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H05B 33/10

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(43)

10-2004-0059700
2004 07 06

(21) 10-2002-0086105
(22) 2002 12 28

(71) . 20

(72) 305 701

(74)

(54)

가 / 가

8d

8a 8d, 9a 9d, 10a 10d, 11a 11d 7 11a-11a, 11b-11b, 11c-11c, 11d-11d
-11d , 11c-11c , 11d-11d , 11a-11a , 11b-11b .

210 : 216 :

218 : 222 :

224 : 232a :

232b : 232 :

242 : 246 :

254 : 256 :

268 : 270 :

272 : IV :

ch : T_D :

(Organic Electroluminescent Device) ,
(Active-Matrix Organic Electroluminescent Device) .

가 가 가 가 ,
가 가 가 .

, PDP(Plasma Display Panel)
(encapsulation) 가 .

, (frame) 가 가 (C_{ST} ; storage capacitance)
 , 가 가 , .

, 가 가 , 가 , ,
가 가 가 .

,
 .

1 .
 , 1 (scan line) , 1 2 , (pix
(signal line) (powersupply line) ,

el area)

(addressing element) (T_S) (T_S; S
witching TFT)가 (C_{ST})가
(T_S) (C_{ST})
(current source element) (T_D)가
(T_D) (+ ; anode electrode) (+) (E ;
Electroluminescent Diode) (- ; cathode electrode)

(E) (+) (-)

(T_S) (C_{ST})

가 , 가 가 , 가
가 , 가 가 , 가
가 , 가

가 ,

가 가 가 ,

2

가 2 TFT

(51) , 1 (37) , (37) (51), (41)
(P) (41) , (37), (51), (41)

(37) (51) (T_S)가
(41) (T_S) (41) (T_D)가 (134)
(C_{ST})가 (31)

(T_D) 1 (58)
, 1 (58) 2

1 (I)

'32' (T_D) (T_D) , '35, 38' (T_S)

3 2 ii-ii

(1) (32), (38), (50, 52) (42)
(T_D)가 (52) (50) 1 (58)

(42) (32) (3) (C_{ST})
4) (42) (34)

1 (58) (64) (66)
(I) .

(I) (1) (32)
(30) , (40) ,
(52) (42) 2 (44) , 1 (58) (50) 3 (54)
(T) 1 (58) 4 (60) 가 1
, 4 (40, 44, 54, 60) () .

4a 4i 2 ii-ii ,
PR(photo-resist) (exposure), (development) (ph
otolithography) ,

4a , (1) 1 (30) (30)
, 1 (32a ; active layer) (34)
.

4b , 4a (32a) , 2 (36) 1 (38) , 2
(32a)

4c , 4b (40) 1 (40)
(42) 2 , 3 (34) , 1
(42) .

4d , 4c (42) , 3 1, 2 (46a, 46b) , (48)
(32a) 2 (44) .

(32a) , (iiia)
) , (iiib) .

(32a)
(32b ; ohmic contact layer) , (32a) (32b)
(32) .

4e , 3 , 5 (4d 48) 1
(4d 46a) , (42) (iiib) (32b) (50)
, (50) , 2 (4d 46b) (iiia)
(32b) (52) .

(32), (38), (50, 52) (
T_D) .

(42) (34) (52)
, 1 (40) , (C_{ST}) .

4f , 4e , 4 , 6
(56) 가 3 (54) .

4g , (4f 56) (50) , 4
, 7 , (I) 1 (58) .

4h , 4g 5 , 8
(I) 1 (58) 1 (62) 가 4 (60) .

4 (60) (T_D) .

[illegible]

1 , , 2 , ,
4 , ,
1 , 2 PR
(slit pattern)
가 PR
, PR 2 PR (ashing)
PR
2 가 3 , 2 가
, 가 , 가 ,
, 가 ,
가 .
-- 1 --
6 1 ,
1, 2 (110, 150)
1 (110, 150) (T_D)
(140) , (140) (T_D)
(142)
(142) , (142) (T_D)
, (T_D) (112), (114), (116) (118)
, (142) (118)
, 2 (150) 1 (152) , 1 (152)
(160) , , (156a, 156b, 156c) 2 (162) (160)
, (156a, 156b, 156c) (160) 1 (152) 1 (154)
58) , 2 (162) , 2 (162) (158) , 1 (154)
, 1, 2 (152, 162) 1, 2 (152, 162) (160)
(E)
, (142) 2 (162) , (T_D) 가 (142) 2 (162)

, 1, 2 (110, 150) 가 (170) , 1, 2 (110, 150)

(142) , (E) (140) ,

, 3 2 ,

, 가 / 가 가 .

-- 2 --

7 2 .

(250) , 1 (220) (212) , 1 2 (212) (250)

(212) (244) , (214) (T_S)가 (250) (T_S) (240) (240) (2

36) (214), (240) (244) (2)

(220) (212) .

, (T_S) (220) (T_D)가 ,

(244) (T_D) (212) ,

(216) , (216)

(242, 246) , (250) (216), (242, 246)

(238) .

(242) (254) (270) , (270)

(264) (220) .

, (246) (IV) (272) .

(270) (272) .

(IV) 2 .

, (IV) ,

, (246) (220) (248)

, (248) (220) (C_{ST}) .

(218), (250), (212), (220) (252), (218), (252), (222)가 , (218), (272) (276),

(278) (278) .

, (236) (238) , (250) (238) , (250),

(248), 가 , (252) (236) (226) .

, (212) (220) , (212)

(220) (212) 1 (279a) (250) (220)

, 2 ¹ (279a) , 2 (272) (279b) (220)
 , (252) (222) 가 ,
 -- 3 --
 8a 8d, 9a 9d, 10a 10d, 11a 11d 7 IIa-IIa, IIb-IIb, IIc-IIc, IId
 -IId , IIc-IIc , IId-IId , IIa-IIa , IIb-IIb
 , , ,
 8a, 9a, 10a, 11a , (210) 1 1 (216),
 (218), (222) .
 , (222)
 1 , ,
 가 , PR PR ,
 8b, 9b, 10b, 11b , (216), (218), (222) 1
 , (a-Si), (n+ a-Si), 2 , 1
 (224) , 2 , (n+ a-Si),
 (a-Si) , (216) (232) ,
 (232) 가 , (232) (24) 2)
 (246) , (III) (252) .
 , 2 , (222) ,
 (III) ,
 (216), (232), (242) (246) (T_D)
 (232) (232a) , (242) (246)
 (232b) , (242) (232a) (ch) , (232b) ,
 (252) , (232) (226a)
 (226b) (226)
 , (242) (246) (232)
 , (ch) ,
 . (17)

1, 2, (SiNx), (Mo),
(Ti), (Cr), (W)
8c, 9c, 10c, 11c, (T_D), (252), (218), (2
22), 2, 3, (242), (246),
(252), (218), (222), (254),
(256), (258), (260), (262) 가 (268)
(260) (262) (218) (319)
(320) (268) 가
(268) (IV) (266) 가
(IV), 2
PR 2
(photo-acrylic resin)
(266) (d1) (268) (d2)
(268) (266)
(12)
8d, 9d, 10d, 11d, (266), 3, 4
(254), (242), (270), (256)
(246), (266), (272),
(258), (252), (274), (260)
(218), (276), (262), (222)
(278)
(270)
12a, 12b
12a, (310), (312), (314), (316), (318)
(T)가 (T) (V)가
(negative type) (T) 가 (320) 가 (330)
(330) (318) (VIa), (V)
(VIb), (VIa) (VIb) (VIc)가
(VIa) (VIb)
(VIc) (VIa)
12b, 가 (negative type) (12a 320)
(318) (340), (V) (VII) 가
(350)

$$\begin{aligned} & \text{,} \quad \text{(VII)} \quad \text{(352)} \quad \text{,} \quad \text{(352)} \quad \text{(D1)} \\ & \text{(350)} \quad \text{(D2)} \quad \text{.} \end{aligned}$$

(352) (350) (D1-D2) 17a

가 가

가 / 가

(57)

1.

$$, \quad \frac{1}{1, 2} \left(\begin{array}{c} 1 \\ 1, 2 \end{array} \right) \quad 2 \left(\begin{array}{c} 1 \\ 1, 2 \end{array} \right), \quad 1, 2$$

2.

3.

2 ,

,

.

4.

1 ,

,

,

,

,

,

,

.

5.

2 4 ,

,

,

,

,

,

가 가

6.

5 ,

,

,

.

7.

1 ,

,

,

.

8.

1 ,

,

.

9.

,

,

,

1 1 , PR(photo-resist)

1 , ;

,

1 1 , 2

1 , 2

,

,

,

,

,

,

2 , 2 3 ,

, , , 가 , 가 ;

3

4

10.

9

1

2

4

11.

9

12.

9

1

2

2

PR

(slit pattern)

가

가 PR

PR

2

PR

(ashing)

PR

13.

9

2

가

3

2

가

가

가

가

14.

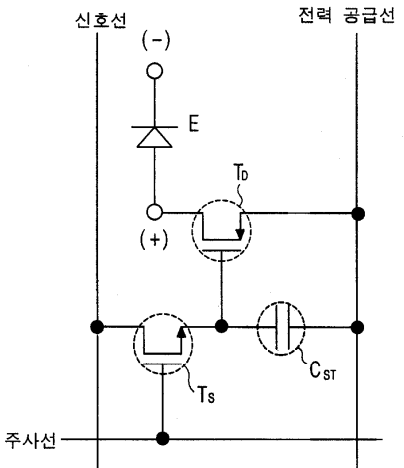
9

15.

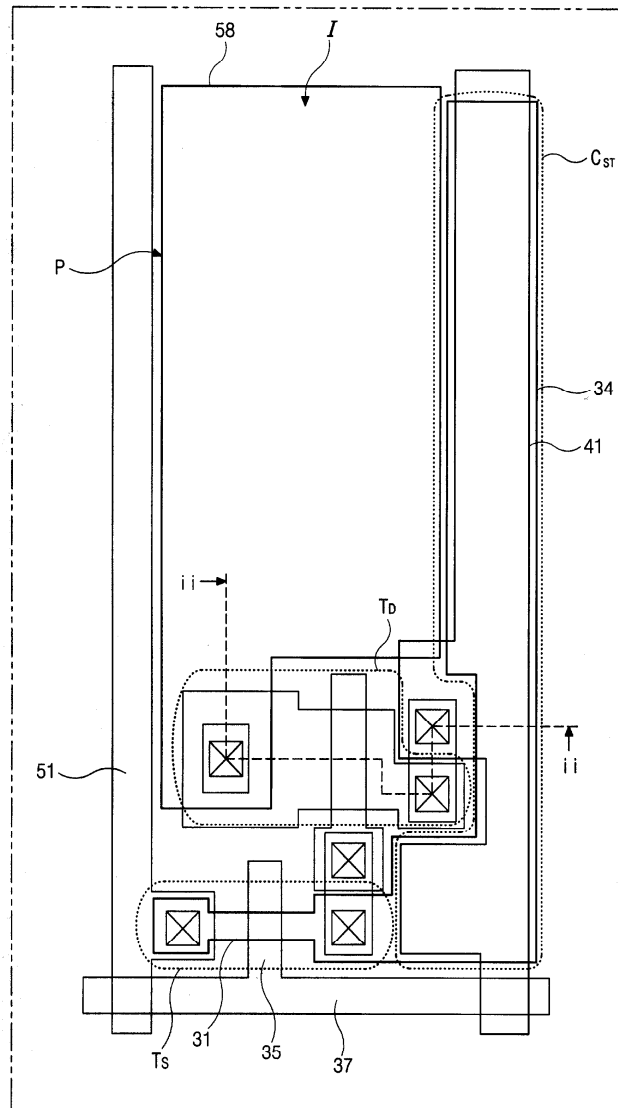
9

가

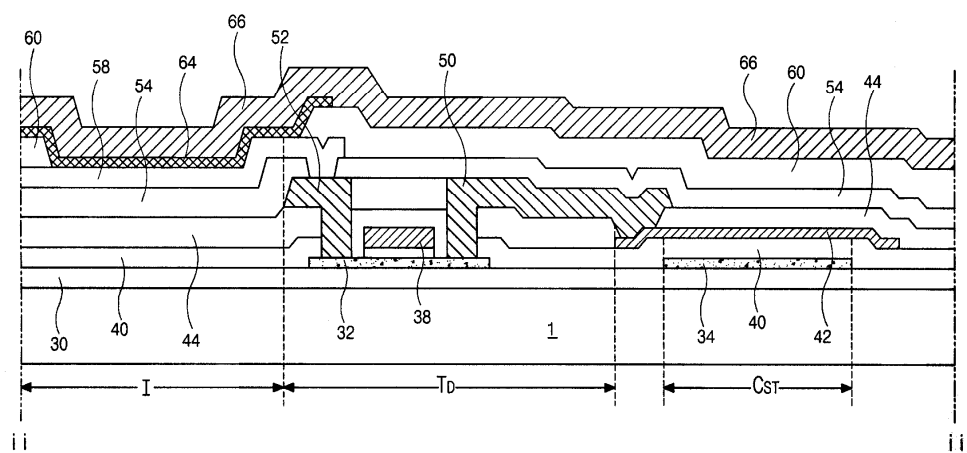
1



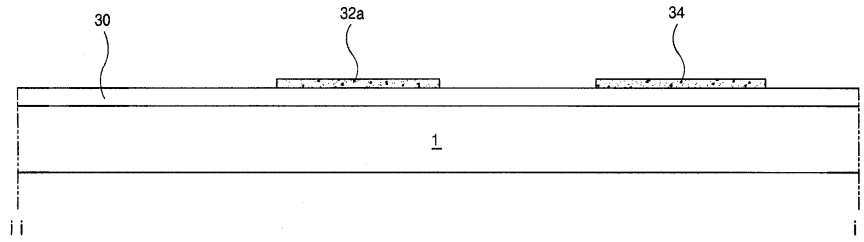
2



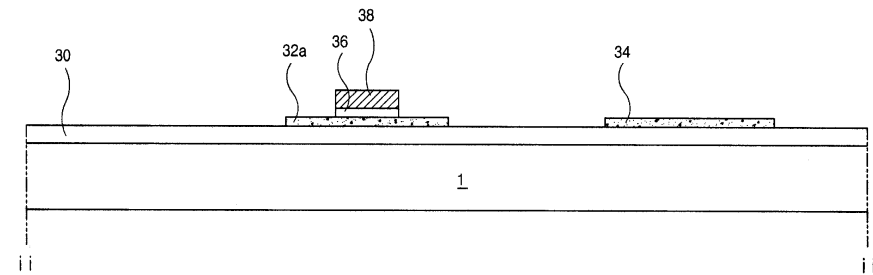
3



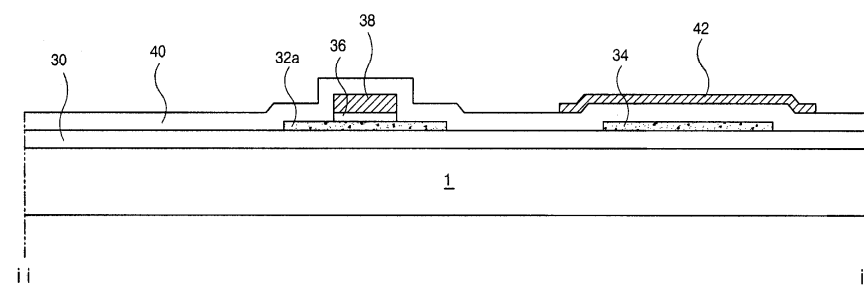
4a



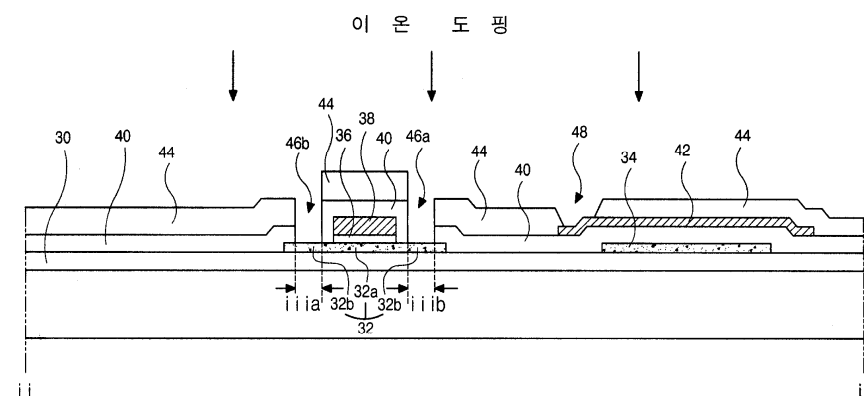
4b



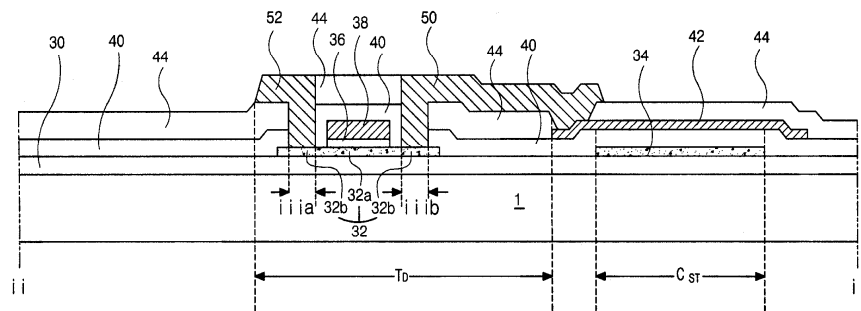
4c



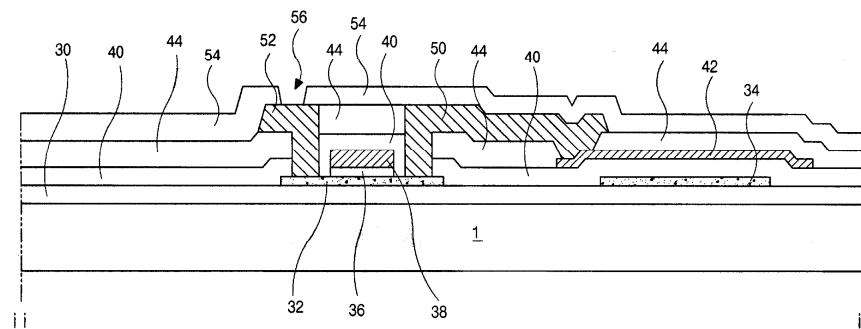
4d



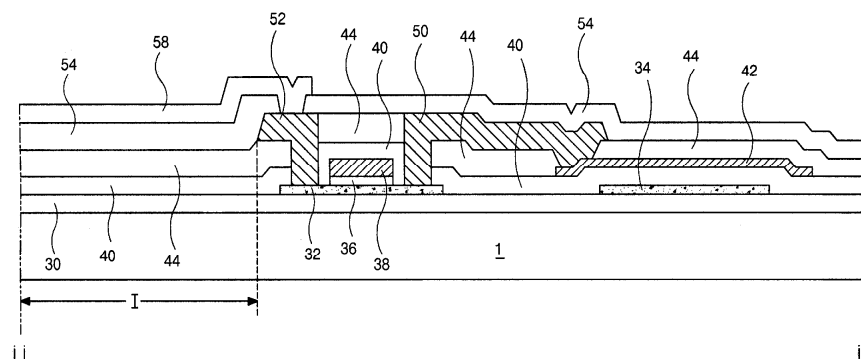
4e



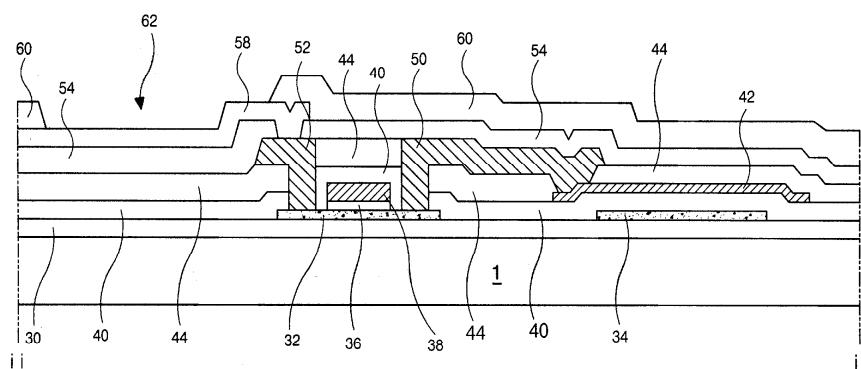
4f



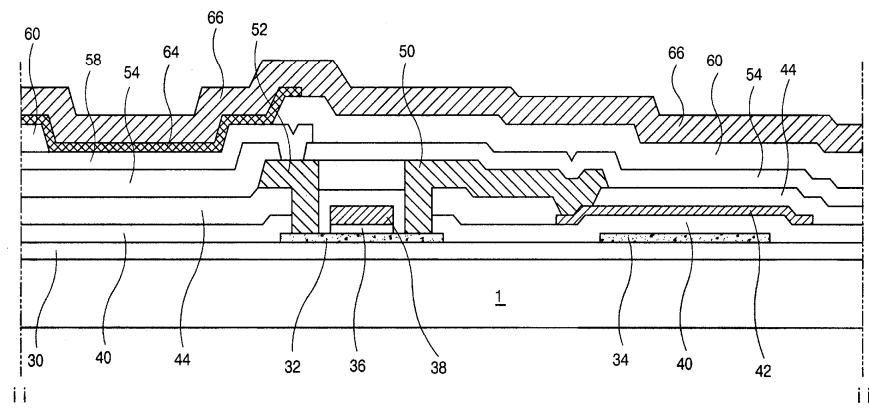
4g



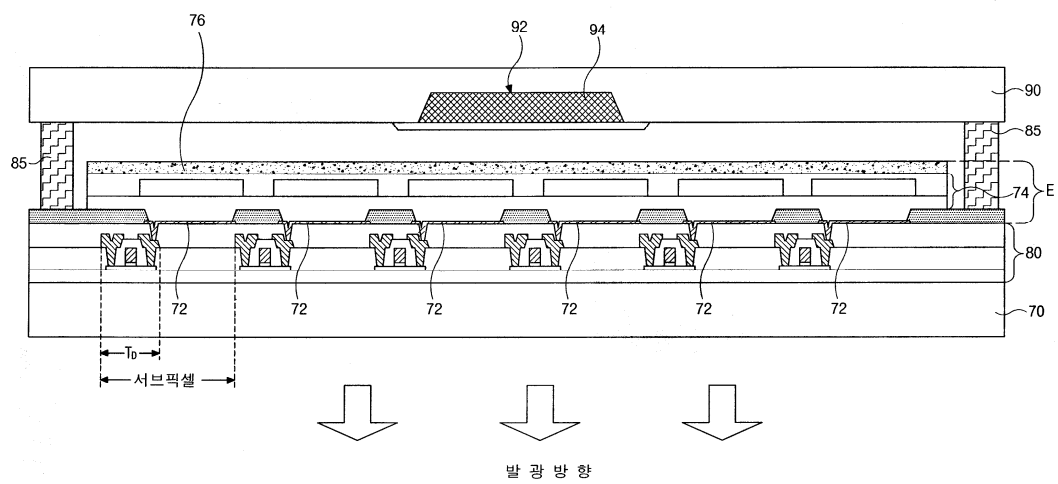
4h



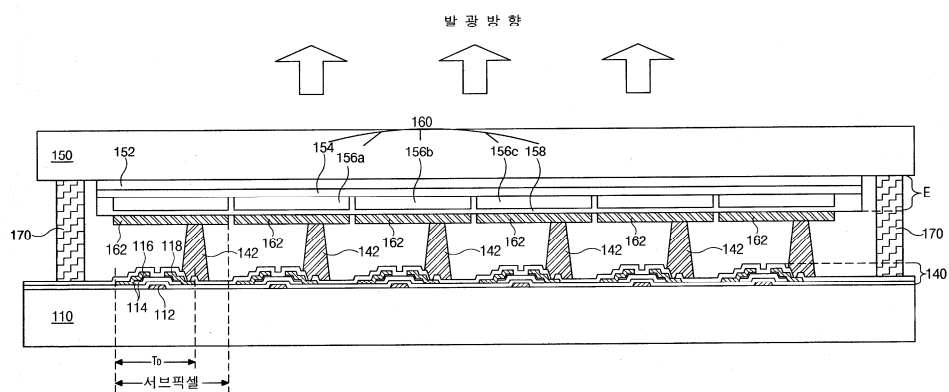
4i



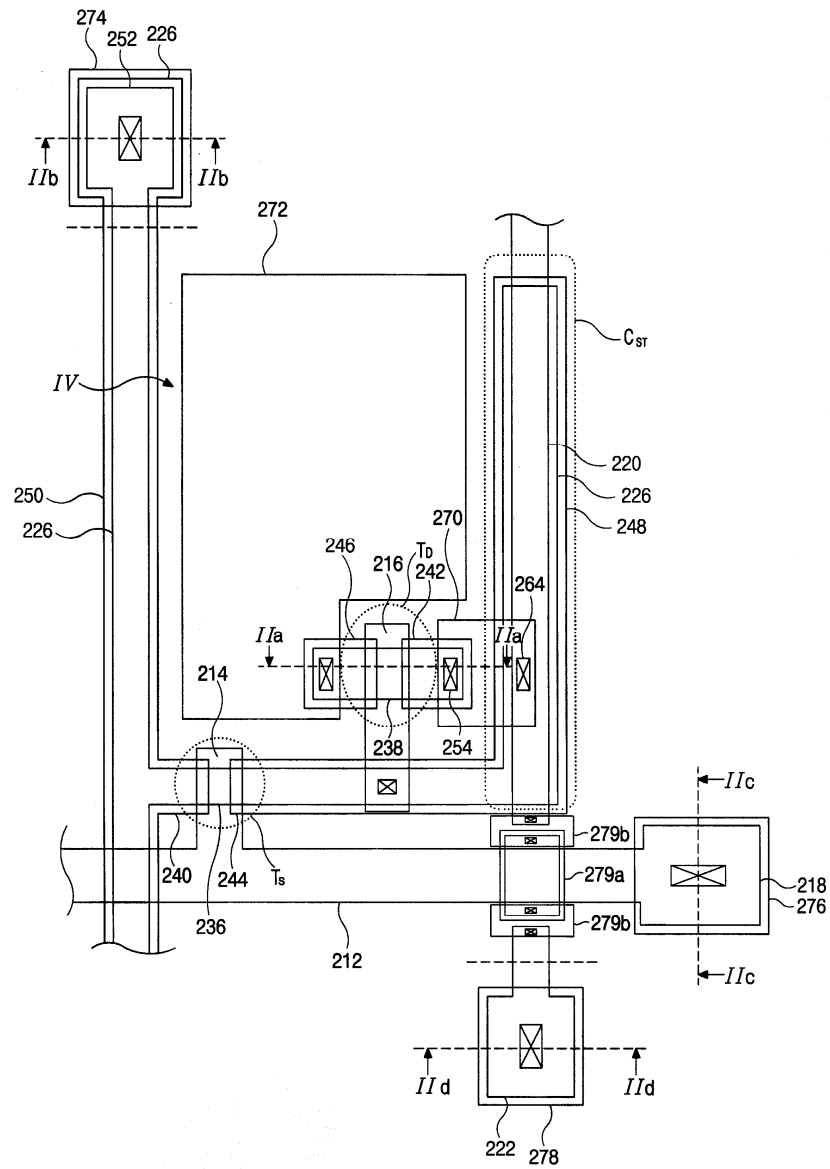
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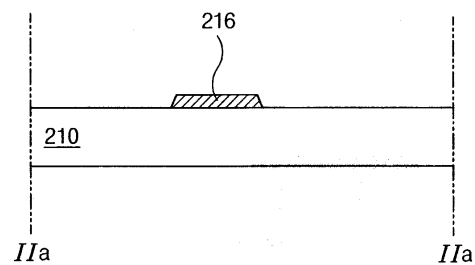
6



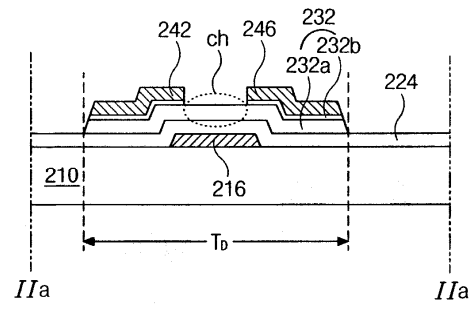
7



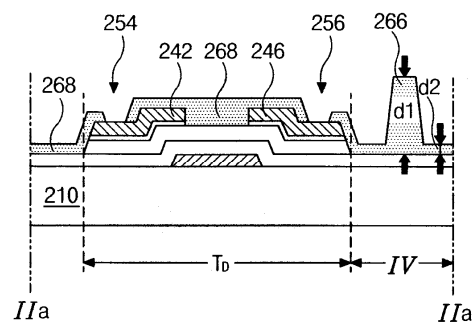
8a



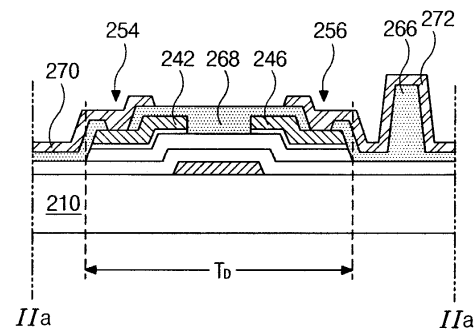
8b



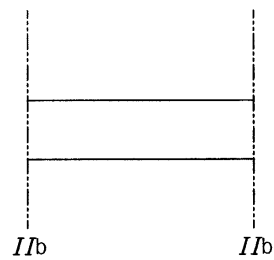
8c



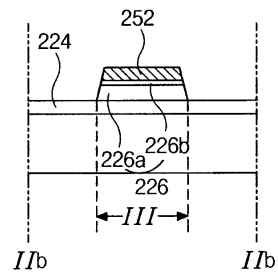
8d



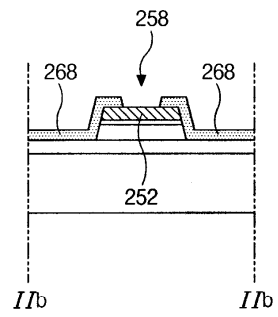
9a



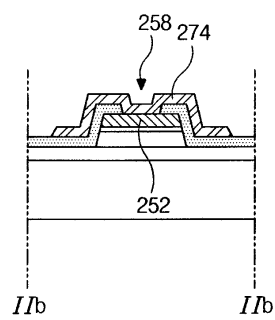
9b



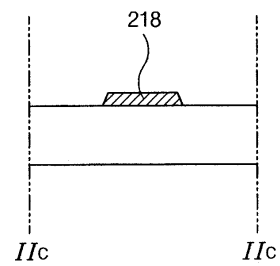
9c



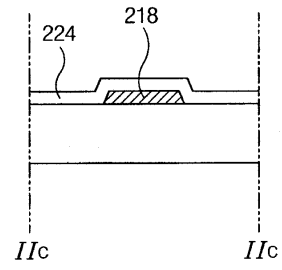
9d



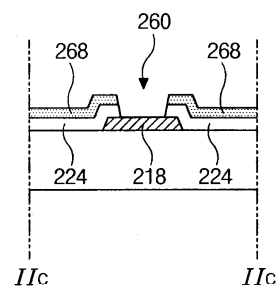
10a



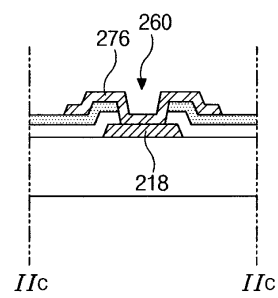
10b



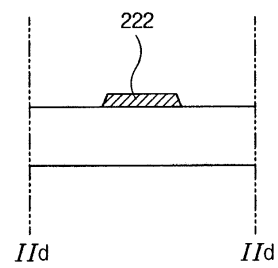
10c



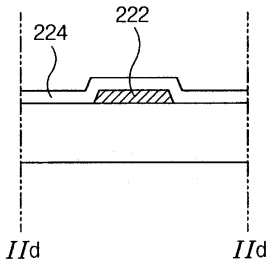
10d



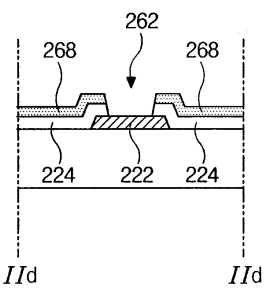
11a



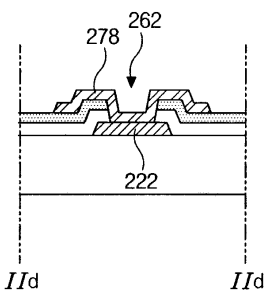
11b



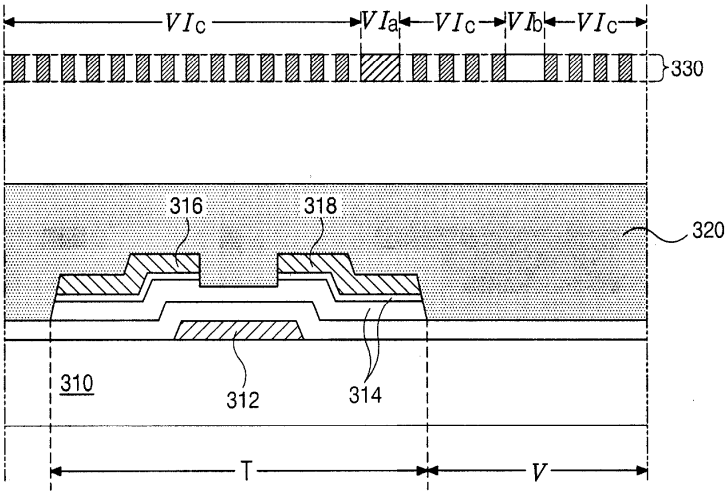
11c



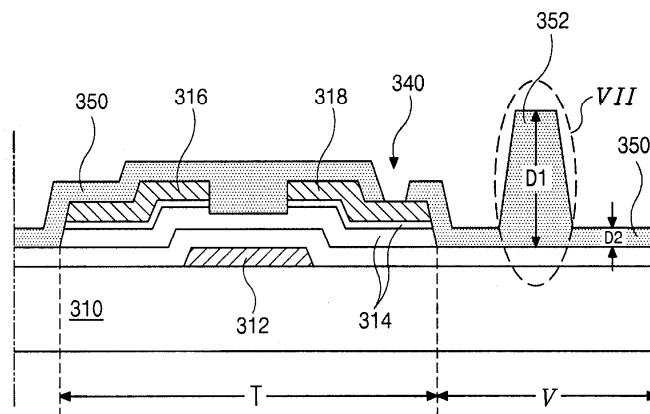
11d



12a



12b



专利名称(译)	用于双面板型有机电致发光器件的阵列基板及其制造方法		
公开(公告)号	KR1020040059700A	公开(公告)日	2004-07-06
申请号	KR1020020086105	申请日	2002-12-28
[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		
[标]发明人	PARK JAEYONG 박재용		
发明人	박재용		
IPC分类号	H05B33/10		
CPC分类号	H01L27/3251 H01L27/3276 H01L27/124		
其他公开文献	KR100497093B1		
外部链接	Espacenet		

摘要(译)

目的：提供一种双面板型有机电致发光器件及其制造方法，通过在不同基板上分别形成阵列元件和电致发光二极管，提高生产率和生产管理效率。结构：门线（212）形成在第一基板上的第一方向上。数据线（250）形成成为横跨第一方向的第二方向。电源线（220）形成在远离数据线的第二方向上。在栅极线和数据线之间的交叉处形成开关TFT（Ts）。开关TFT包括半导体层，该半导体层由非晶硅形成。在开关TFT和电源线之间的交叉处形成驱动TFT（TD）。驱动TFT包括与开关TFT相同的半导体层。连接电极（272）连接到驱动TFT。在连接电极的区域内形成柱形电连接图案，以便将有机电致发光二极管连接到连接电极。

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