

(19)
(12)(KR)
(A)(51) 。 Int. Cl. ⁷
G02F 1/1335(11)
(43)2002 - 0089008
2002 11 29(21) 10 - 2001 - 0028122
(22) 2001 05 22(71) .
20

(72) 111 - 1001

(74) :
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(54)

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가

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(floating)

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6e

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2	1	-` , -` , -`				,
3						,
4a	4f	3	-` , -` , -`			,
5						,
6a	6e	5	-` , -` , -`		1	
						,
7a	7b	5	-` , -` , -`		2	
						,
8a	8b	5	-` , -` , -`		3	
						,

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$$130 : \quad 132 : \quad 1$$
$$138 : 2 \quad (\quad) \quad 146 : 3$$

148 : 4 158 : 5

160 : 6 162 :

163 : 164 :

166 : 172 :

170 : 174 :

(Liquid crystal display device) , (Poly sili
con TFT) (Transflective liquid crystal display device) .

(back light)

(power consumption)

가

1

(2) (4) (6)
(7) , (P)
(8) (10) .
(18) (32) (4) (9)
(34) (8) (5) 가

(6) (10) (12) (14) (16)
(17) (T)가 .
(17) (T) (12) (17) (coplanar) ,

(18) (28) (16) .
(12) (6) , (14) (10)

(7) 가 (P) (C) .
(30) (18) (island) (15)
(7) .

, 2

.(1)

2 1 - ` , - ` , - ` .

2 , (2) 1 (20) , (20)
(17) .

(17) 가 (Active channel) 1 (17a) ,
(17) 2 (17b,17c) .

, (17) 2 (22) .

(12) , (22) , (17)
(12) (6) , (6)
(4) .

(6) (7) .

(12) (2) 3 (24)
(17b,17c) 2

2 (17b,17c) (23a,23b) .

(23a,23b) (2) (14,16) (15) 2
(17b,17c) (14) (8)가 (10)

(14,16) 4 (26)
(16) (15) (4)
(4) (28) (30) (32) (

34) .

4 (26) (16)
(18) (4) (5) (8)
(9)

1 .

가

가

3 .

(30) (P) (63,72)
가 (matrix type) (30) (T)
(54) (T) 가 (41)

(T) (40)
(40) (50) (coplanar) .

(41) (54) (44)
(56)가 (44,56) (64) (66)

(T) (40) (50) (52) (40)
(36)

(37) 가 ..

(41) (42) (42)
(P)

(42) (P) 가 (43)

(42) (43) , (63) 2 (48b)
 (63) (52) 1 (62) (52)
 .
 , (P) (C) (E)가 .
 , (37) (42) (43) 1, 2
 1 , (43) (63) 1, 2
 2 가 .
 , (C) (72) (P) (E)
 . (F) .
 , 4a 4f . (,
 3 .)
 4a 4f 3 - ` , - ` , - ` .
 , 4a (30) (SiO₂) (SiN_x)
 1 (32) , 1 (32) (a-Si:H)
 (34) .
 1 (32) (buffer layer) , (30)
 .
 (34) (poly silicon) .
 , , FE - MIC
 .
 , 4b (36) , (36)
 2 (38) , .
 (37) 가 (40) (41) . (36) (P)
 (.
 (41) 가 (44)
 .
 , (41) (43) , (42)
 (P) (43) 가 .
 (B) (36) 2 , 1 (A) , 2
 (B) 1 (A) 가 .

(38) (40) 1 (A) .

(40) 2 (B) (ion doping)

(40) 1 (A) (dopant)가 (36)

(Ion - stopper) 가 B₂H₆ 3 가 P - , PH₃ 5 가

N - .

(38) 4c , (40) 2 (B) 1 (32) 2

(B) 3 / (Inter layer insulator ; 46) , 2

(48a, 48b) .

(Cu), / (48a,48b) (30) (Al), , (W),

(Cr), (Mo) (B) (50,52) .

(56) (50) (54) (54)

(T)가 .

4 (58) (T)가 (30) .

(resin) 4 (58) , (Benzocyclobutene) (Acryl)

5 (60) .

1 5 (60) , (52)

(62) , (44) (61) (56)

(65) .

e) 4e , 5 (60) - - (Indium - tin - oxid

(Indium - zinc - oxide) (52) (P) (63) ,

(44) (64) , (56) (66)

(SiN_x) 6 (63) (30) (SiO₂)

6 (68) .

6 (58) , (52) (62)

2 (70) .

, 2 (70) (30) (Al), (P), (52) (62) (72) .

64) (72) 6 (68) ((66) 1 (74) 2 (76) .

(64, 66) (72) (72) (63) .

, .

(C₁ + C₂)가 , 1 (C₁) 2 (C₂) (37) (43) (38) (dielectric material) .

1500 2000 .

1 (37)가 .

(52) (63) 가 (37) 가 .

가 , 가 , 가 .

(C₁ + C₂) 2 (C₂) , (46,5 8,60) .

(54) (52) 3 2 (46) 7000 , (60) 1 1.5 μ m 4000 .

1 2 , 1 가 2 .

, 가 .

,
 , (72) (63,64,66) 6 (68)
 (72) (63) 6 (68) 1
 (72) (64) (66) 6 (68)
 2

가 .

, 6 () (68) (pin hole)
 , (63) (72)

, (72) (63)
 가 .

,
 가 가 ,

(SiN_x) (SiO₂)

- - (ITO) - - (IZO)

, 6a , (130)
 1 (SiO₂) (SiN_x)
 (buffer layer)(132) .
 (132) .
 , (132) (a - Si:H)
 (134) .
 , 6b , (136) .
 , (5 P) (137) .
 (134) (active channel) 1 (A) , 2
 (B) .
 (104) (130) (SiN_x) (SiO₂)
 2 (138) .
 , (136) , 1 (A)
 (140) , (140) (141) ,
 (144) .
 , (141) (142) , (
 142) (P) (143) 가 .
 , 6c , (140) (130)
 3 (146) (146) , 2 (B)
 1 2 (148a, 148b) .
 , 3 (146) (Al), , (Cr), (W), (Mo),
 (Nb) (150) (152) , 2 (B)
 .
 , (150) (156)
 (154) .
 (154) (141) (P) .
 (T)가 .
 , 6d , (T) 4 (158)
 TFT .
 , 4 (158) (Al),
 , (P) (172) .
 (172) (142) (143) .
 , (172) (130) (benzocyclobutene) (acryl)
 (resin) 5 (160) .

, 5 (160) (152) (162)
 (144) 1 (144) (164) ,
 (156) (166) .

, 6e , 5 (160) - - (Indium - tin - oxide) -
 - (Indium - zinc - oxide)
 (152) (P) (163) , (164)
 (170) (156) (166) .

, (137) (143) , 2
 1 1 (C₁) , (143) (163)
 1, 2 2 (C₂) .

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, 6 가 . ,
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, 2 .

, 2 1 .

- - 2 - -

, 7a 7b 2 .(가
 5 .)

7a 7b 5 - ` , - ` , - `

2 (142) (143) ,
 (143) .

2 1

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7a , (130) 1
 (buffer layer)(132) .

, (132) (a - Si:H)
 , (136) (5 P) (137)
 .

(136) (active channel) 1 (A) , 2
 (B) .

(136) (130) 2 (138) .

, 1 (A) (140) , (140)
 (141) , (144) .

(141) (142) (143) 가 .
 142) (P)
 (140) 2 (130) 3 (146) (146)
 (B) 1 2 (148a,
 148b) , (143) 3 (154) .
 , 3 (146) (Al), , (Cr), (W), (Mo),
 (AlNd) , 2 (B)
 (150) (152) (142) (1
 43) / (157) .
 , (150) (156)
 (154) .
 (T) (C) 1 (157)
 .
 , 7b (T) 4 (160)
 TFT .
 , 4 (160) (Al),
 , (P) (172) .
 (172) 1 (157) .
 , (172) (130) (benzocyclobutene) (acryl)
 (resin) 5 (160)
 .
 , 5 (160) (152) (144) (156)
 .
 , (152) (P)
 (163) , (144) (170) (156)
 (176) .
 , (143) 1, 2
 2) 1, 2 (C₁)가 , 2 (143) / (17
 (C₂)가 .
 2 1 가 ,
 1 (157,163) (146) .
 , 3 2 .
 - - 3 - -
 , 8a 8b 3 .(3
 5 .)

8a 8b 5 - \, - \, - \, .(5 .)

, 3 (142) 1 (157)

, 3 .

8a (130) 1
(buffer layer)(132)

, (132) (a - Si:H)

, (136) (5 P) (137)

(136) (active channel) 1 (A) , 2
(B)

(136) (130) 2 (138)

, 1 (A) (140) , (140)
(141) , (144)

, (141) (142) , (

142) (P) (143) 가 .

(140) (130) 3 (146)
, 2 (B) 1 2 (148a, 148)

b) , (143) 3 (154)

, 3 (146) (Al), , (Cr), (W), (Mo),
(Nb) 2 (B)

(150) (152)
(island) / (157) (143)

, (150) (156)
(154)

(T)가 .

, 8b (T) 4 (158)
TFT

, 4 (158) (Al),
(P) (172)

(172) (142) (143)

, (172) (130) (benzocyclobutene) (acryl)
(resin) 5 (160)

, 5 (160) (152) (144) (156)
(172) .

, (152) (172)
(P) (163) , (144) (170)
(156) (174) .

(163) , (142) (143) / (157)
(172) 2 2 (C₂) ,
(143) / (157) (137)가
1 2 1 (C₁) .
3 2 가 ,
1 1, 2

가 .

, 가 .

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, 1 2 , , 가 .

(57)

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(SiN_x)

(SiO₂)

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(SiN_x)

(SiO₂)

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 (SiN_x) (SiO_2)

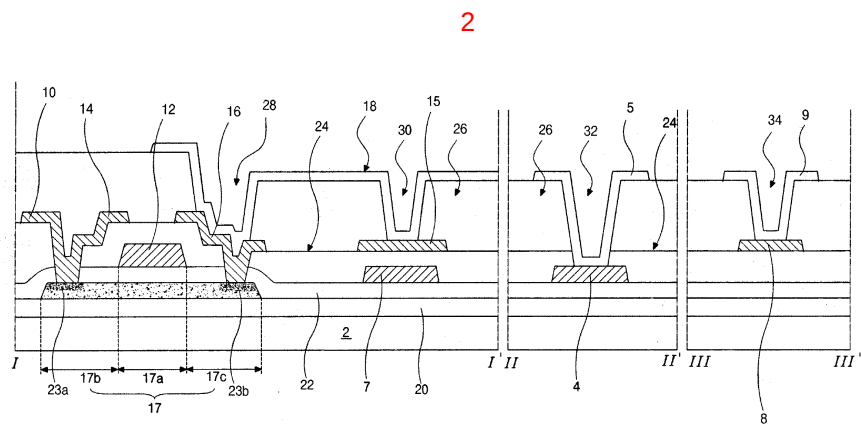
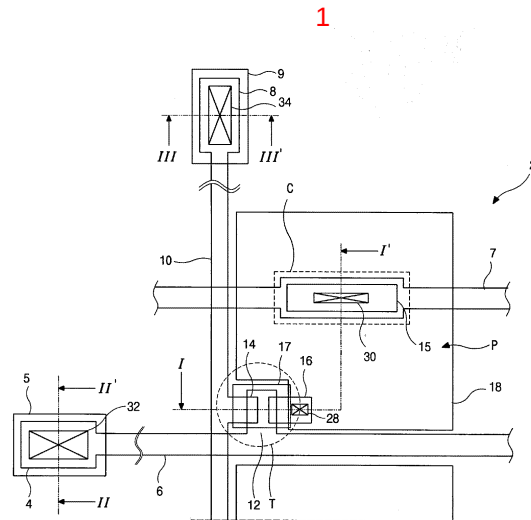
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16.

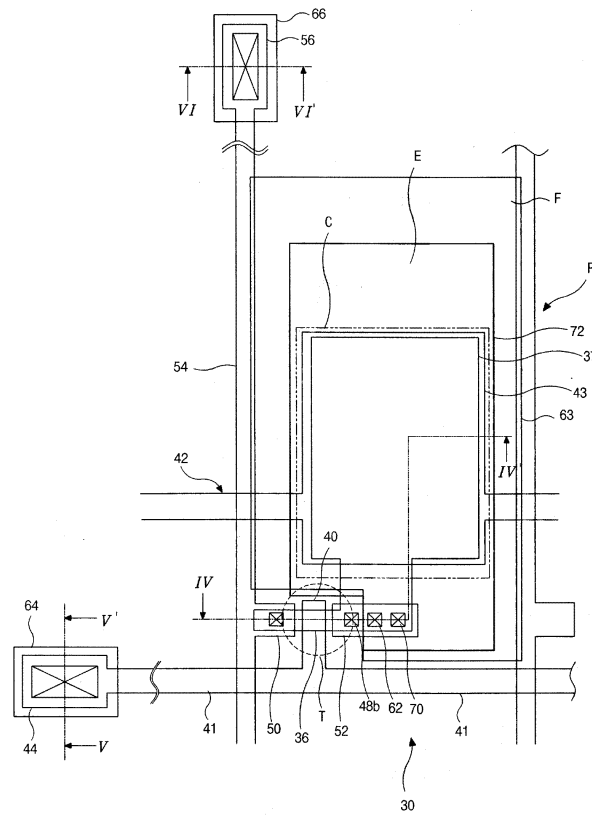
13

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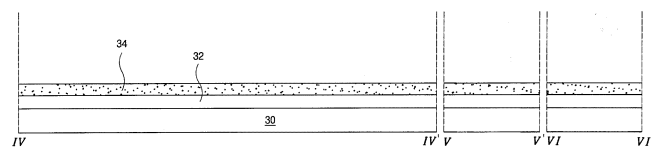
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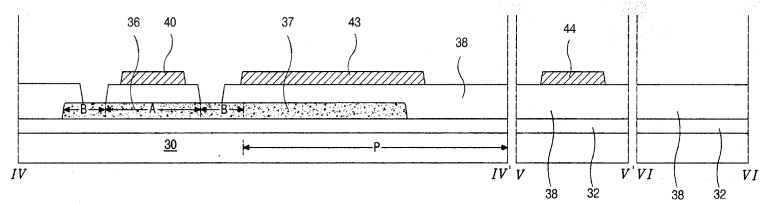
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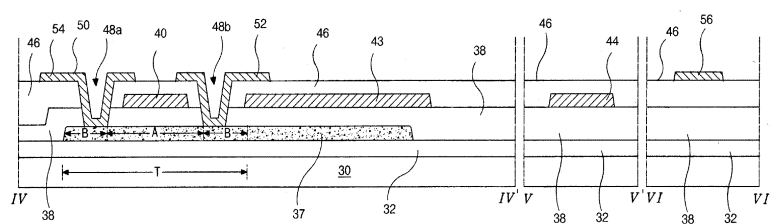
4a



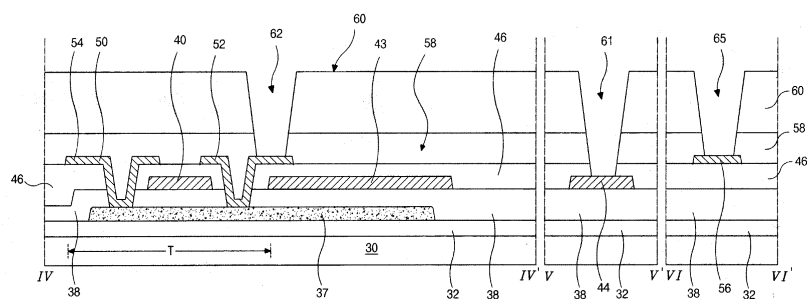
4b



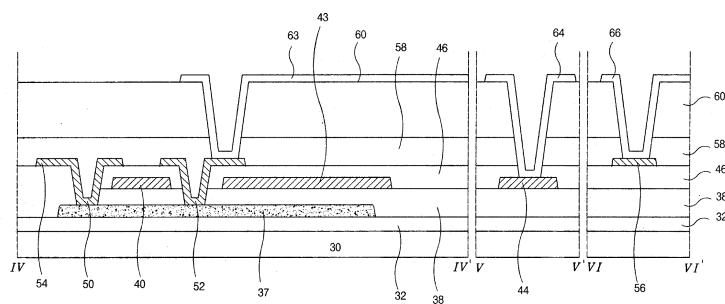
4c



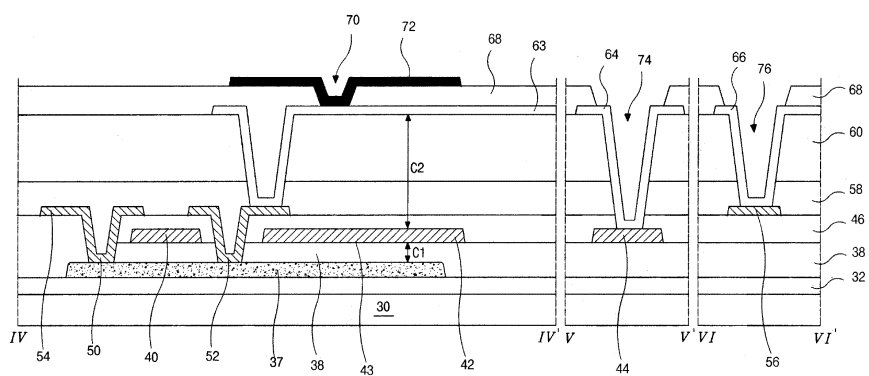
4d



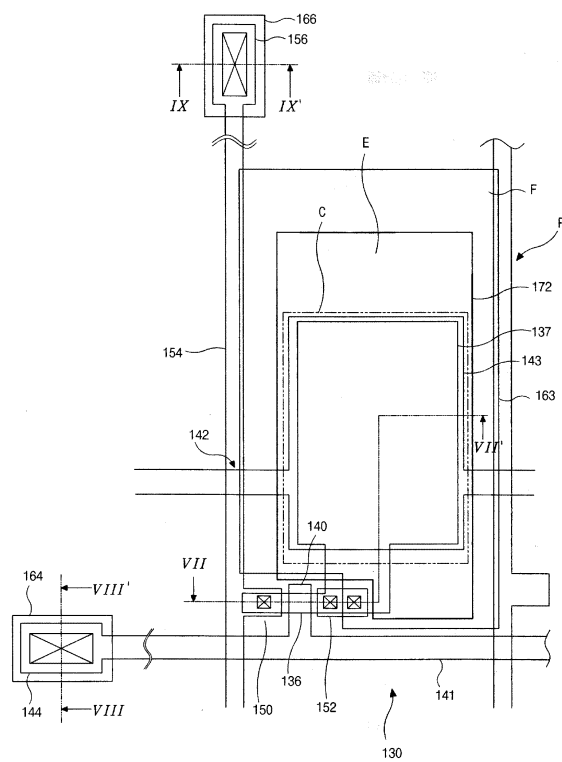
4e



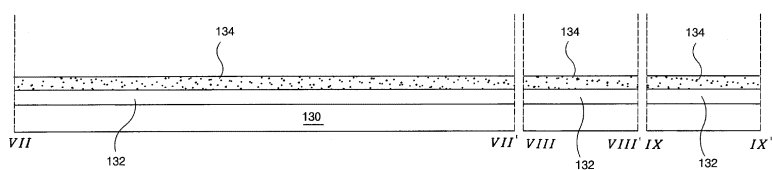
4f



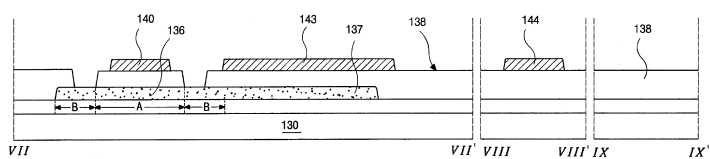
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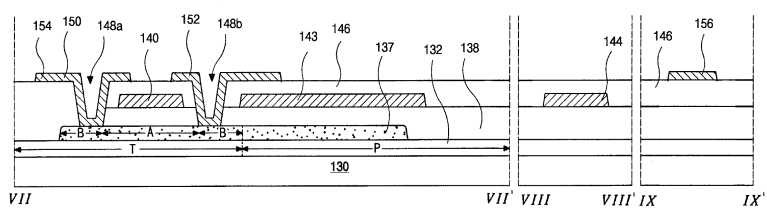
6a



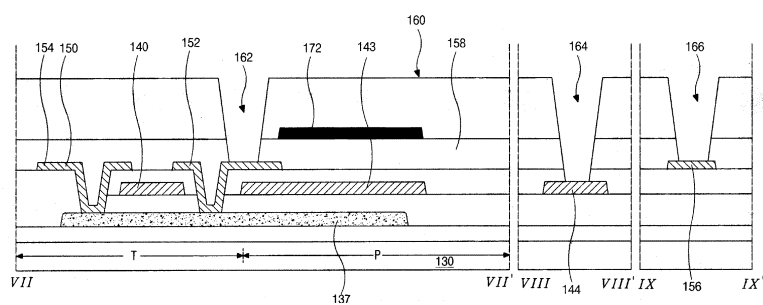
6b



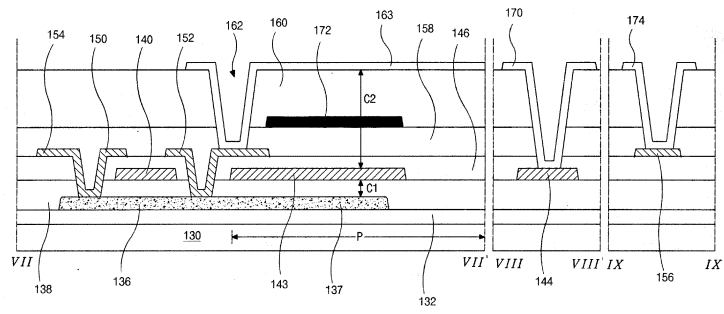
6c



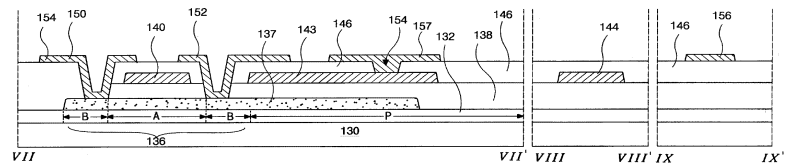
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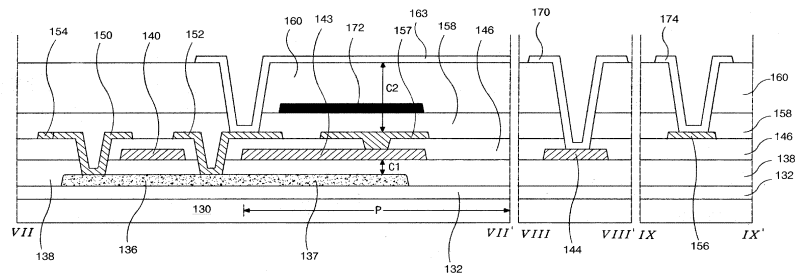
6e



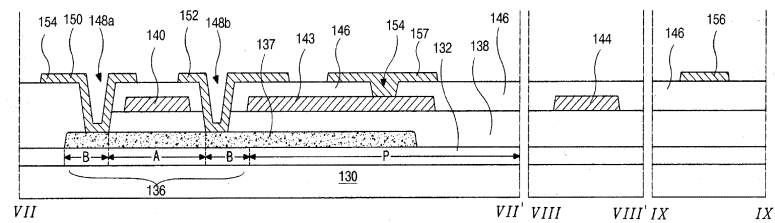
7a



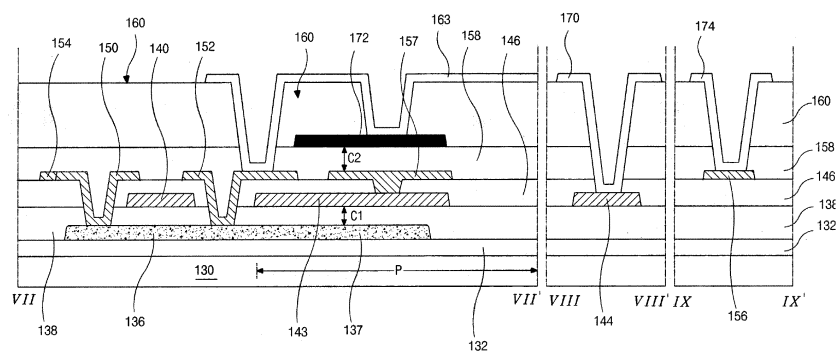
7b



8a



8b



专利名称(译)	用于反射透射型液晶显示装置的阵列基板及其制造方法		
公开(公告)号	KR1020020089008A	公开(公告)日	2002-11-29
申请号	KR1020010028122	申请日	2001-05-22
[标]申请(专利权)人(译)	乐金显示有限公司		
申请(专利权)人(译)	LG显示器有限公司		
当前申请(专利权)人(译)	LG显示器有限公司		
[标]发明人	PARK JAEDEOK		
发明人	PARK, JAEDEOK		
IPC分类号	G02F1/1335		
代理人(译)	贞媛KI		
其他公开文献	KR100408345B1		
外部链接	Espacenet		

摘要(译)

本发明涉及一种包括液晶显示器的半透半反型液晶显示装置，特别是多晶硅薄膜晶体管。***，在半透半反型液晶显示装置中配置的半透射电极中，电极与漏电极和第一电极作为透明电极接触；并且组织了将无机绝缘膜放置在间隔中并且在透明电极的上部接触的反射电极。接触孔具有如下问题：利用蚀刻剂产生电化腐蚀，其中如上所述的传统结构渗透到形成在无机绝缘膜上的多个针孔中。在反射电极和传输电极之间图案化反射电极，并且其中反射电极和传输电极接触是分开形成的，需要多个掩模工艺。因此，产物的产率降低。本发明涉及发射电极下部的浮动结构，反射电极将温暖的有机绝缘膜置于间隔中以解决上述问题。这样，降低了下侧和掩模工艺；并且在反射电极和传输电极之间不产生电化学腐蚀。因此，它具有提高产品产率的优点。

