



129 : 2 132 : 1  
134 : 135 :  
136 : 138 :  
140 : 142 :  
146 : 148 :  
150 :

1 , .

(8) (11) (6) (7) (8) ,  
(56) (T) (9) (5) , (P) (5)  
(22) (15) (22) (T)가 (matrix type)  
(P) (12) 가 (12) (34) (P)  
(56) - - (indium-tin-oxide : ITO)  
(T) (56)

(12) (T) 1  
(34) (T) 2  
가 가 (Spontaneous Polarization) 가  
(Bipolar) 가

2  
2

(12) (34) (P) (12)  
(34) (12) (T)가 (34)  
(36) (36) (58) (60)  
(T) 가 (12) 가 (14) ,  
(34) (14) 가 (40) (40) (42) (42) (32)  
(P) (42) (56)  
(56) (12) (12)  
(12) (56)  
(17) 1 2 1  
2 (28) ( ) (C)  
) , , (32) (40,42) ( )  
, (34) (36) 1 (35) , (28)

2 (29) . 4 , 4

3a 3g 4a 4g 5a 5g 2 - \ , - \ , - \

4 , 4a 4a 4g , 3a 4a 5a , 5a (22) 5g 1 .) (1

4) , (10) , (12) , (12) (1

(Al), (Al) , (Mo), (W), (Cr) (Mo) (Cr)

(12) (10) (22) 1 (16) ,

(18) , (16) (20) 2 (24) (SiO<sub>2</sub>)

(SiN<sub>x</sub>) (Cr), (Mo), (W), (Ta)

(22) (T) , (P) (S)

(D) (G) (P) (S)

3b 4b 5b (photo-resist: 'PR' ) PR (26) , PR (26)

(positive type) (A) (B) (C)

PR (26) (22) (A) (B) (C)

(50) (C) (14) (C)

PR (26) (50) (A) (exposure) , (devel

op) (34) (36) 1 (35) , (26)

3c 4d 5d (T) (S)

(D) PR (26) PR (26) 2 ( 3c 24)

3d 4d 5d ( 3c 20) (18)

(28) , (T) (D) / (28) , /

(12) (34) , (36) (38) (28)

(34) (36) 1 (35) , (26)

2 (29) (T) 1 (32) ,

(32) (30) (CH)

3e 4e 5e PR (ashing processing) PR

PR (26) (F) 가 (14) (E) (28,38,36)

PR (26) (Mo) 가 , (Cr)

PR (32) (30) (CH) (T) / (32)

3f 4f 5f (40) , (42) (T) / (32)

(CH) (32) (40,42) (34)

(36)가 2 (40,42) (34) (22) (BC

B) (acryl) (resin) (46) (SiN<sub>x</sub>) (SiO<sub>2</sub>) 2 ,

(48) , (46) 3 , (42) (10) (36)  
 (28) (50) , (54) (ITO) - -  
 3g 4g 5g (52) , (46) 4 (56) ,  
 (IZO) (42) (P) (28) (36)  
 (60) (10) (58)

4

3

(n+a-Si:H) 2 가 PR 1 ; PR 1 (a-Si:H) ;  
 ; ; 2 , / ,  
 / ; / ; 3  
 ; ; 3 가 3  
 ; 3 ; 3

(SiN<sub>x</sub>)

300 500 ~1000

(Cr), (Mo), (W), (Ta)

-- --  
 6 3

(112) , (100) (112) (13) (P) ,  
 (112) (136) (150) (110) , (T)가 (134) (148)

(134) (T) (112) 가 (114) , (142)  
 , (114) (140) (142) (132)  
 , (P) (142) (146) ,  
 (146) (112) (112) (138) ,  
 , (146) (142) , (138)  
 , (112) 1 , (146) 2  
 (132) 2 ( ) (C) .  
 , 7a 7h 8a 8h 9a 9h 6 - , - , -  
 7a 7h 8a 8h 9a 9h 6 - , - , -  
 ( 7a 7h , 8a 8h , 9a 9h )  
 7a 8a 9a , (100) (Al), (W), (Mo), (Cr)  
 , (114) 1 (112) (110)  
 , (114) RC (delay)  
 (hillock)  
 , 가 (112) (114) (116)가 (100) (Acryl)  
 (SiO<sub>2</sub>), (SiN<sub>x</sub>) (116) (a-Si:H)(118) (BCB)  
 H)(120) 2 2 (124) (Cr), (Mo), (W), (Ta) (n+a-Si:  
 , (D) 2 (124) (100) (P) , (T) (S)  
 , 7b 8b 9b , 2 (124) (100) ( )  
 photo-resist: 'PR' , PR (126) (150)  
 PR (126) (100) (A) (B) ( ) (C) (C)  
 , (114) (150) (exposure) , (develop)  
 , 7c 8c 9c , (T) PR (126) PR (126)  
 , , 7d 8d 9d , PR (126) 2 ( 7c ( 7  
 124) ( 7c 120) (D) / (136)  
 128) , / (128) (134) , (138)  
 , (112) (138) (128)  
 (134) (136) 1 (135) , (138)  
 , 2 (129) (T) 1 (132) ,  
 (132) PR (126) 1 (130) (116)  
 , 7e 8e 9e , (T) (CH)  
 PR (ashing processing)

(114) (E) PR  
 , PR (126) (F) 가 (128,138,136) .  
 , PR (126) (Mo) , (Cr)  
 PR , ,  
 , 7f 8f 9f (T) /  
 132) , (140) , (142) , ( )  
 2 , (132) (140,142) (134)  
 (136) 2 . - - (ITO) - -  
 (IZO) (142)  
 (P) (138) (146) , (110)  
 (148) , (136)  
 (150) .  
 (146,148,150) (100) (SiN<sub>x</sub>) (SiO<sub>2</sub>)  
 2 (152) 300 500 ~  
 1000 , (146,148,150) 2 (152)  
 (132) , 7g 8g 9g (152) (100) ( )  
 D) (G) (154) (printing) .  
 , (polyimide) (152) , 7h 8h 9h ,  
 , (148) (150) (S,T,P) 2 (154)  
 (G) (D)  
 , 3 .  
 , 3 , 가 .

(57)

1.

1 , ;  
 ;  
 PR (n+a-Si:H) 2 가 PR 1 ; (a-Si:H)  
 ;  
 ;  
 1 ; 2 , / , / ;  
 / / ;  
 ;

3

가

3

3

3

2.

1

3.

1

4.

1

5.

1

가

6.

1

(SiN<sub>x</sub>)

7.

6

300 500 ~1000

8.

1

9.

8

10.

1

(Cr), (Mo), (W), (Ta)

11.

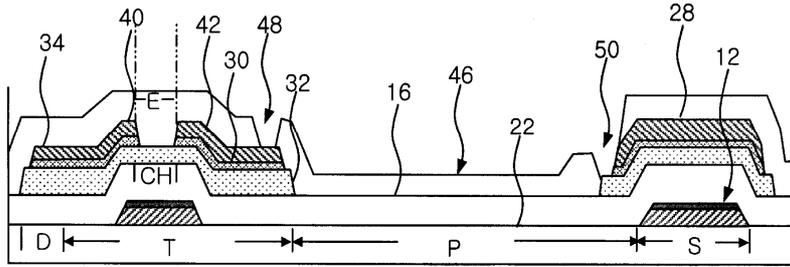
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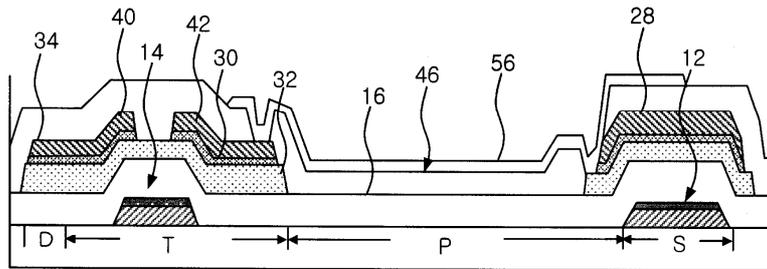




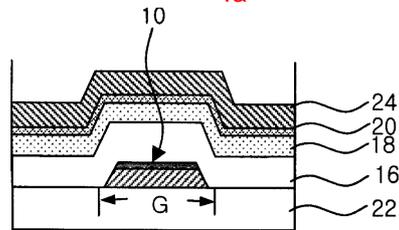
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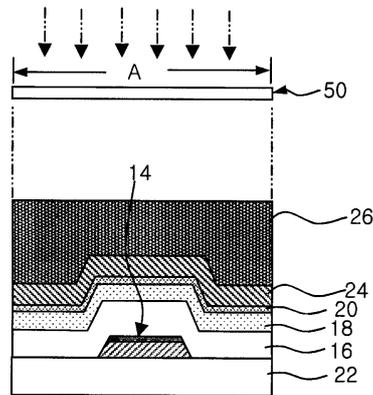
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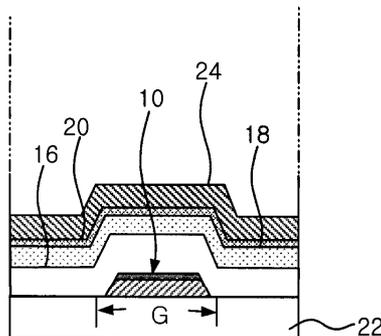
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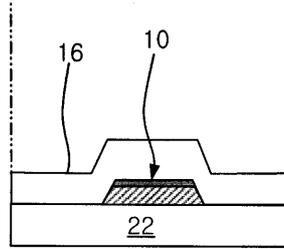
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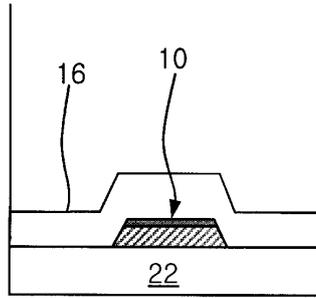
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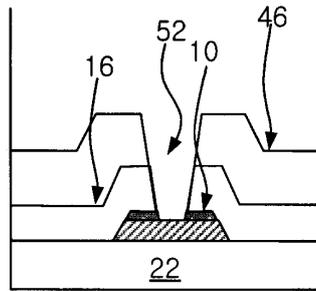
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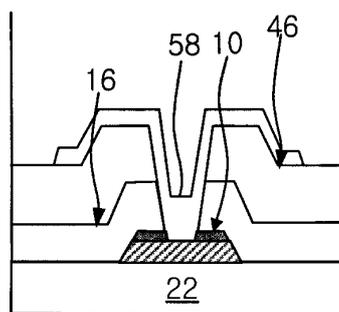
4e



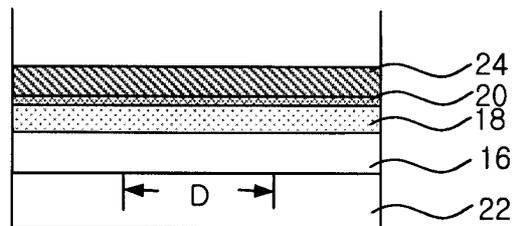
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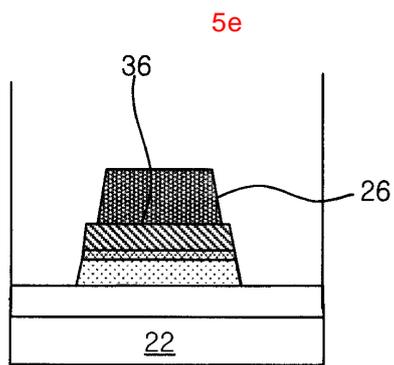
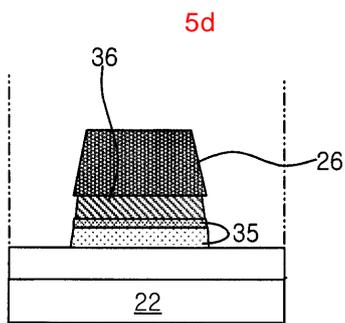
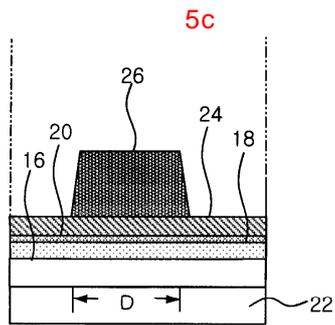
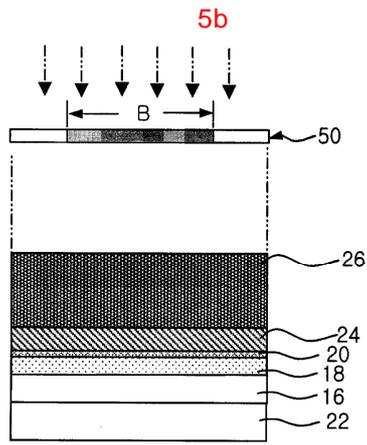


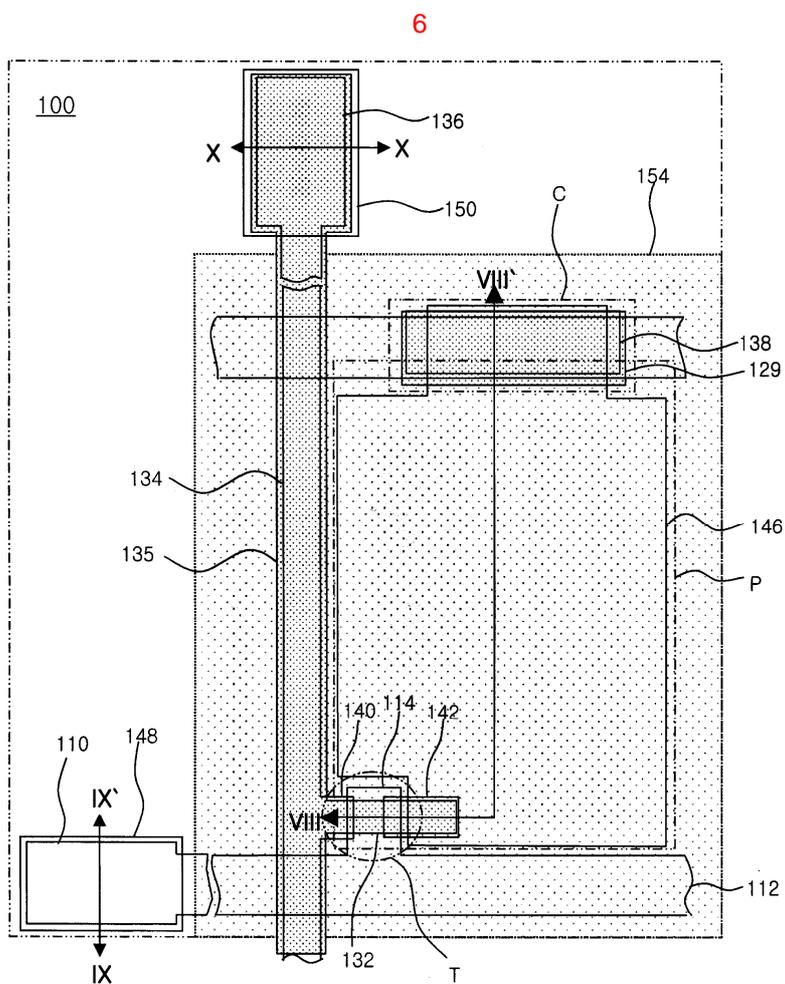
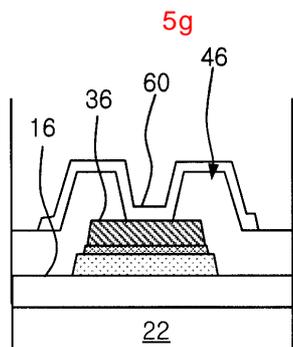
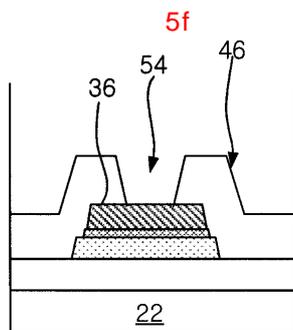
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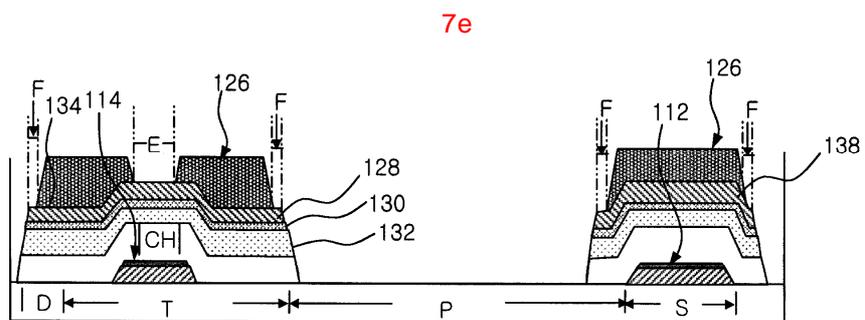
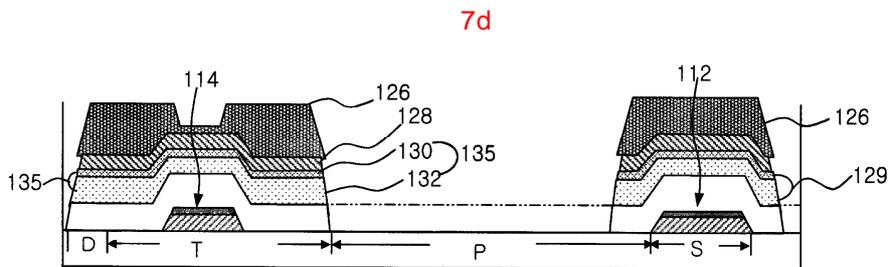
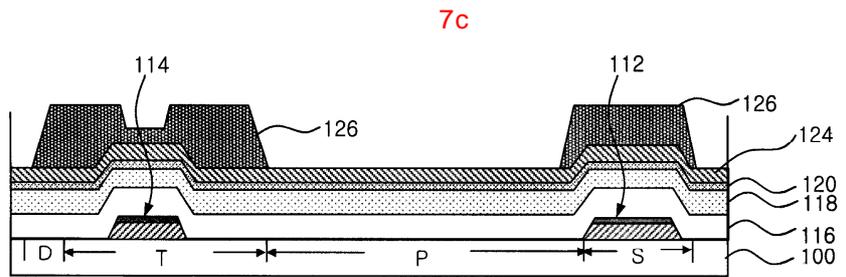
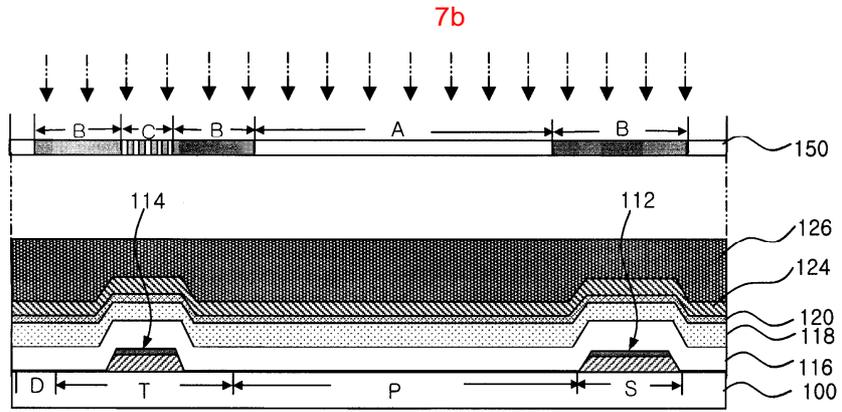
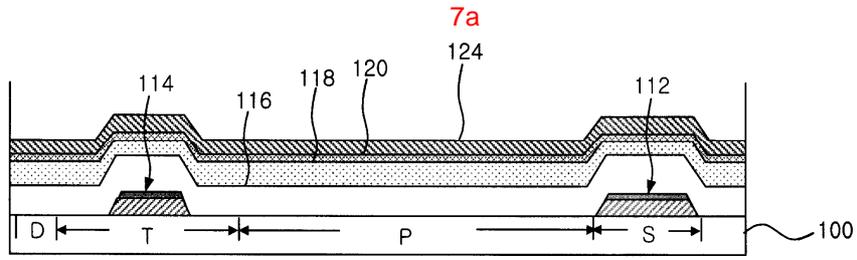


5a

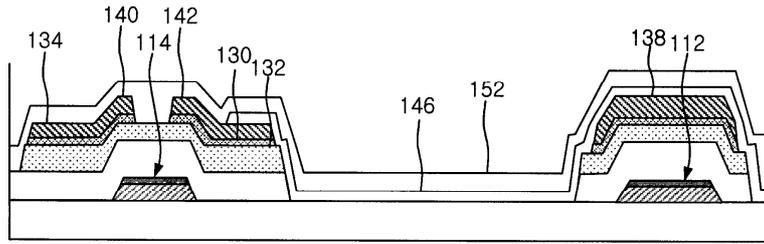






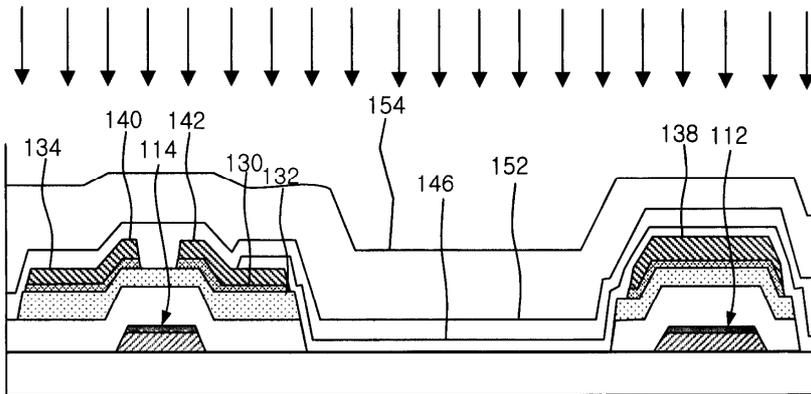


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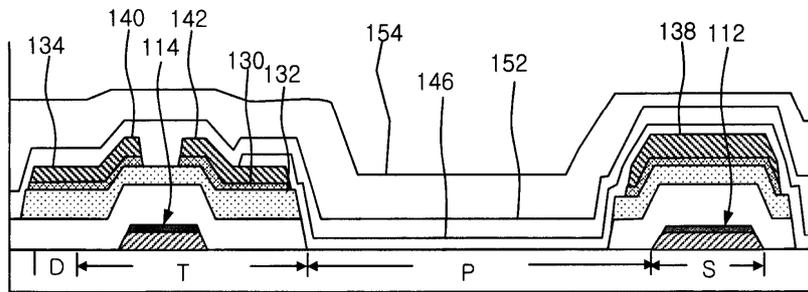


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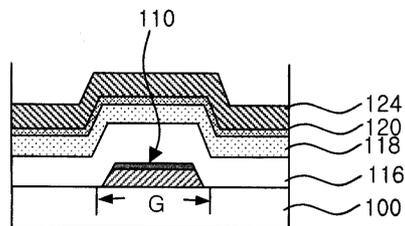
건식식각



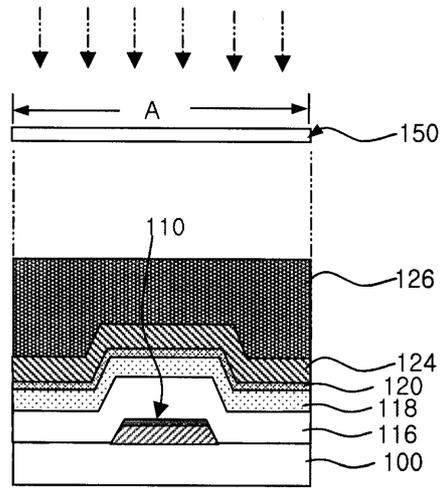
7h



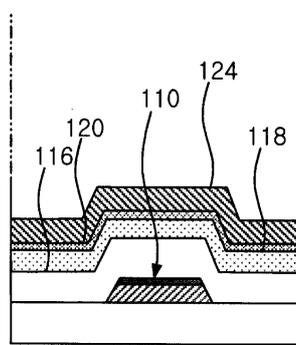
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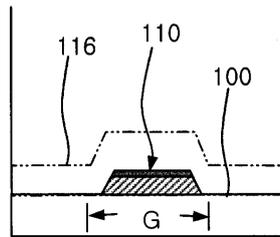
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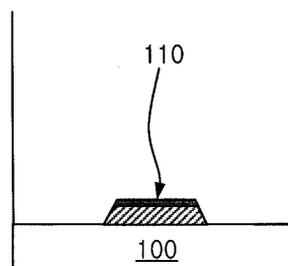
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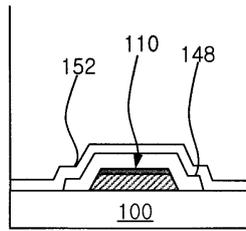
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8e

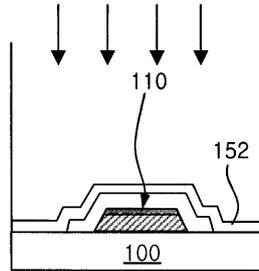


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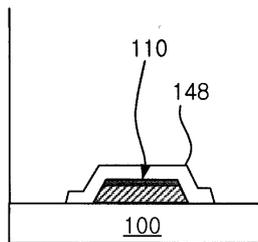


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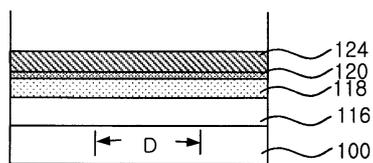
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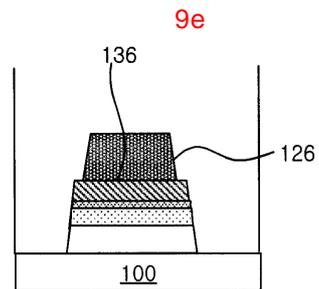
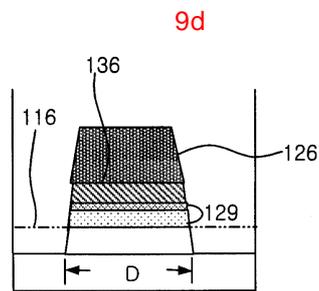
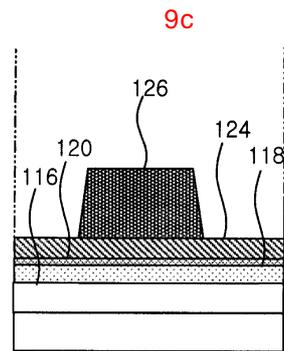
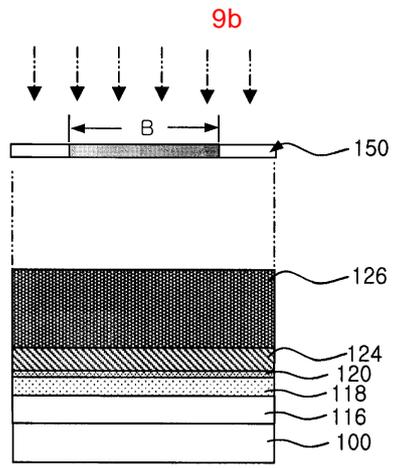


8h

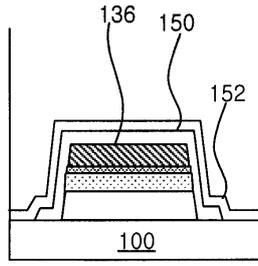


9a



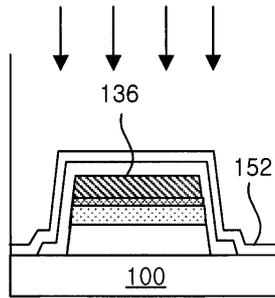


9f



9g

건식식각



9h

