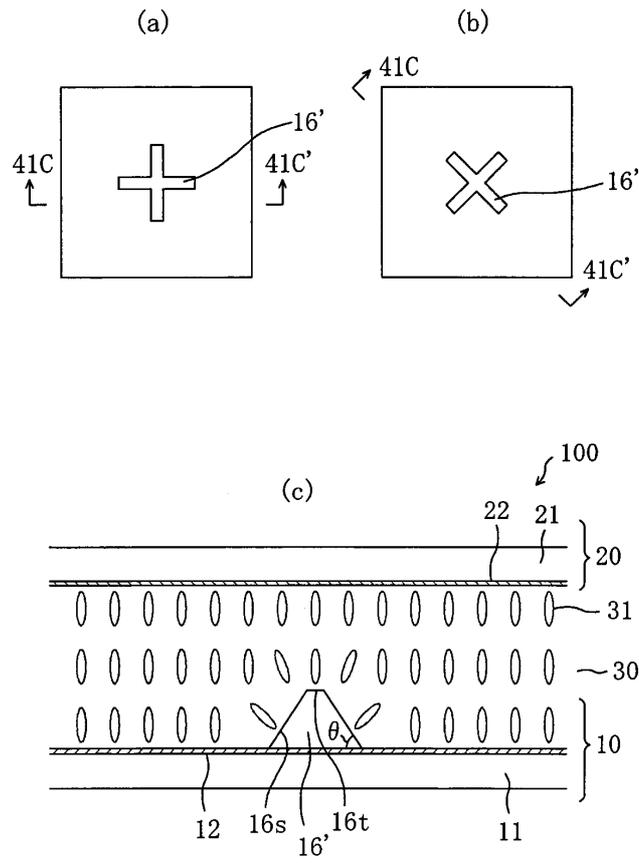
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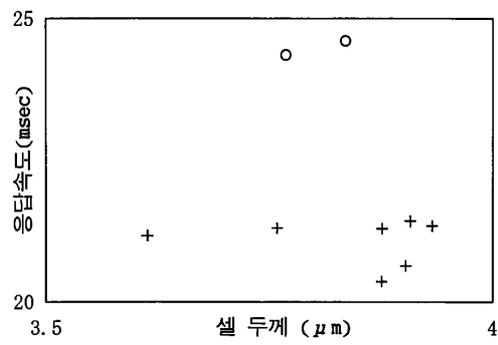
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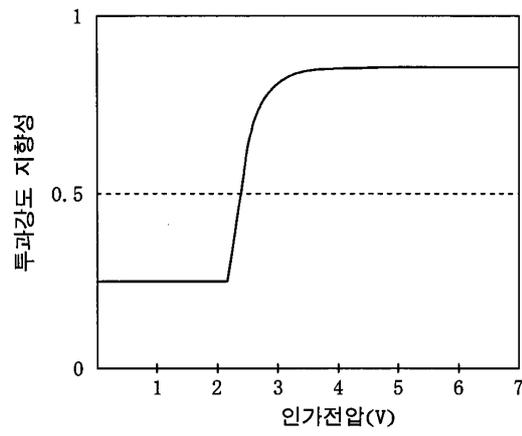
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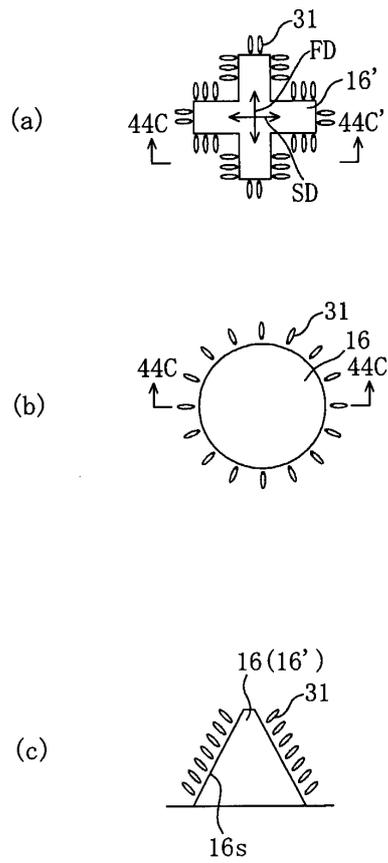
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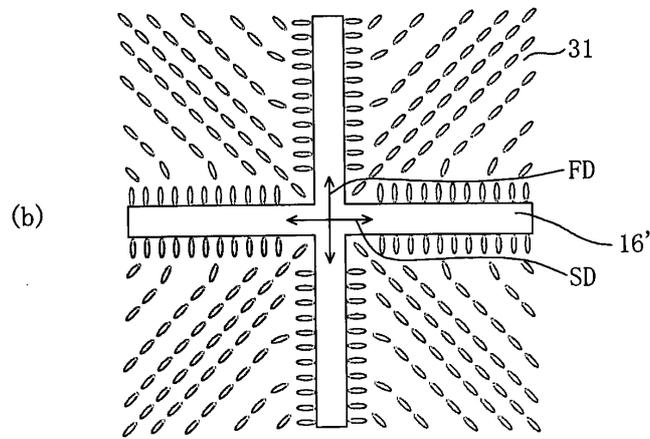
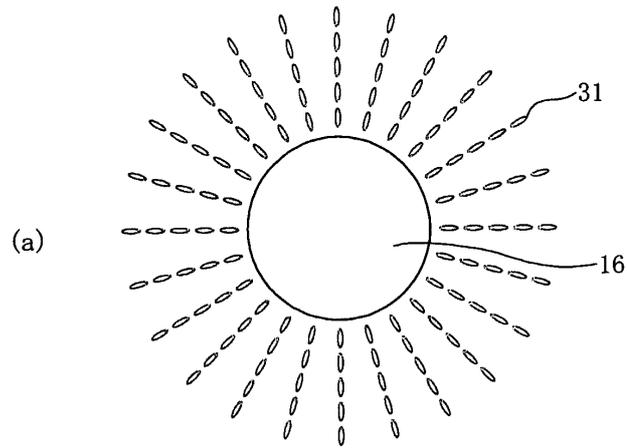
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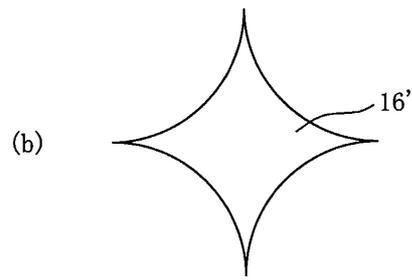
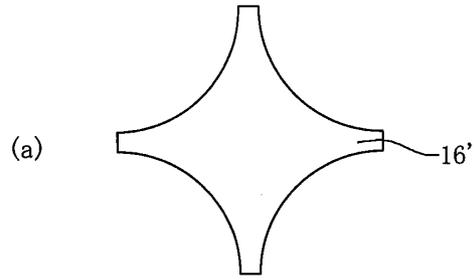
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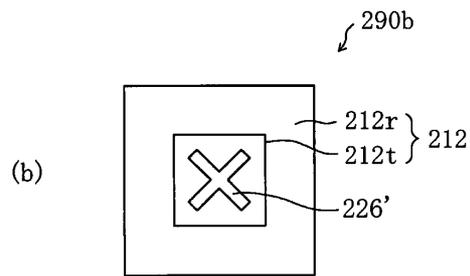
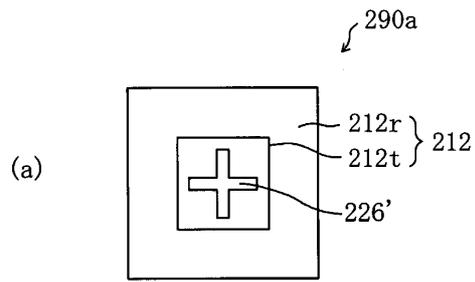
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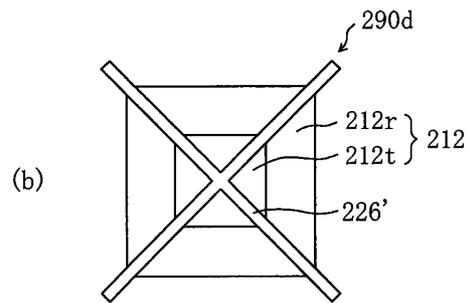
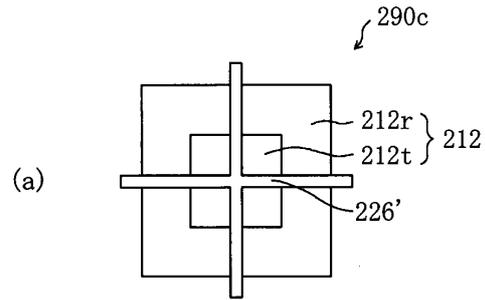
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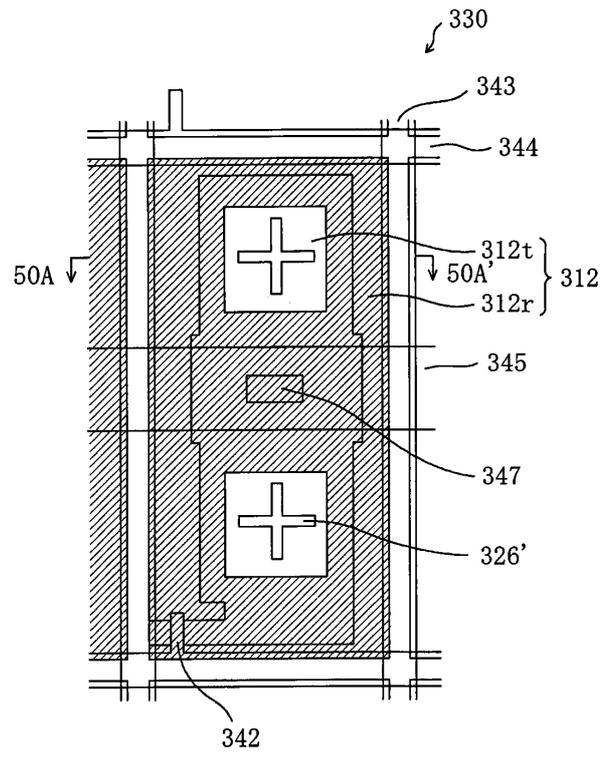
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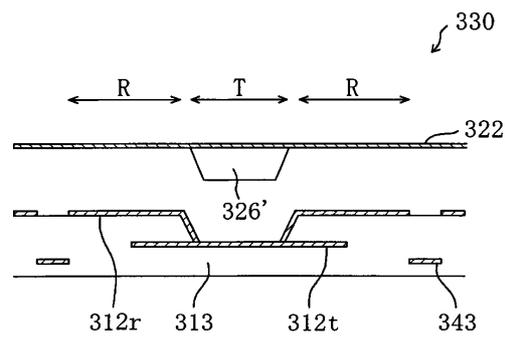
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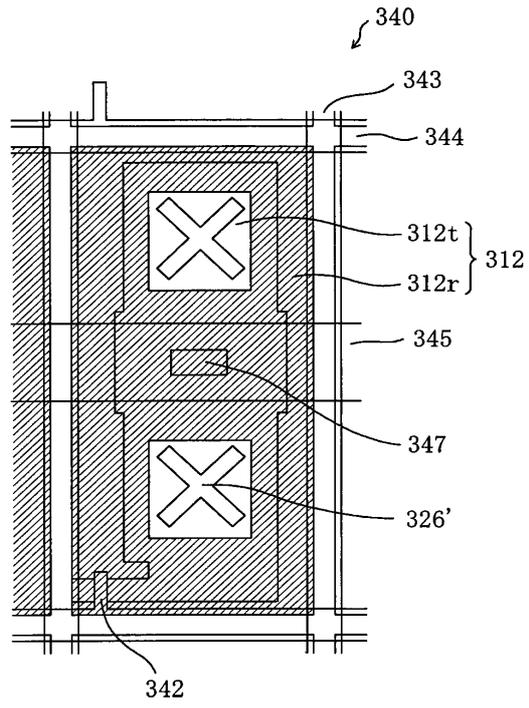
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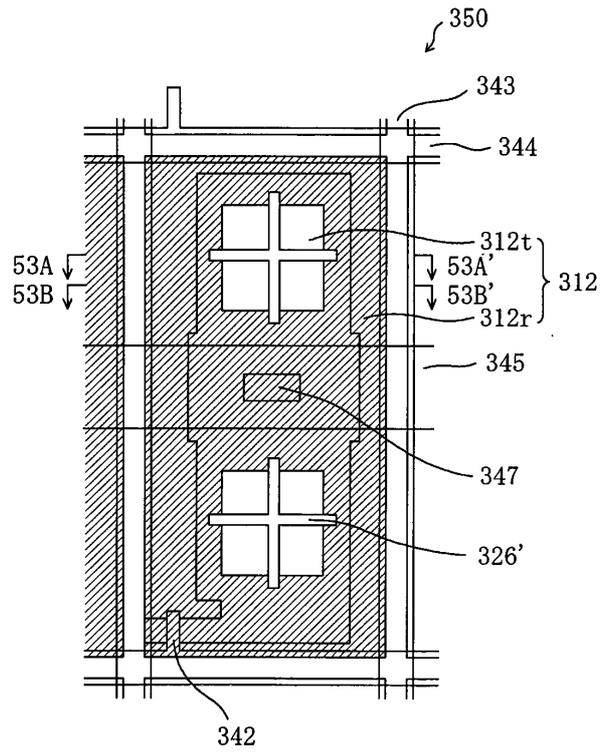
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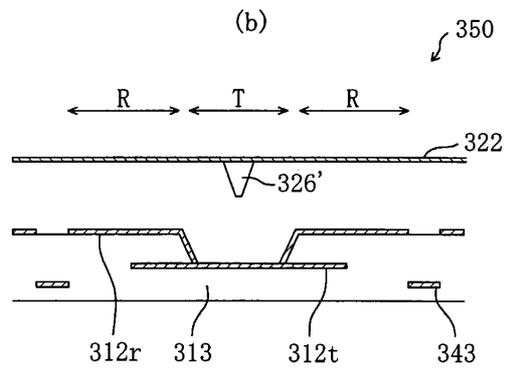
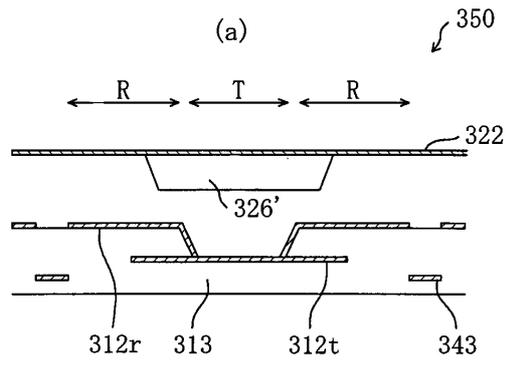
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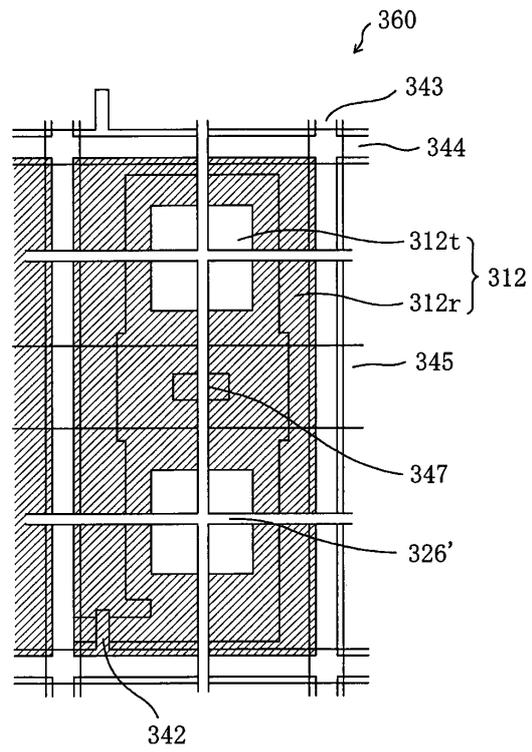
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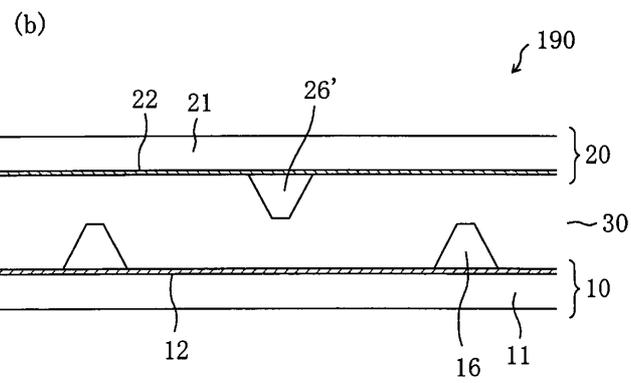
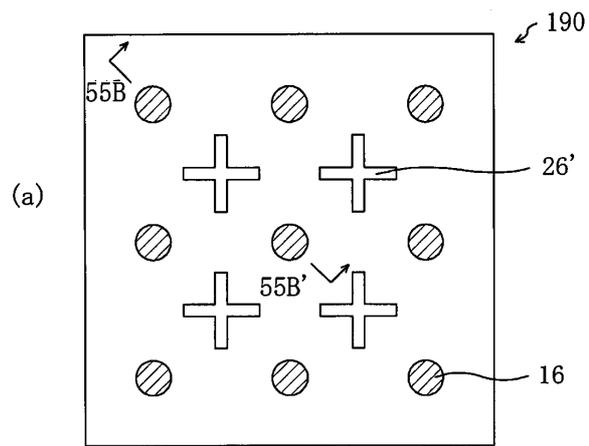
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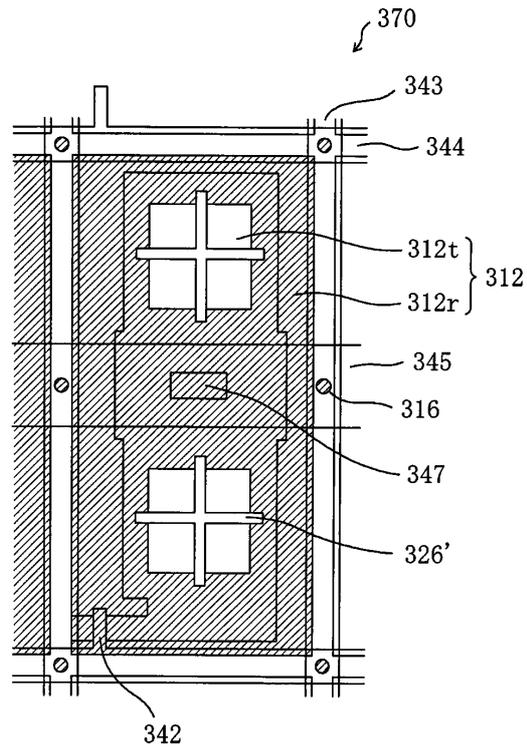
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|----------------|--|---------|------------|
| 专利名称(译) | 液晶显示器 | | |
| 公开(公告)号 | KR1020020079583A | 公开(公告)日 | 2002-10-19 |
| 申请号 | KR1020020019736 | 申请日 | 2002-04-11 |
| [标]申请(专利权)人(译) | 夏普株式会社 | | |
| 申请(专利权)人(译) | 夏普株式会社 | | |
| 当前申请(专利权)人(译) | 夏普株式会社 | | |
| [标]发明人 | OGISHIMA KIYOSHI 오기시마기요시 KUBO MASUMI 구보마스미 | | |
| 发明人 | 오기시마기요시 구보마스미 | | |
| IPC分类号 | G02F1/1368 G02F1/139 G02F1/1335 G02F1/1337 G02F1/1333 | | |
| CPC分类号 | G02F1/133707 G02F1/133555 G02F1/1393 | | |
| 代理人(译) | CHANG, SOO KIL | | |
| 优先权 | 2001112705 2001-04-11 JP 2001285593 2001-09-19 JP 2002081048 2002-03-22 JP | | |
| 其他公开文献 | KR100507585B1 | | |
| 外部链接 | Espacenet | | |

摘要(译)

本发明提供一种具有宽视角特性和高显示质量的液晶显示装置。并且，在第一基板10和第二基板20之间形成垂直取向的液晶层30。场区域由第一基板10的第一电极12和形成在第二基板20的液晶层30侧的第二电极22限定。第一基板10具有至少一个第一凸起部分16，该第一凸起部分16在液晶层30侧具有与多个像素区域和液晶层30中的每一个对应的倾斜侧面包括第一液晶畴的至少一部分，该第一液晶畴在未施加电压的状态下呈现基本上垂直的对准状态，并且在施加电压的状态下围绕第一凸起部分16采取径向倾斜的对准状态，通过改变对应于电压的液晶层30的取向状态来执行显示。

1 - 1 - 指数方面 液晶显示器，液晶层，垂直取向，凸起部分，凹陷部分，液晶畴

