

(19)
(12)

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(A)

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(11)
(43)

10-2004-0084459
2004 10 06

(21) 10-2003-0019571
(22) 2003 03 28

(71) 416

(72)

2	102	504
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460

216 1702

1 692

(74)

⋮

(54) _____,

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7a

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1					
2	5				
6a		1			
6b	6a	Vlb-Vlb'			
7a		1			
7b	7a	VIIb-VIIb'			
8a	12b		1		
13a		2			
13b	13c		13a	XIIIb-XIIIb', XIIIc-XIIIc'	
14	15		3	4	

11, 21 :	101 :
110, 210 :	140 :
121 :	123 :
125 :	131 :
133 :	171 :
173 :	175 :
177 :	179 :
180 :	190 :
220 :	270 :

(Thin Film Transistor, TFT)

EL(Electro Luminescence)

TN mode, VA mode, IPS mode

TN mode (Twisted Nematic : TN) . TN
가 가 (pitch) 가 가

TN
, 가
(grey level) 가
가 가

(Vertically aligned mode : VA) (in-plane-switching : IPS)
IPS
가
가
VA 가 PVA(
patterned vertical alignment)
, 가 (negative)
가
가

, (2) (1) ()가 .

V_1 , V_2 2 5 . 2 4 0 , 5

2 가 (3) (2) (1, 2) (1) 가 (1, 2) (2) (21) (1) (2) (21) (11) 가 . (3) 가 .

3 (3) 가 , V_1 가 1 2 가 (3) (director) 가 .

4 5 , 가 $V_2 (>V_1)$ 0 가 (Azimuthal twisting torque) . 가 x-y (micro-groove).

가 [1] bulk twist threshold energy((twist). [1]

$$W_{\phi} = 1/4(k_{11}k_{33})^{1/2} a^2 (2\pi/L)^3$$

W_{ϕ} : Maximum twist torque

a : 산의 높이

L : 산과 골의 진폭

k_{11} , k_{33} : LC의 elastic constants

A (A) B (B) 2 2 4

6a 6b , 6b 6a VIb-VIb' 6a 1

(220)가 (2) 1 (210) (230R, 230G, 230B)가 (21) , (230R, 230G, 230B) (270) (21) (21) (121) (121) .

7a 7b , 7b 7a VIIb-VIIb' 7a 1

(121) (1) 2 (110) (121) (121) (125) (121) (121) (121) .

(190) 가 (121) (177) (121) ()

) 가 .

(121) (123) (140) (123)

(154) (140) (ohmic contact layer) (163) (154) (165)

(173) (175)

(140) (121) (171) (171)

(163) (173) (173)

(165) (175) (177)

(121) 가 (171)

(171) (179)

(171), (173), (175) (177)

(180) (180) (175) 1 (181),

(177) 2 (182)가 (180) 1 (181) 2

(182) (175) (190)

가 (121) (171)

95, 97) (121) (95, 97)가 (125, 179) 3 4 (183, 184) (

(125, 179)

(190), (95, 97) (101)

(A B) A (101)

, B (B) (A)

(3)

(101) (11) (101)

(11) 가

1 7a 10b 1 7a 10b

8a 8b (110)

(121) (123) 가 (12

1) (125) (121)

9a 9b (121, 123, 125) (140),

(150), (160) (160),

(160A), (151, 154) (150)

10a 10b (160A)

(171), (173), (175) (177) (171

, 173, 175) (160A) (161, 163, 165)

11a 11b (171), (173) (175) (180)

(175) 1 (121) (125)

2 (182), (121) (179) 3 (183),

(177) 4 (184)

(180) IZO(indium zinc oxide), ITO(indium tin oxide)

1 4 (181, 184) (175) (177)
 (190), 2 3 (121) (171)
 (95, 97) .

12a 12b (101) , (190) (190) (95, 97) 가 가 (101)
) . (190) 가 .
 .
 (101) (11) (1a 1b). (11) (101)

[2]

13a 2 , 13b 13a XIIIb-XIIIb', XIIIc
 -XIIIc' .

5) , 2 (171), (173) (175) (161, 163, 16
 . (161, 163, 165) (151, 154)
 . (173) (175)
 1 .
 (151, 154), (161, 163, 165) (171, 173, 175) ,
 가 .

[3, 4]

14 15 3 4 .
 , 3 4 1 2 (101) (180)
 . , (180) 1 2 (190) (11) . (18) (18
 0) 가 1 2 (101) (190) (190) (180) 가
 가 . (180) (180)
 .
 가
 4 . 4
 , B (B) (disclination) A (A) B (A) (B)
 , 가 가
 .
 (retardation)
 1 2
 1 . 1 2

가
 , 2 2 .

4

(57)

1.

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2.

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3.

1

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4.

1

2

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5.

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가

가

6.

5

7.

5

6

8.

5

6

9.

가

가

10.

9

11. 1, 1, 2, 2

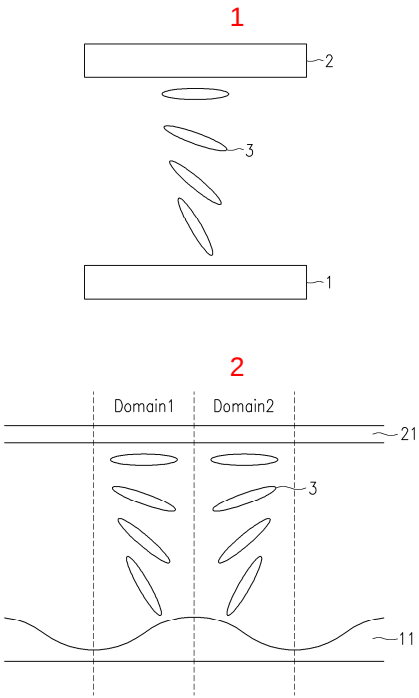
가 1, 2

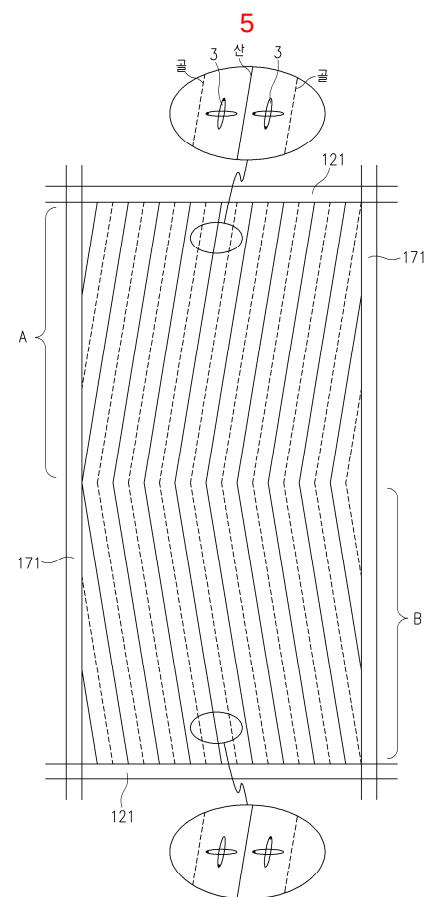
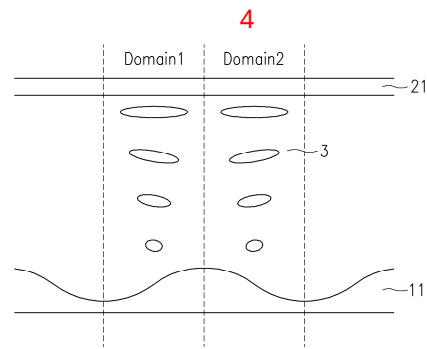
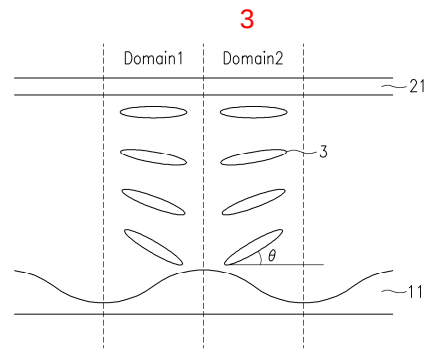
1 1

12. 11,

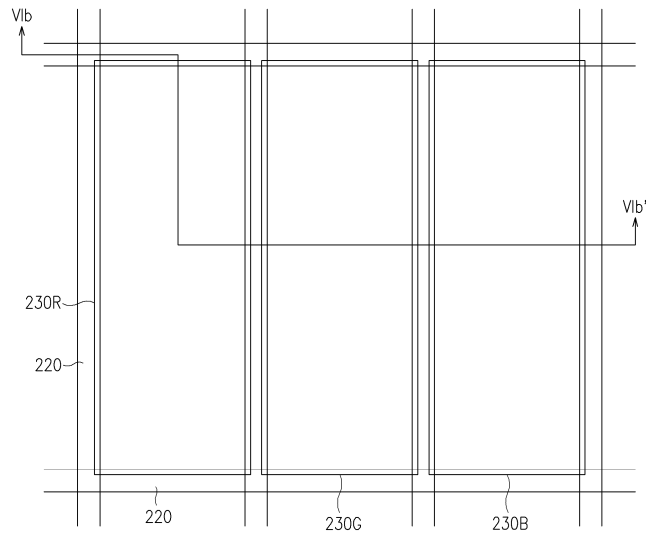
가 .

13. 11,

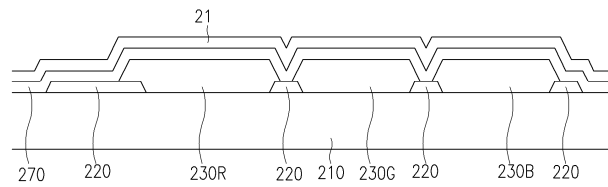




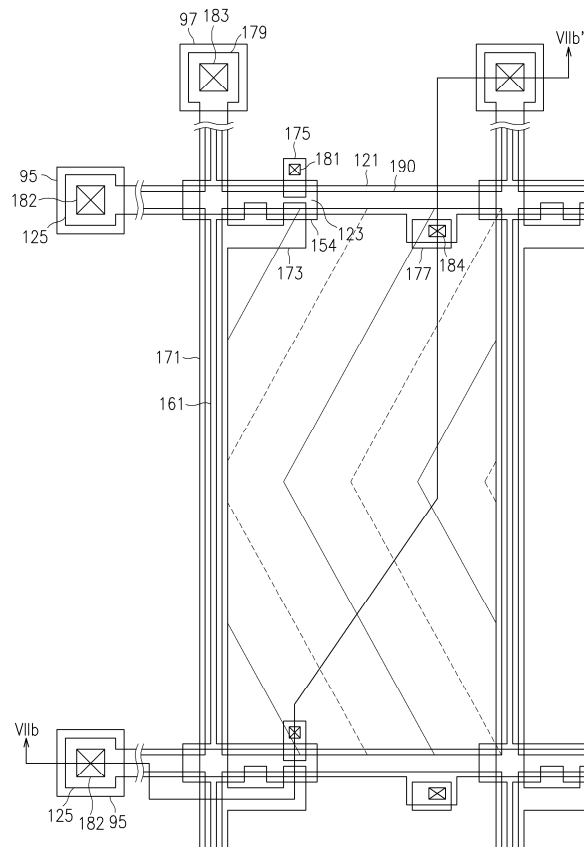
6a

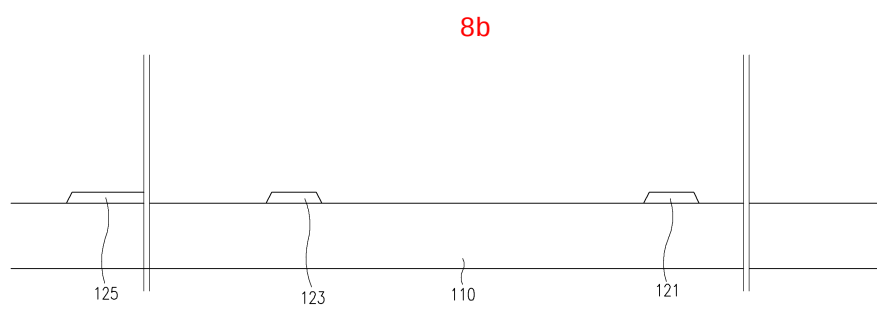
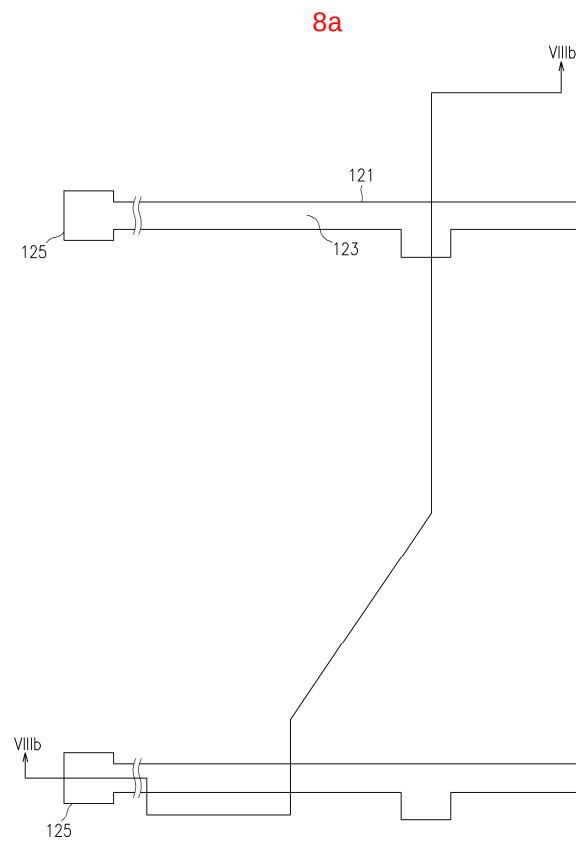
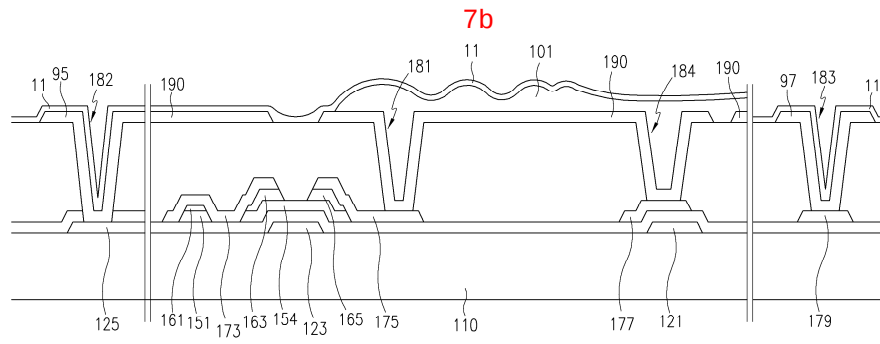


6b

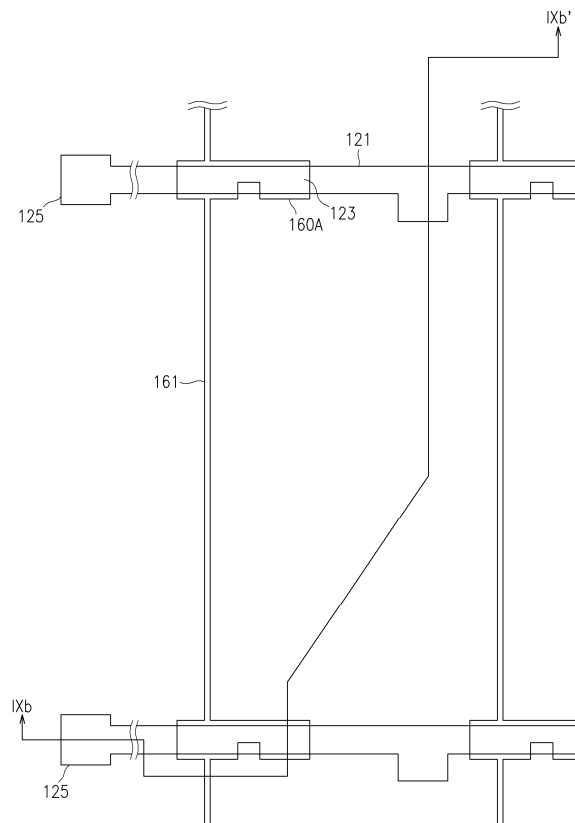


7a

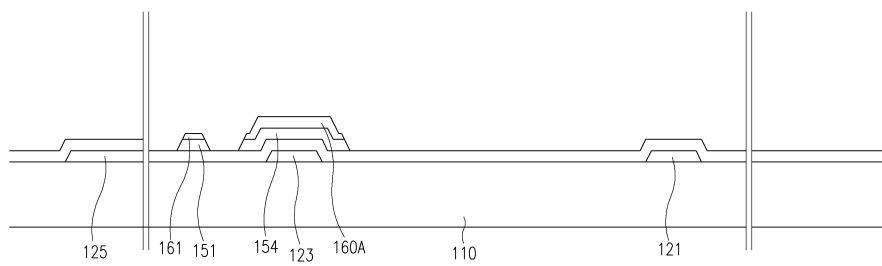




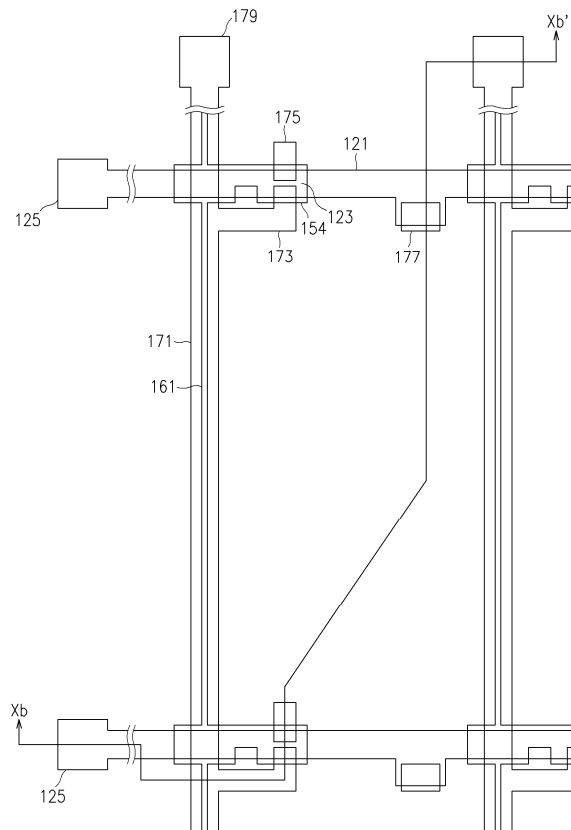
9a



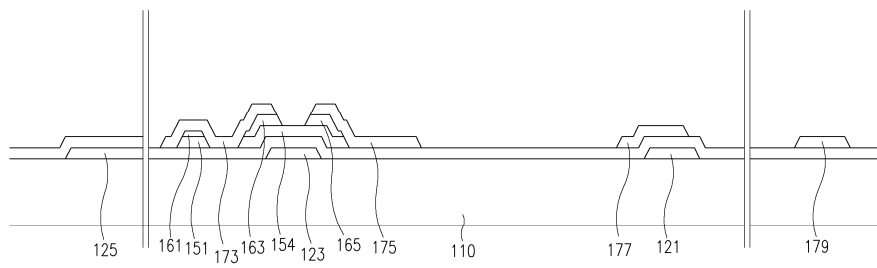
9b



10a

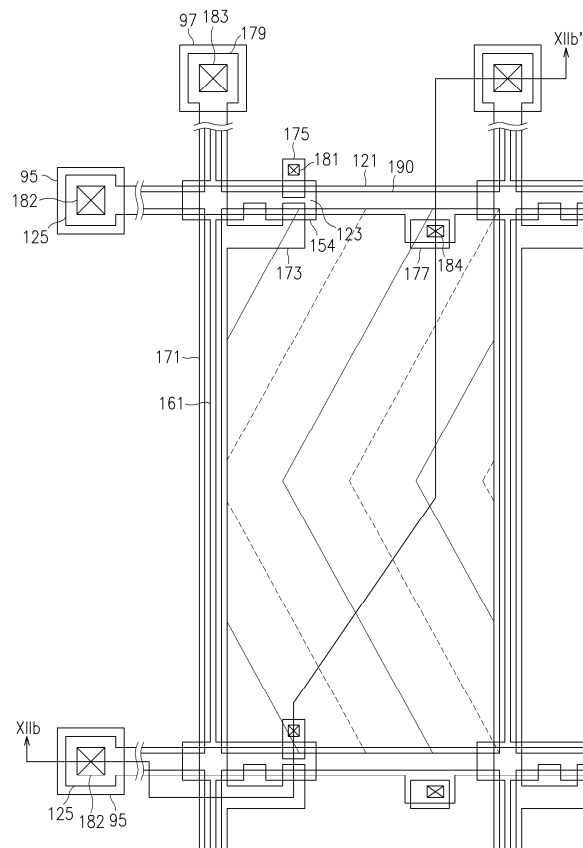


10b

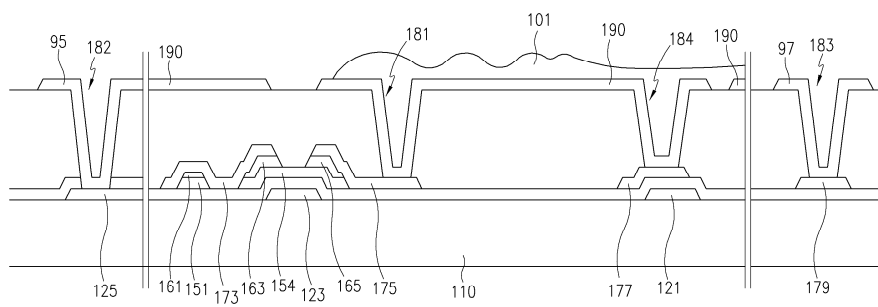




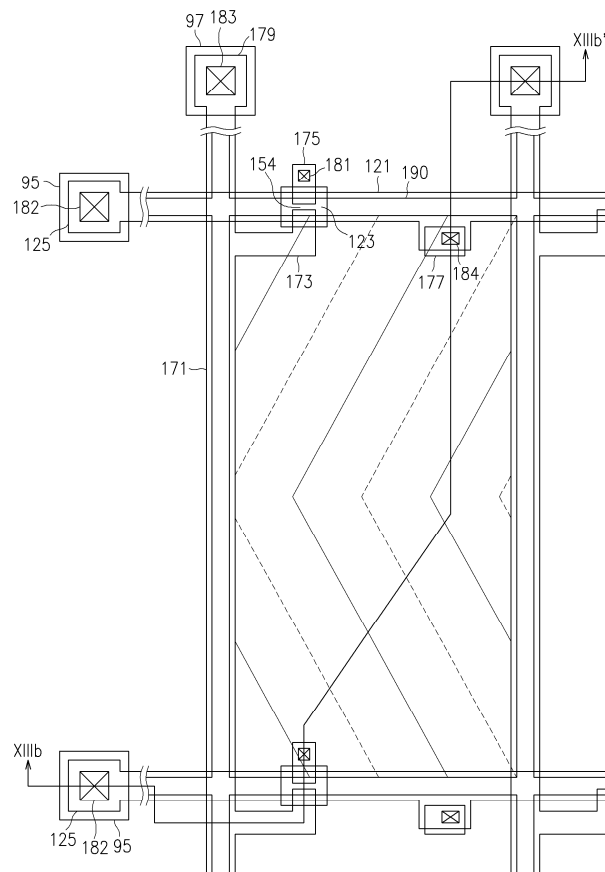
12a



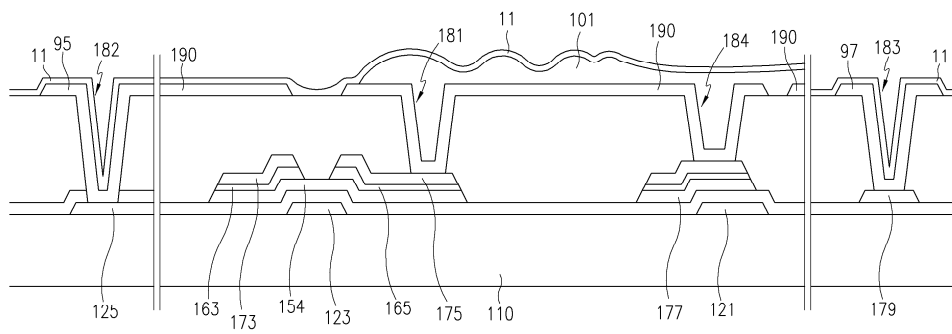
12b



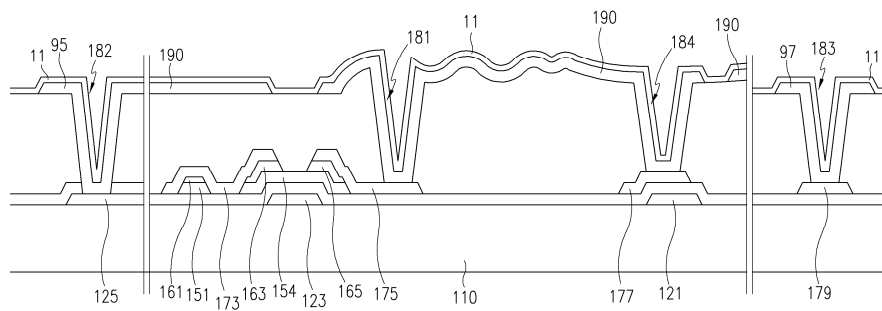
13a

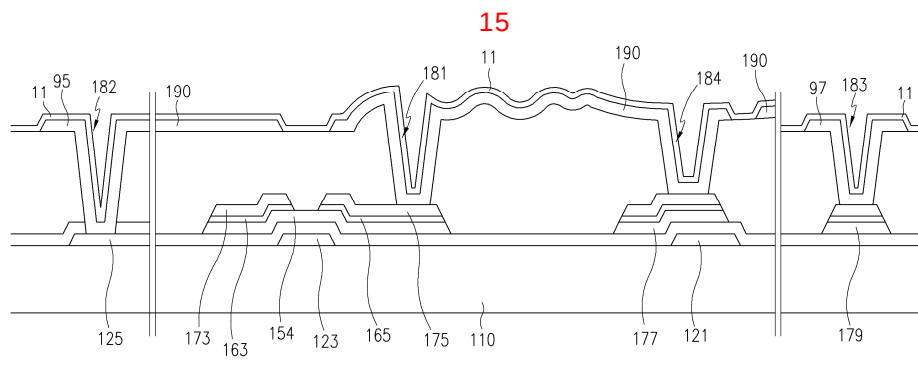


13b



14





专利名称(译)	液晶显示装置，薄膜晶体管显示面板及其制造方法		
公开(公告)号	KR1020040084459A	公开(公告)日	2004-10-06
申请号	KR1020030019571	申请日	2003-03-28
[标]申请(专利权)人(译)	三星电子株式会社		
申请(专利权)人(译)	三星电子有限公司		
当前申请(专利权)人(译)	三星电子有限公司		
[标]发明人	SON JONGHO 손정호 HONG SUNGHWAN 홍성환 UM YOONSUN 엄윤성 LYU JAEJIN 유재진		
发明人	손정호 홍성환 엄윤성 유재진		
IPC分类号	G02F1/136		
CPC分类号	B65F1/004 B65F1/085		
其他公开文献	KR100929676B1		
外部链接	Espacenet		

摘要(译)

根据本发明的薄膜晶体管面板包括在绝缘基板上沿一个方向在长度方向上形成的绝缘基板，栅极线和栅电极，形成为覆盖栅极线和栅电极的栅极绝缘膜，以及用于暴露数据线和漏电极的接触孔，所述数据线和漏电极限定与栅电极交叉的像素区域以及与欧姆接触层和漏电极的一部分重叠的源电极和漏电极，形成在钝化层上并通过接触孔连接到漏电极的像素电极，形成在像素电极上并且在其顶部具有酸和凸台的支撑膜，以及形成在支撑膜上的取向层，它包括。图7a 指数方面 形态学，配向膜

