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(A)(51) 。 Int. Cl. ⁷
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(43)2003 - 0030564
2003 04 18(21) 10 - 2001 - 0062753
(22) 2001 10 11(71) .
20

(72) 2 1027 - 3

(74) :
:

(54)

, 가

(etching stopper)

가 .

가

가 .

1						,
2						,
3						,
4a	4d	3	-	-	-	,
5		1				,
6a	6f	5	- , - , -			,
7		2				,
8a	8f	7	- , - , -			.

< >

100 :	102 :	
104 :	106 :	
108 :	110b :	
112b :	1	118 :
120 :	124 :	2
126 :	128 :	3
130 :		

(liquid crystal display device) ,
(Transflective liquid crystal display device) .

(back light)

(power consumption) .

64) (13) , (15) , (P) (29) (19) (17) (52) (A) (C) (T) (34,46) (30) , (15) (30) (23)

2

(A) , (29) (13) (15) , () (52) , (64) (30) , (15) (30) (23) , (30) (41)

가 (29) (reflective mode)

5) , (B) (52) , (13) (1) (23) , (23) (B) (Image)

1) , (Transmission mode) , (21) (4) (F) (41) (64) (23) (41) (64) (13) (23)

3

(30) , (T)가 (matrix type) (34) (46)

, (P) (34) (46) (52,46) (34) (S) , (P)

(48)가 (34) (46) (36)

(40) (T) (32) (42) (44)

, 4a 4d , 3

4a 4d 3 - - -

, 4a 1 2

, (30) 1 , (32) (3
 34) (36) , (32)
 (30) (38) .
 , (32) (38) (40a)(active layer)
 (40b)(ohmic contact layer)
 (40) .
 4b 3 , 4
 .
 , (40b) , (40a) (42)
 (44) , (42) (46) (46)
 (48) .
 , (P) (3 34)
 / (3 50) . / .
 (42,44) (30) 2 (50) .
 4 , 2 (50) (Al)
 , (P) (A) (52) .
 4c 5 , (52) 3
 , 1 (38) 2 (50) 3 (54) , (44)
 (56) , (52) (A) (58)
 (36) (60) , (48)
 (62) .
 4d 6 , .
 , (54) 6
 , (44) (P) (64)
 , (36) (48) (66)
 (68) .
 6 , .

6

가 ,

3 , 4 ;
 , 5 .

-- 1 --

1 (top gate)
 (TFT) ,
 , 5 1 .
 , (100) (122) , (122)
 (P) (106) , (106,122)
 (102,104) , (110b) , (110b)
 (118) (T) .
 , (T) (102) (106) , (118)
 (122) .
 , (118) (118) , (118)
 (118) (110b) .

가 .

6a 6f 1 .
 6a 6f 5 - - - .

6a 1 .
 (100) (Al), (AlNd), (W), (Cr), (Mo)
 , (Cr)((Mo), (Ti))/ (Al) (n+
 p+) (ohmic contact layer) .

1 ,
 / () ,

1 (102) (104) , (102)
 (108) (5 106) ,
 (105) .

6b 2 , .
 (102,104) (105) (100) (a - Si:H)
 (110a) , (SiN_x) (SiO₂)
 1 (112a) .

, 1 (112a) (114) .

, (114) (positive type) (116a)
, (mask) (M) (exposure) (develope) .

(104) (118) (114) , (102)

, (118) , (120) (122) .

16b)가 , () (118) (1

6c (100) (116b) (110b) 1 (112b)

(6b 116b) 1 (112a) (110)

(110b) , (108) (5 122) (118)

, (118) (6b 116b)

, (110b) 가 .

(118) , (110b) (120) (5 122)

6d 3 .

, (5 122) (118b) (110b) (100) 3
(BCB) (acryl) (resin) (124) .

, 3 (Al) (AlNd) (P)
(A) (126) 3 ,

, 6e 4

(126) (100) (SiN_x) (SiO₂)₃ (128) .

, 4 2 (124) 3 (128) ,
(104) (108) (130) (120) (126) (A) (132) ,
(134) (136)

, (105) 가 . , 1 (108)

6f 5 .

, (130,132,134,136) 3 (128) - - (ITO) -
 - (IZO) 5 ,
 (104) (138) .

, (108) (142) (120)
 (142) .

, 1 .

, 2 ,

- - 2 - -

2 5 가

7 2 .

, (222) (206) (P) ,
 (206,222) (T) .

(T) (202) (204) (210b) (218)
 (top gate) .

(T) (206) (20
 2) (204) .

(202,204) (210b) , (210b)
 (222) (218) .

, (210b) (218) (222)

.
 (P) (240) (A) (228) .
 , (228) (N) .

, 8a 8f ,
 .

8a 8f 7 - , - , - .

, 8a 1 .

(200) (Al), (AlNd), (W), (Cr), (Mo)
(Cr)(Mo), (Ti))/ (Al), ,

1 , ()

(202) (204) , (202)
(208) (206) , (2
02, 204) (206) (205) .
(202) , (204) , (202) ,
(208) (206) .

8b 2

a) (202,204) (200) (a - Si:H) (210
(SiN_x) (SiO₂)
(BCB) (Acryl) (resin) 1
(212a) .
, 1 (212a) (214) .
, (214) (positive type) (216a)
, (M2) (exposure) (develope) .
(M2) () () ()
(D1) , (P) (D2)가
(210b) (214) , (202,204)

, (218) (220) (7 222)

(P) (224) .

, (7 22) (218) (224)
(Photo - Resist)(216b)가 가 .

(210a) 1 (116b) , (212a) 가

8c (210b) 1 (212b) (218)
(200) .

, (218) (8b 116b) 1
(8b 121a) (8b 210a) .

,
 (220) (7 222) (218) , (220) (7
 222) (218) (220) 1 (212b) (210
 b) .
 , (P) (224) 1 (212b) (210b)
 (N) .
 , (110b) (220) (218) (7
 222) (224) .
 8d 3 (228) .
 , (7 222) (218) (210b) (P) (N)
 (200) (BCB) (acryl) (resin)
 3 (226) .
 , 3 (226) (Al) (AlNd)
 () .
 , (N) (O) (P)
 .
 3 (P) (A)
 (228) .
 , 8e 4 .
 (228) (200) (SiN_x) (SiO₂)
 3 (230)
 .
 , 4 2 (226) 3 (230) (2
 04) (232) , (228) (A) (234) ,
 (208) (220) (236) (238)
 .
 , (205) .
 8f 5 .
 , 3 (230) - - (ITO) - - (IZO)
 5 (204)
 (240) .
 , (208) (240) (220)
 (242) .
 1 2 .

가 .

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가 .

(57)

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1 , 2 ;

2 1 , 1 2 ;

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2 3 ;

3 , 4 ;

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2 ,

(Al)

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5.

2 ,

- - (ITO) - - (IZO)

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2 3 ;

3 4 ; ,

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7 ,

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9.

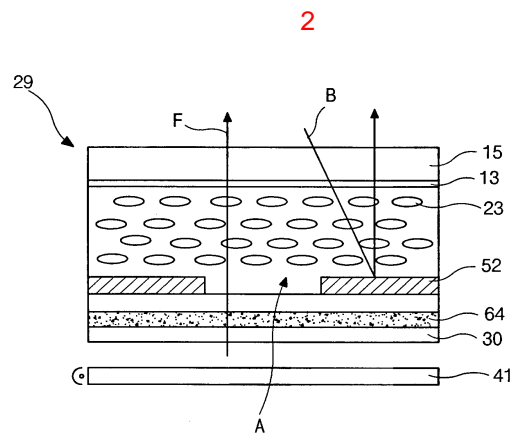
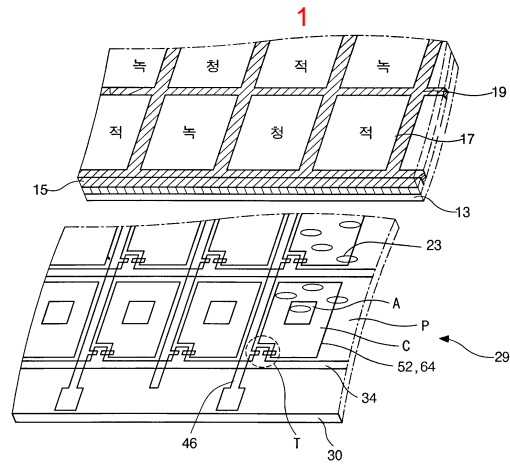
7 ,

(Al)

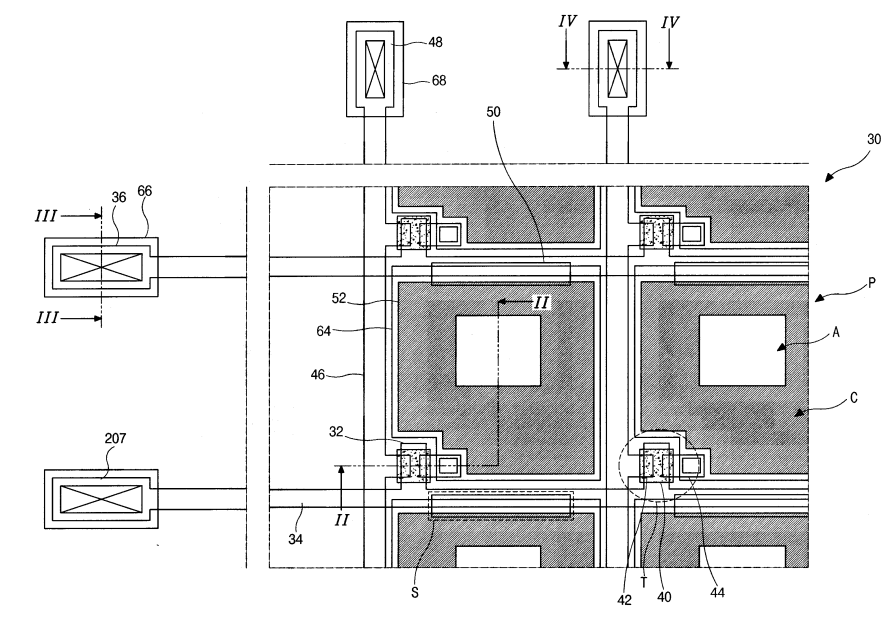
10.

7 ,

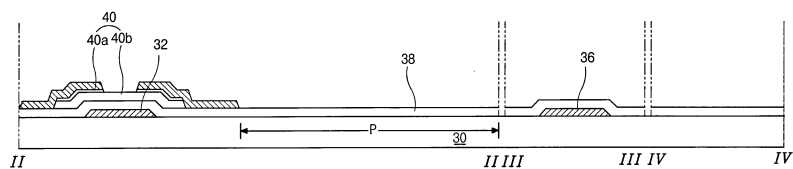
- - (ITO) - - (IZO)



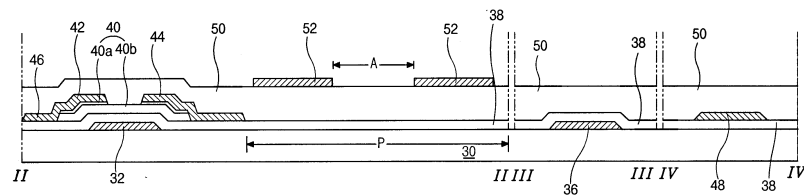
3



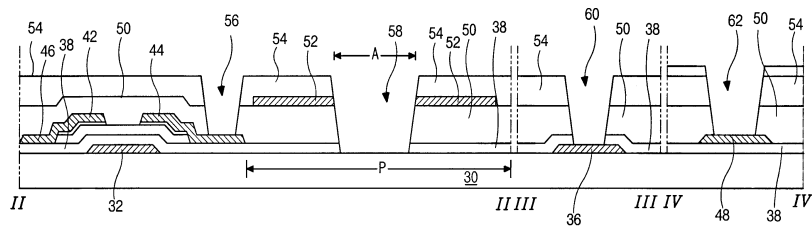
4a



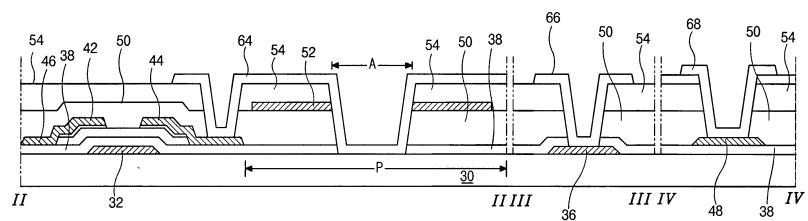
4b



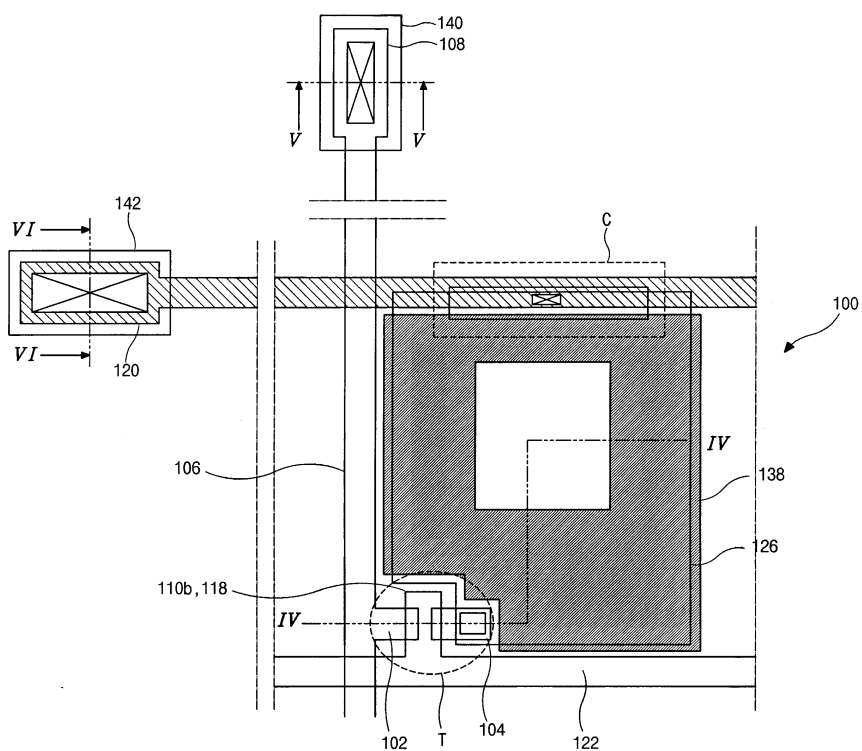
4c



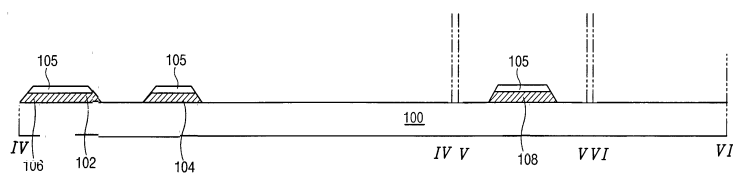
4d



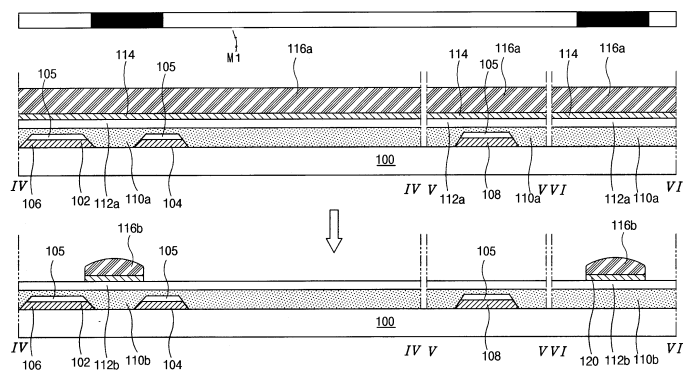
5



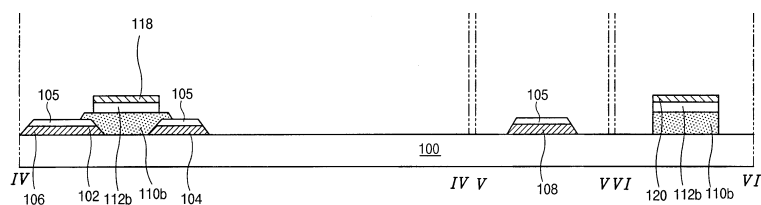
6a



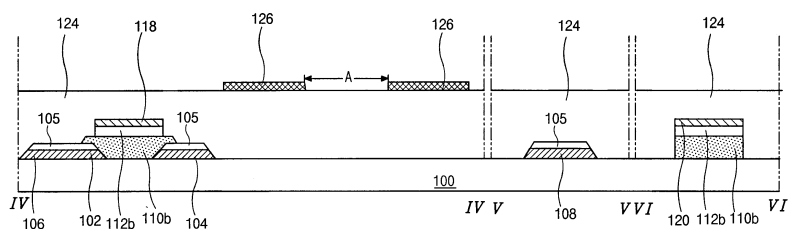
6b



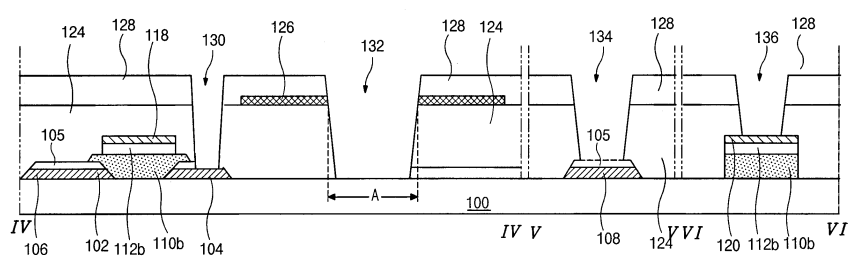
6c



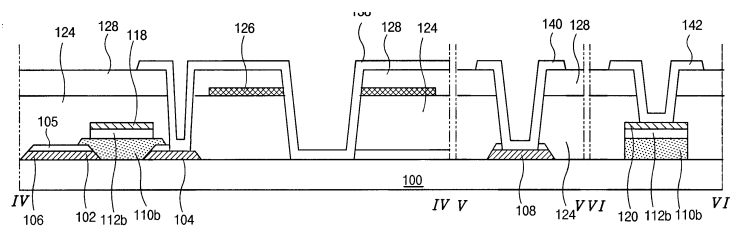
6d



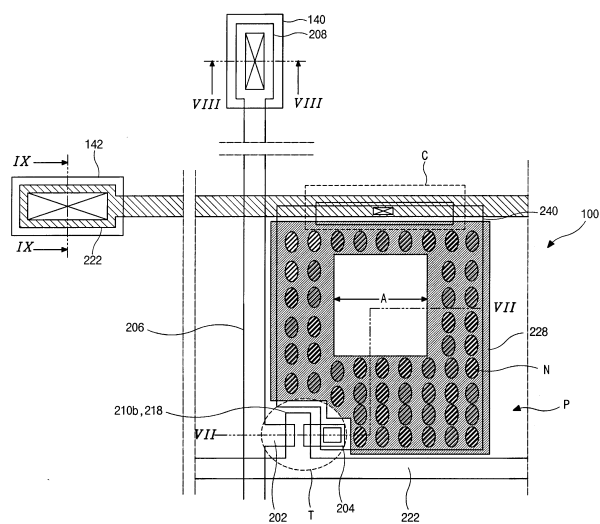
6e



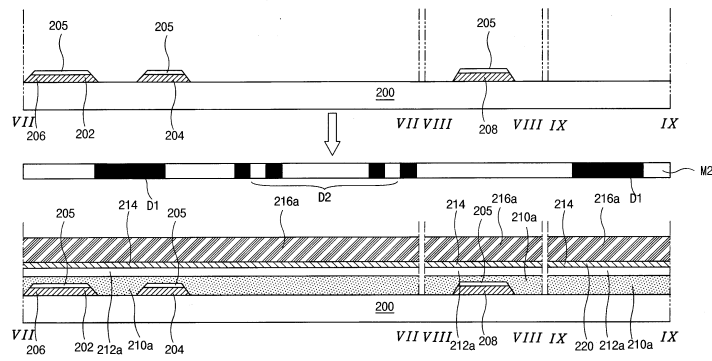
6f



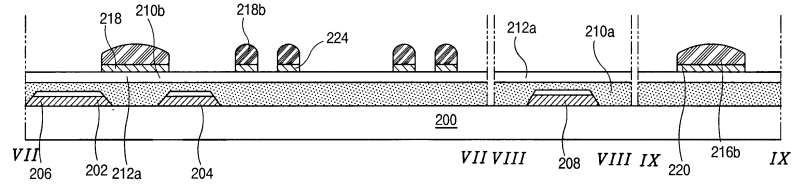
7



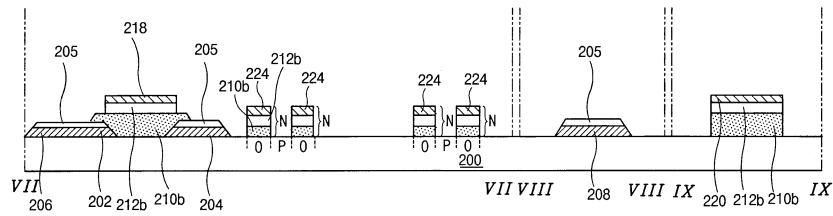
8a



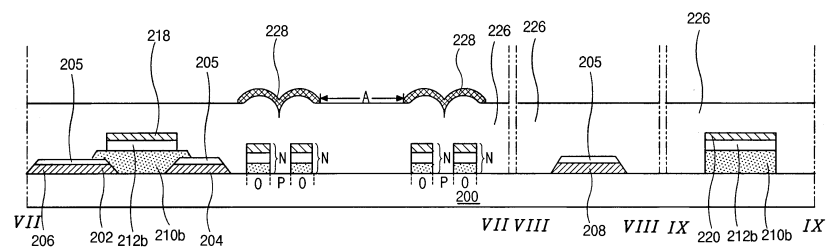
8b



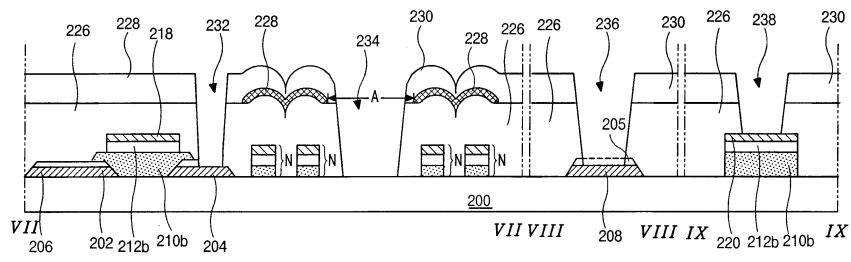
8c



8d



8e



8f

