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(51) 。 Int. Cl.⁷
G02F 1/1343

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10-2004-0037343
2004 05 07

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10-2002-0065803

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2 1 - `，
3a 3e 2 - `，
4a 4e 1 - `，

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 6 5 - ` ,
 7a 7g 8a 8g 5 - ` , - ` , 1
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 9 2
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 10 9 - ` ,
 11a 11g 12a 12g 9 XI-XI` XII-XII` , 2
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 13 3
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 100 : 102 :
 104 : 106 :
 108a,108b : 124 :
 127 : 133 :
 138 :

n-Plane Switching) , 4 (I
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 (AM-LCD : Active Matrix LCD ,)가 가
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(12) , (P) (30) (16) ,

(12) (30) (12) (14) (

) (22) (26) (30) (28) (T)가

(22) (24) .

(P) (28) (34) (36a,36b,36c) ,

(36a,36b,36c) (16) (18a,18b) .

(36a,36b,36c) (28) (P) 1 (36a) , 1

(36a) (36b) 2 (36c) (36b) , (16)

(18a,18b) (16) (18b) (18a) (3

6b) (18b) , (18b) (18a) .

(C_{st}) (16) (P) (16) 1 (C_{st})가 , 1

(C_{st}) () 2 (36c) 2 ,

() (異狀) 가 (30) 가 (18b) (S

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2 1 - ,

(30) (18b)가 .

(30) (18b) (S) .

(40) (42) .

(42)가 (40) (10) 가 ,

(42) (S) 가 .

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가 .

, 3a 3e 4a 4e ,
 .(5 .)

3a 3e 2 - ` , 4a 4e 1 - ` ,
 .(- ` , - ` ,
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, 3a 4a 1 , (10)
 (Al), , (W), (Cu), (Mo), (Cr), (Ta), (Ti)
 (1 12) , (14) ,
 (1 16) , (1 18a) (18a,18b) .
 (18b)

, (12) (Al) (AlNd) .
 (Cr)
 (Mo)

(12) (16) (18b) 1 (10) (SiN_x)
 (SiO₂) (20)

3b 4b 2 , (14)
 (20) (22a) (22b) (22) , (22)
 (DL) (24)

(22a) (a-Si:H) , (22b)
 (n+a-Si:H)

3c 4c 3 , (26) (28)
 (26) (12) (30) (16) (24)
) (P)

3d 4d 4 , (34)
 (26,28) (30) (10) (BCB) (acryl) (resin)
 (SiN_x) (SiO₂)
 (32)

3e 4e 5 , (34)
 (10) - - (ITO) - - (IZO)
 1 (36a) , 1 (28) (1 P)
 (18) (36b) (18b) (1 36c) (36b) ,
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(a-Si:H)

(n+a-Si:H)

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(halftone exposure)

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(100)

(102) (106) (P

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(102) (133) (104) (124) (128)

(130) (104) (T) (102) (128) (133)

(124) (128) (133) (127)

(127) (133)

(P) (130) (138a,138b,138c)

(108a,108b)

(108a,108b) (106) (P) (108b)

(108a)

(X) (Y)

1 (138a,138b,138c) (P) 1 (138a)

(138a) (138b) (138b) (106)

2 (138c) (138b)

(108b)

, $\frac{2}{2}$ (C_{st}) (138c) 1 (106) (106) 가 , (C_{st}) 2 .
 (138c)가 .
 , 1 (127)
 (108b) .
 , 6 .
 6 5 - , .
 , (100) (108b)가 (108b)
 (110) , (127) (133) .
 , ((133) (108b))(127) (H) 가 (108b) .
 , (127) (L) .
 가 , 7a 7g 8a 8
 g .
 7a 7g 8a 8g 5 - , - , 1
 .
 , 7a 8a 1 (Mo), (Cr), (Ta), (Ti) (100) (Al), ,
 (W), (Cu), (5 102)
 , (106) , (104) , (108a,108b)
 (106) (108a,108b) (106) (108b) ,
 (108a) .
 (108b) (108b) (X) (Y) , 5
 , (102) (Al) (AlNd) .
 (Mo) (Cr)
 7b 7e 8a 8e 2 , 2 (half to
 ne)
 , 7b 8b (SiN_x) (102) (106) (108)
 (100) (110) (SiO₂) (a-Si:H, 112) (n+a-
 1 Si:H, 114) , (116) .
 , (116) (photo-resist : 'PR') PR (118)
 , PR (118) (positive type) .
 (PR , .)

PR (118) (100) (A) (B) (C) (M)
 , (M) PR (118) .
 ,
 (C) (S/D) (DL) , (B)
 , (DL) (E)
 , (DL) (108b) (M) (B) (DL)
 (108b) , () ()
 PR (118) , 8c 9c , PR 가 (1
 20)
 , (8b M) (F1)
 (F2)
) (120) (116) (114)
 04) (112) 7d 8d (1)
 126) 1 (126) 1 2 (132) , 1 (124)
 2 (132) (124a) (127) (124b)
 , (wet etching) (dry etc
 hing)
 , PR (120) (ashing processing) , PR (120)
 (E) (7c F2) (F1) 가
 (U)
 , (E) (W) PR
 7e 8e , 1 2 ,
 (104) (2 (128) (130)
 'U' , (130) (128) (128)
 , (128) (130)
 , 가 (128) (130)
 , (133) (U) (124b)
 (W)) (E)
 (133) (108b) (127)
 (133) (108b) (H) (133)
 , (H)

7f 8f 3 (128
,130) (133) (100) (BCB) (acryl) (resin)
(134)
(130) (136)

7g 8g 4 (134) (100)
- - (ITO) - - (IZO)
(130) (P) 1 (138a) , 1 (
138a) (108b) (138b) , (138b) (138a,138b,138c)
(106) (138c)
(138c) (106) (C_{st})
(106) 1 (138c) 2
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4 PR
(133) (108b) (H)
2
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2
9 2
(200)
(233) (202) (206) , (P)
(202) (233) (204) (224) (228)
(230) (204) (T) (202) (228) (233)
(224) (228) (233) (227)
(227) (233)
(P) (208a,208b) (228)
(238a,238b,238c)
(208a,238b) (206) (208b)
(208a) (238a,238b,238c) (230)
(P) 1 (238a) , 1 (238a) 2 (238c) (238b) , (23
8b) (206) (238b) (208b) (208b) (X) (Y)

$\frac{2}{2}$ (238c) (206) (C_{st})
 , (C_{st}) 1 (206) 가 , 2
 $\frac{2}{2}$ (238c)가 .
 , (233) (20
 8b) (233) , (233)
 (208b)
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 10 9 - ` .
 , (200) (208b)가 , (208b)
 (210) , (227) (233)
 , (233) (208b) (233)
 , (233) (208b)
 , (208b)
 .
 11a 11g 12a $\frac{2}{12g}$.
 11a 11g 12a 12g 9 XI-XI` XII-XII` , 2
 .
 11a 12a 1 (200) (DL)
 / (S/D) , (P) () (SL)
 r), (Ta), (Ti) (200) (Al), , (W), (Cu), (Mo), (C
 , (9 202) , (204)
 6) , (9 202) (202) (20
 (206) (208a,208b)
 (208a,208b) (206) (208b) ,
 (208a)
 (208b) (DL) (DL)
 , 9 가 (P)
 (X) (Y)
 (9 202)
 (Al) (AlNd)
 .
 (Cr) (Mo
)
 11b 11e 12b 12e 2 2
 (half tone MASK)
 , 11b 12b , () (206) (208a,208
 b) (200) (SiN_x) (SiO₂)
 1 (210) , (212)
 214) , (216) .

, (216) (photo-resist : 'PR') PR (218)
 . , PR (positive type) .

PR (218) (200) (A) (B)()
 (C) (M) (M) PR (218) .

, (C) (S/D) (DL) , (B)
 (S/D)

(E) .

, (DL) (M) (C) (208b)
 가 .

PR (218) , 11c 12c , PR 가
 (220) .

, (11b M) (F1) ,
 (F2) .

(220) (216) (214)
) (212) 11d 12d ,
 1 (226) (224) , (224) 2 (232) 2 (232) , 1
 7) (22) .

, (224) (224a) ,
 (224b) .

, PR (220) (F1) 가 가 PR (220) (F2)
 , .

, 1 (226) 2 (232) (W) PR 1 2 (226,232)
 . 4 .

11e 12e , (W) 1 2 , (228)
 (204) (228) (202) (228) (230) (233) , (230)
 1 (228) , (228) 'U' , (230)
 (228)

, (233) (W) , (W) (E)
 (204b) .

, (233) (208b)가 (233)
 .

, (233) () (208b)
 .

11f 12f 3 , (200) (BCB) (acryl) (2
 28,230) (233) (236) (234) , (resin)
 (228) .

11g 12g 4 , (234) (200)
 - - (ITO) - - (IZO) (P) 1 (238a) , 1
 , (230)

(206) (208b)
2 (238c) (238b) , (238b)
(238a,238b,238c)

(206) 2 (238c) (206) (C_{st}) ,
(206) 1 2 (238c) 2

1 2 , 1 (

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3 1 가

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, (300) (302) (304) ,
(302,304) (306)

(302) (306) , (302) (308) ,
(308) (308) (306) (310)
(308) (312) , (308) (31

0,312) (314) (T)

(306) (304) (302) (P) ,
(304) (320) , (312) (318)

(322a,322b,322c)

, (320) (304) (P)
(322a,322b,322c) (312)

1 (322a) (P) 1 (322a) ,
(322a) (304) 2 (320) (322c) (32

2b) , (306) (314) (316)

, (316) 1 ,

, (320) , (306) (320) (306) (316) (306) (316)

, () (multi domain)

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1, 5, 2, 4 가 .

3 가 .

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(a-Si:H)

(n+a-Si:H)

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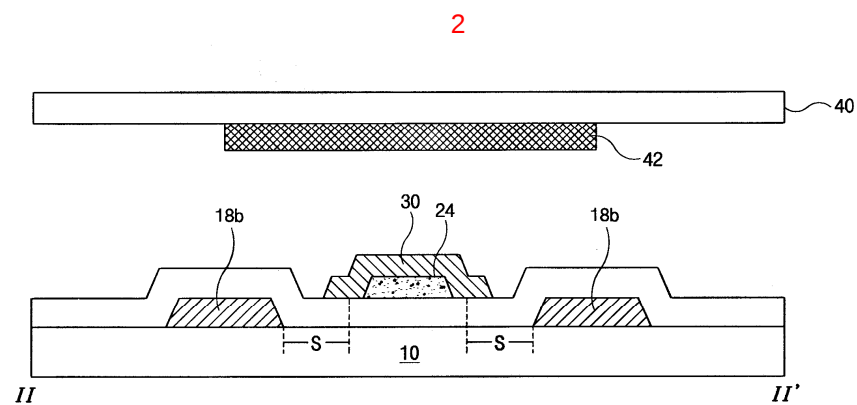
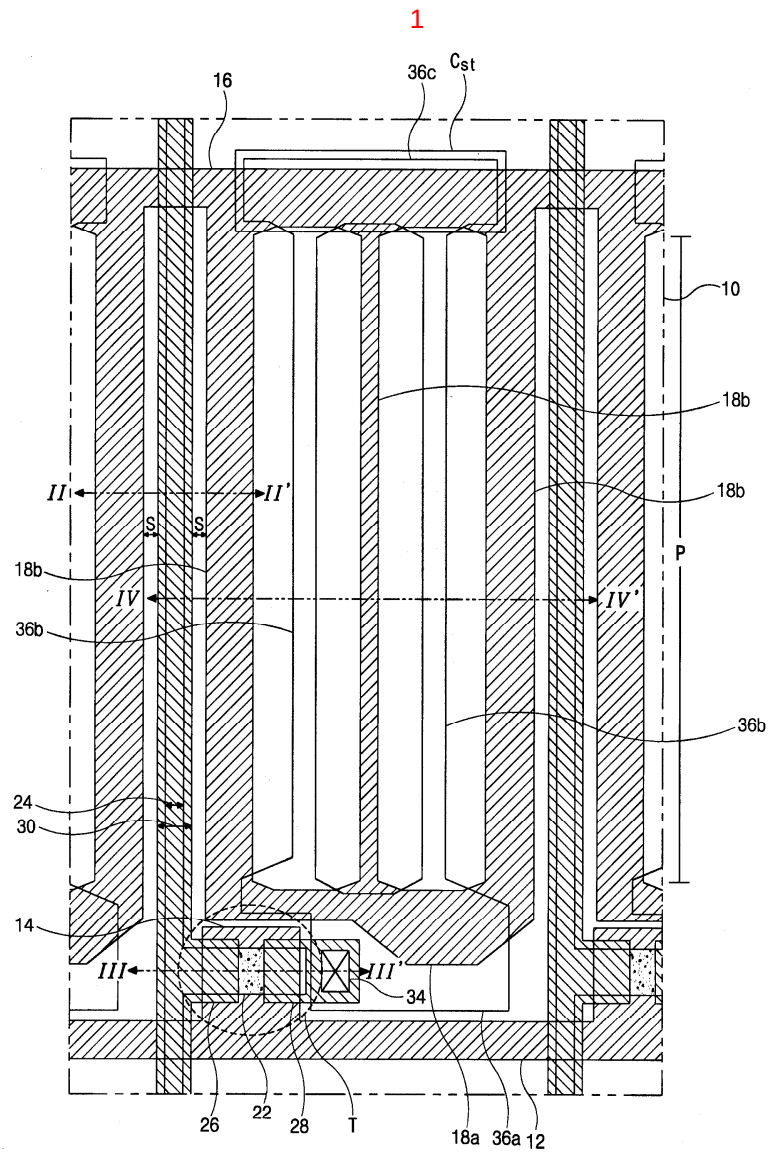
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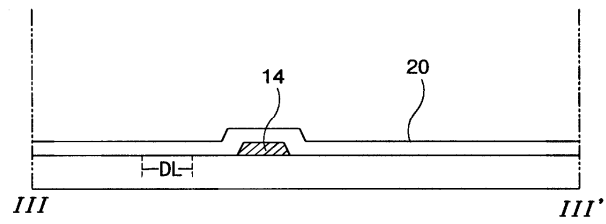
17 18. ,
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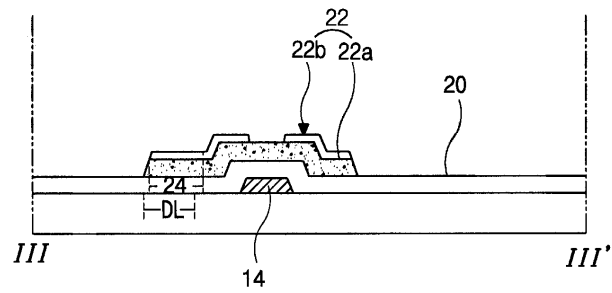
18 19. ,
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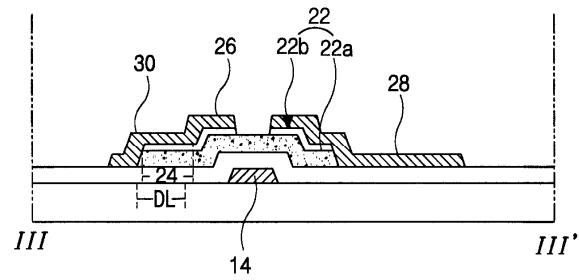
3a



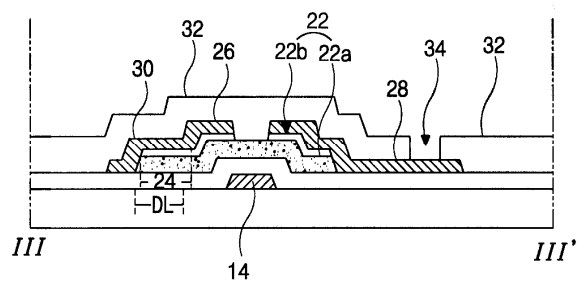
3b



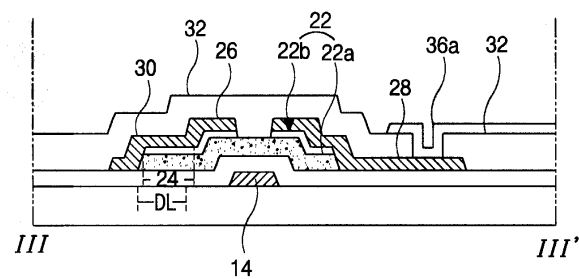
3c



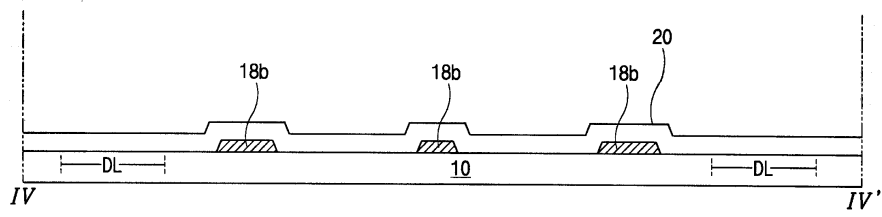
3d



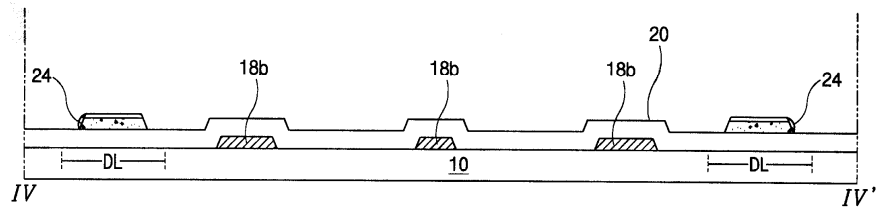
3e



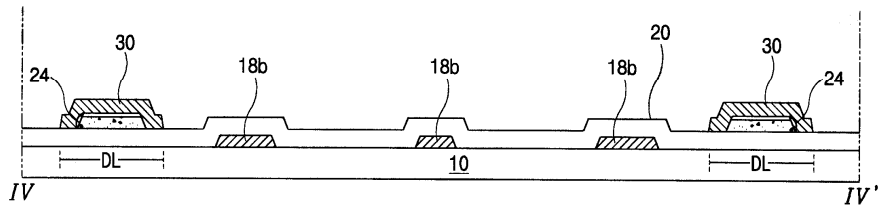
4a



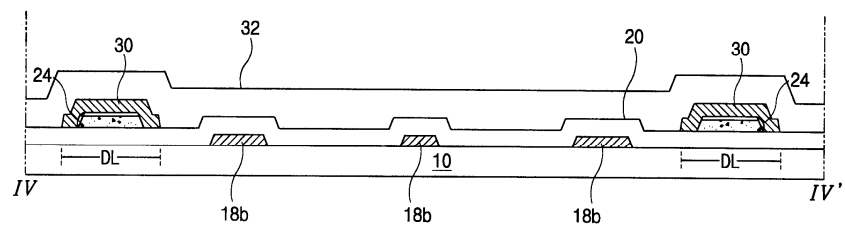
4b



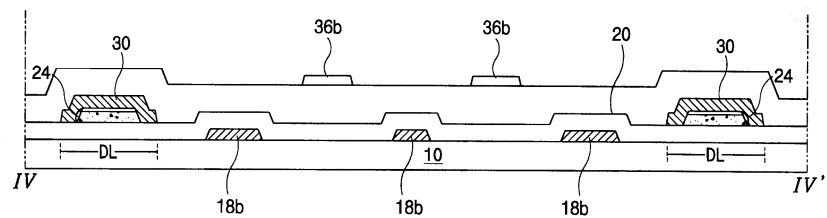
4c



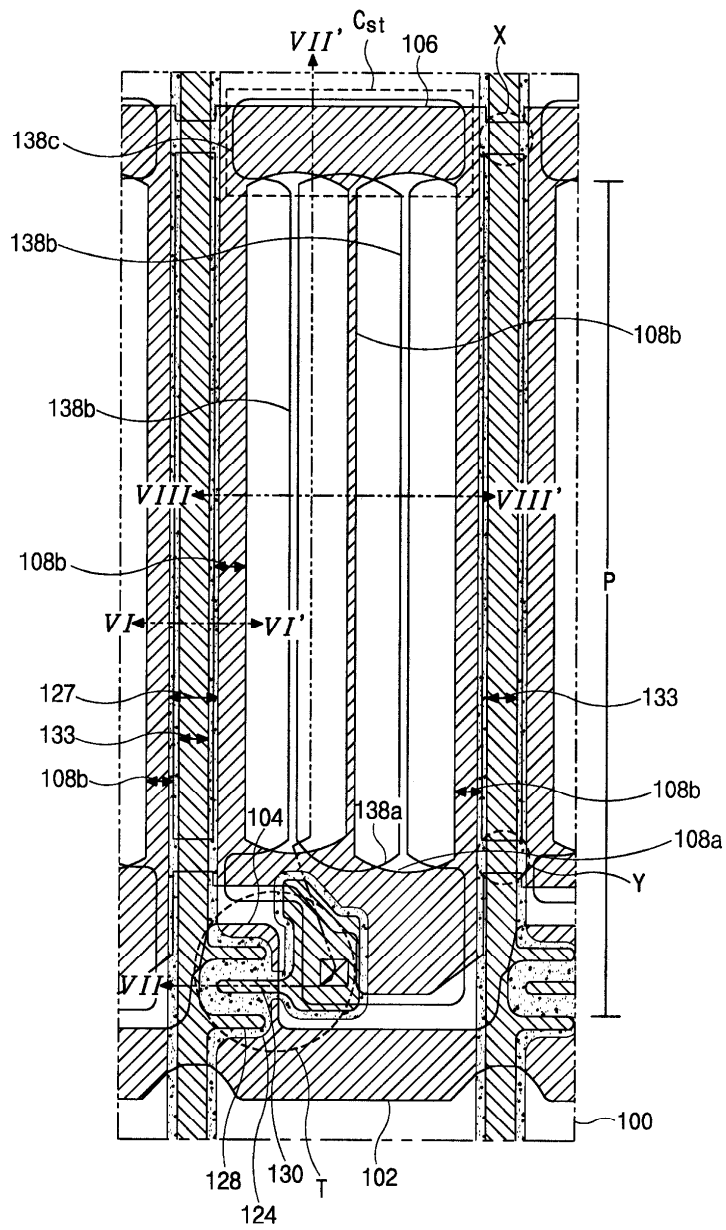
4d



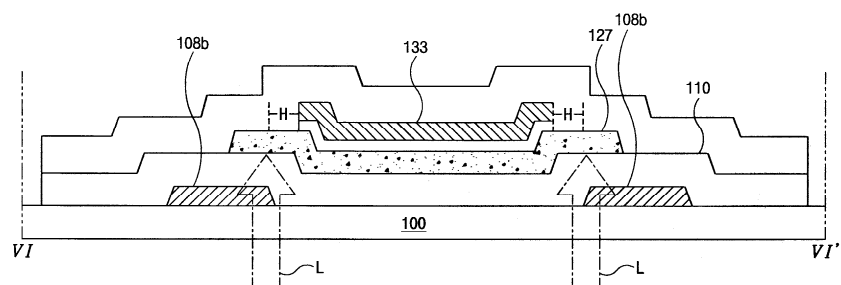
4e



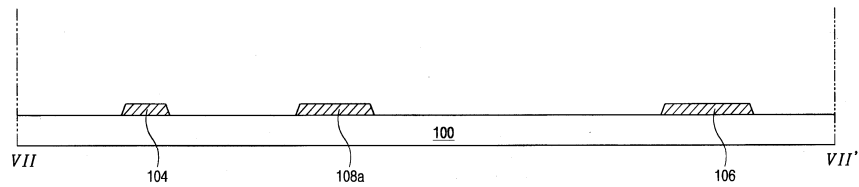
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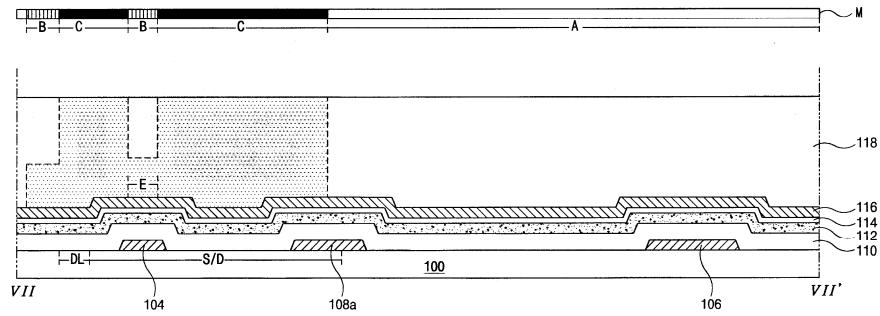
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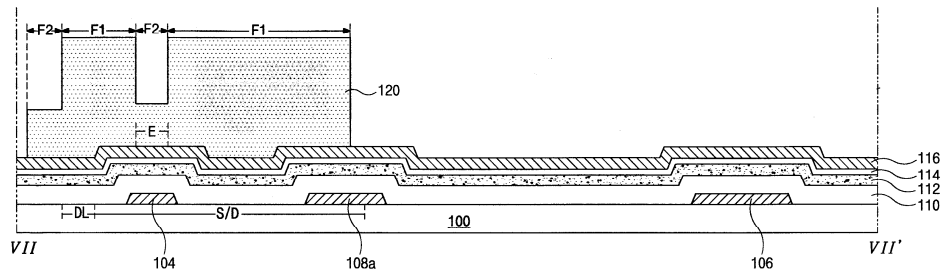
7a



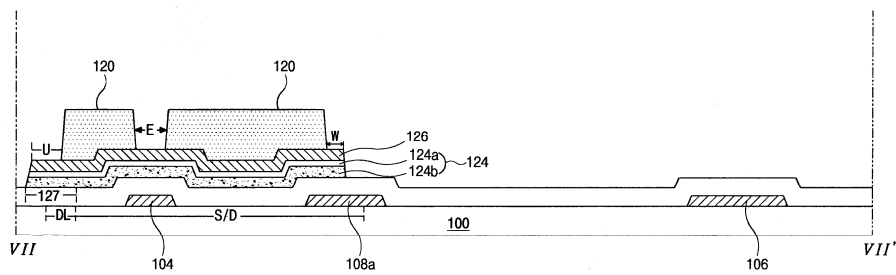
7b



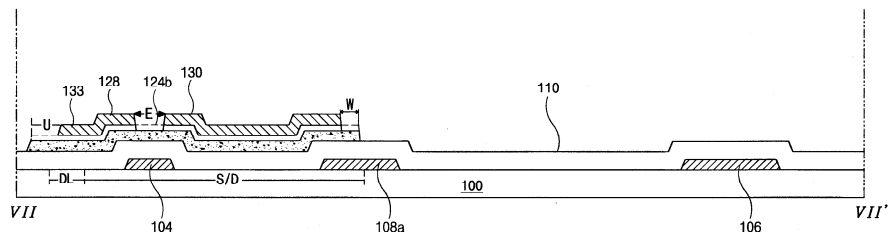
7c



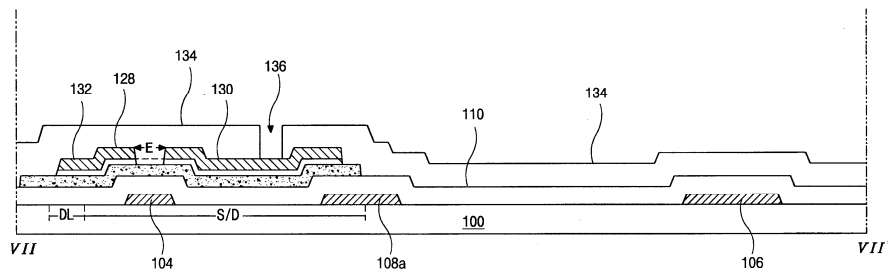
7d



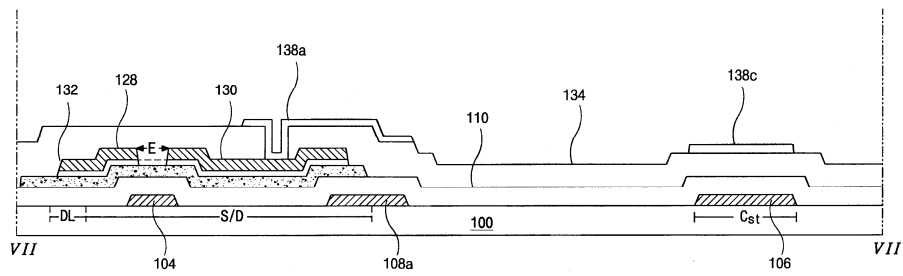
7e



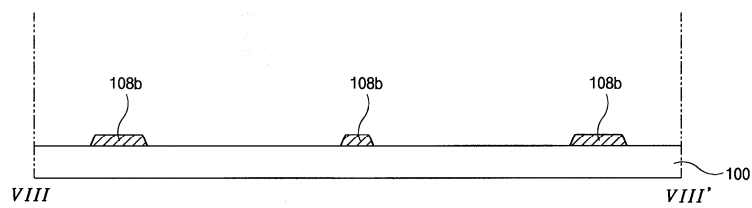
7f



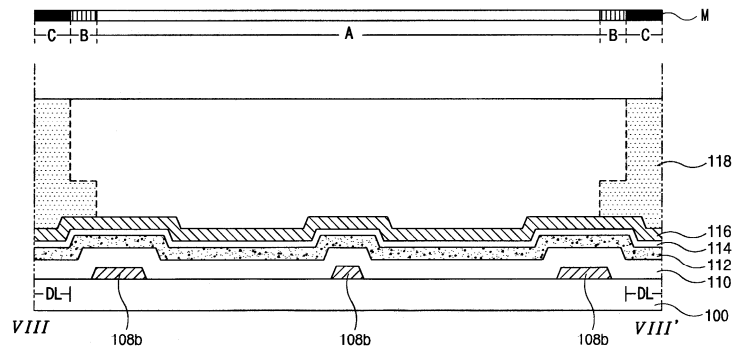
7g



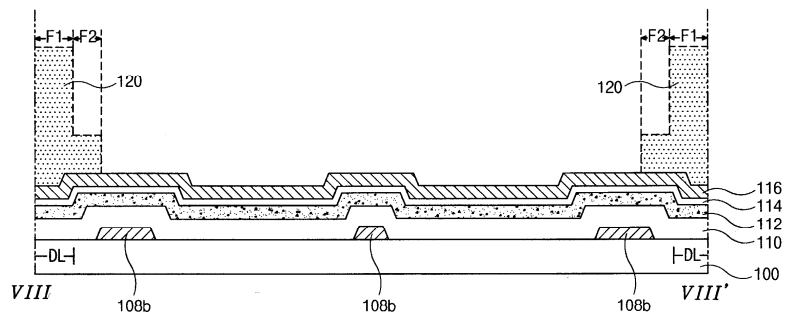
8a



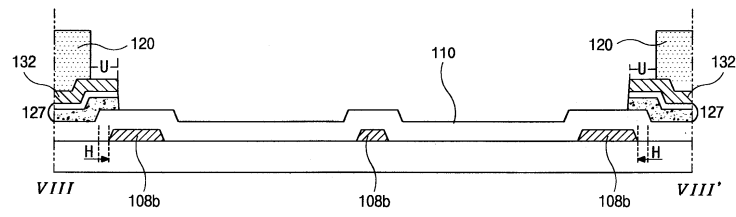
8b



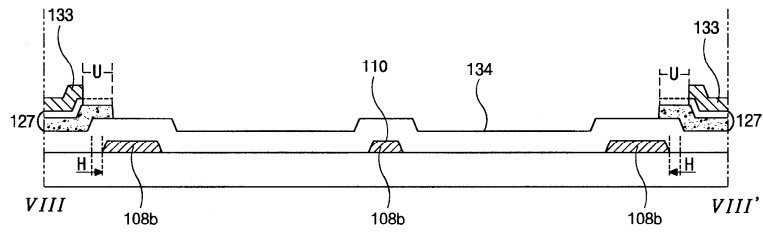
8c



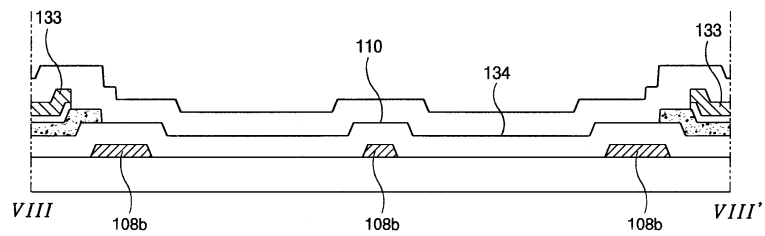
8d



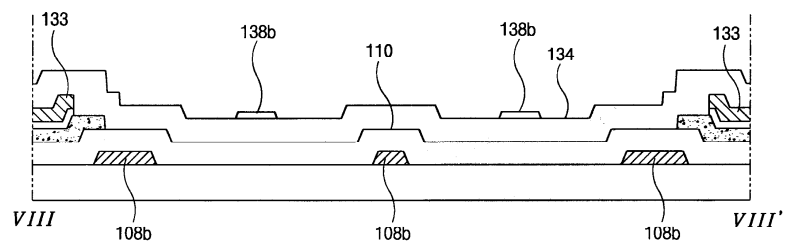
8e



8f

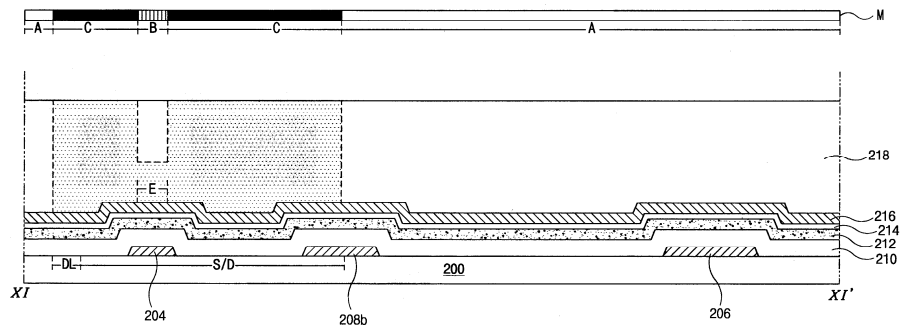


8g

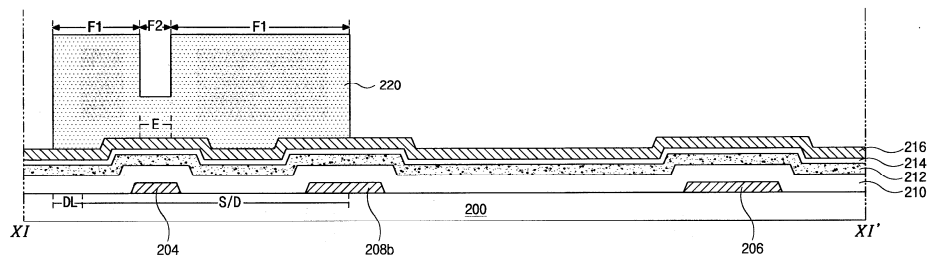




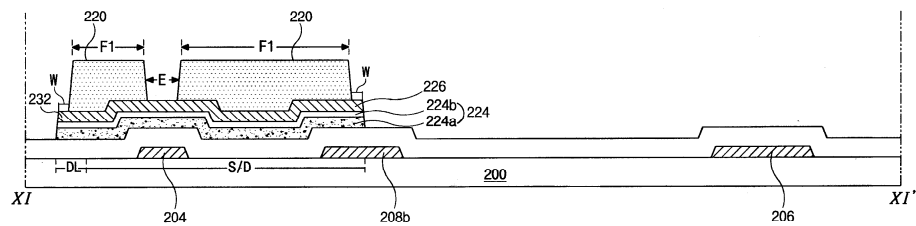
11b



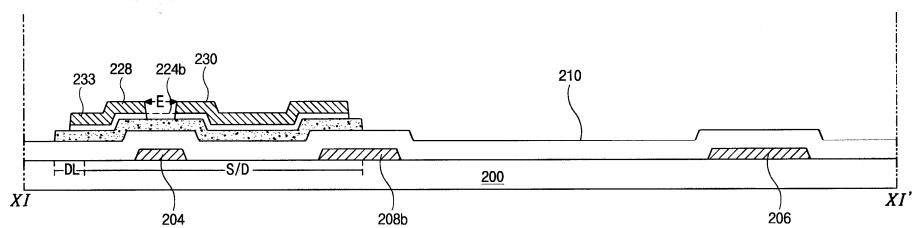
11c



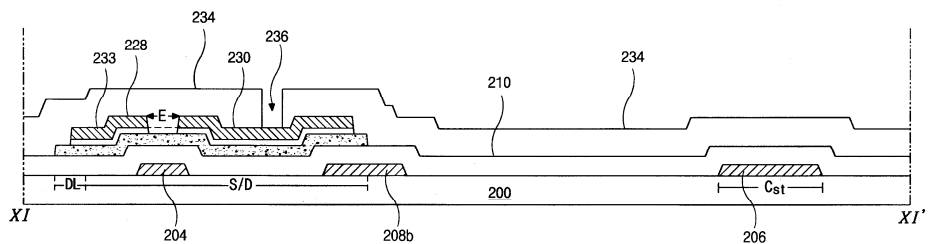
11d



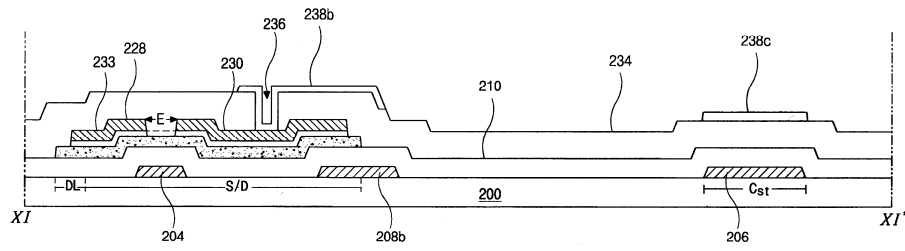
11e



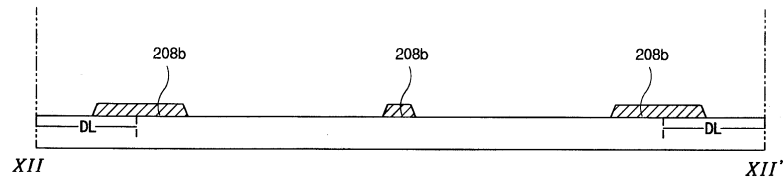
11f



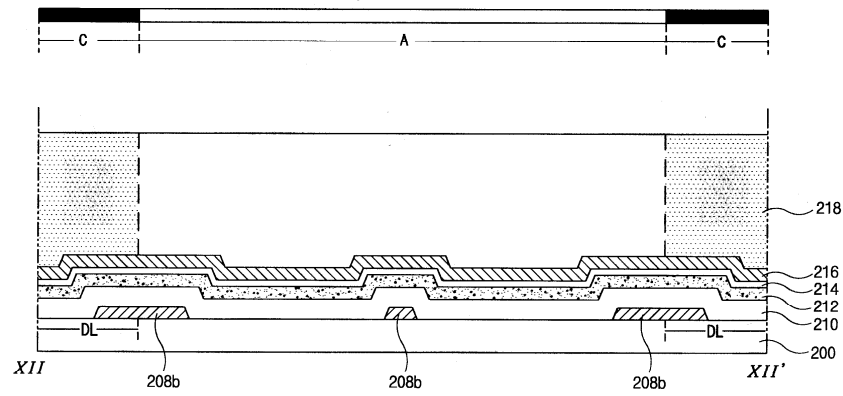
11g



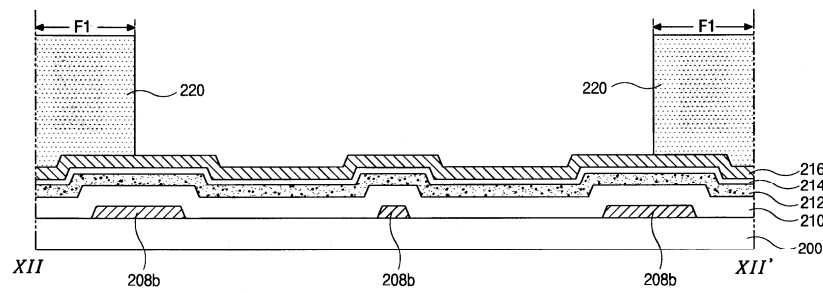
12a



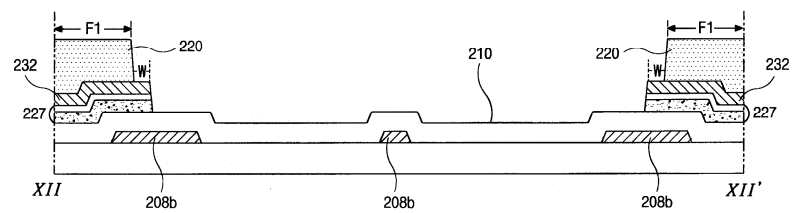
12b



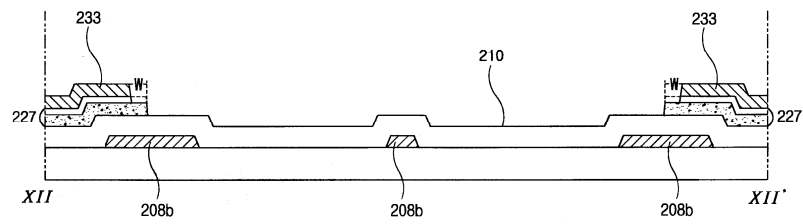
12c



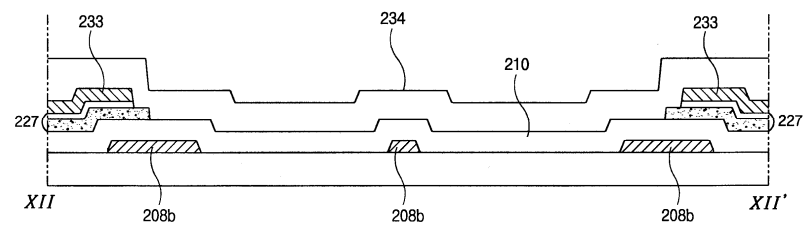
12d



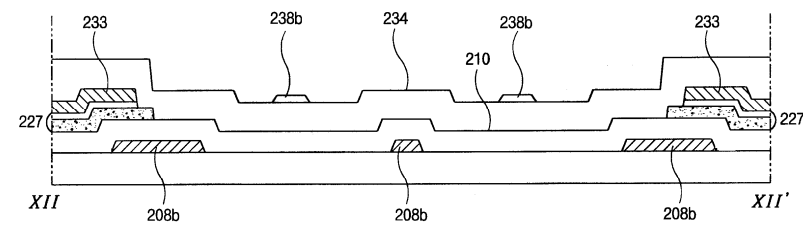
12e



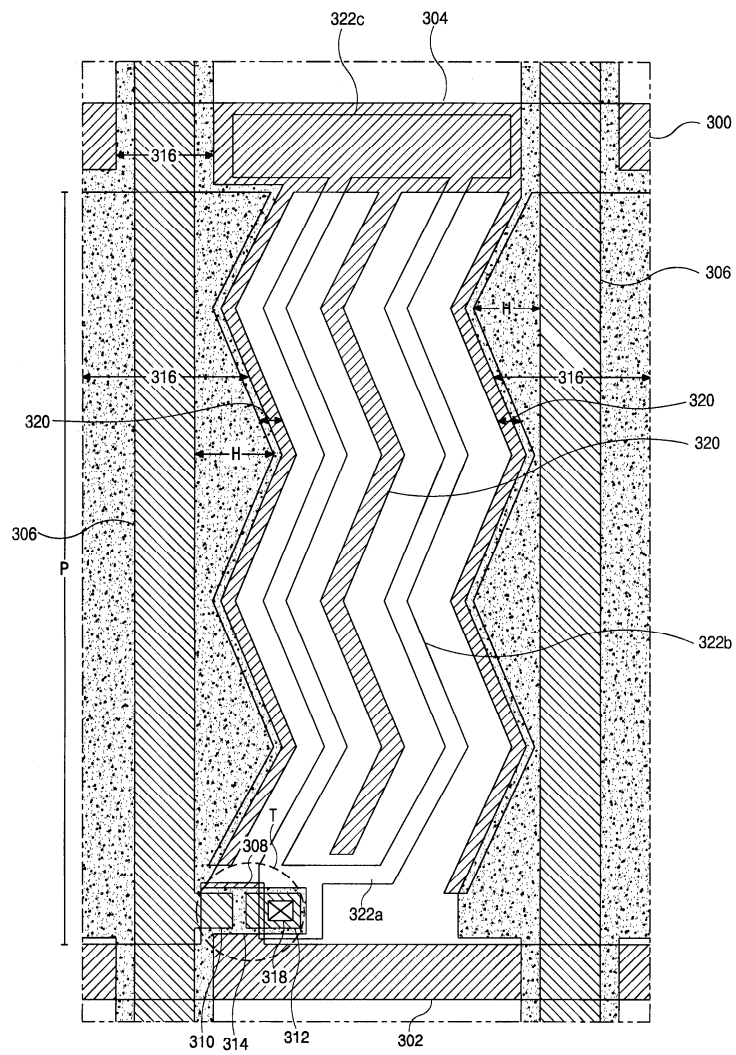
12f



12g



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专利名称(译)	用于横向电场型液晶显示装置的阵列基板及其制造方法		
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摘要(译)

本发明涉及特别地，该数据线和该横向电场型阵列面板和液晶显示装置的制造方法用于去除，横向电场型的液晶显示装置上的相邻电极之间产生的光泄漏现象。根据本发明的基板是由4个掩模的过程中，在数据线和这是为了防止光泄漏在相邻电极之间的间隔区域，所述数据线的或下部的构成的半导体层产生的阵列，用于水平电场方式的液晶显示装置并且与数据线相邻的电极延伸到间隔开的区域。根据这一点，即使在工艺缺陷在数据线和与该相邻电极之间间隔的区域不覆盖黑矩阵时，阻止由细长半导体层或电极的背面的光的光，能够防止光泄漏。此外，由于该工艺是通过4掩模工艺制造的，因此简化了工艺并提高了产量。五

