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(71) 3 416

(72) 331 110 802

865-1 110 304

955-1 136 1806

289-12 102 504

3 220 1301

2 220 1201

(74)

(54)

1 1 ,
2 1 ,
3 1 ,
4a 가 ,
4b 가 ,
5a 2 ,
5b 5a Vb - Vb' ,
6a 3 ,
6b 6a Vlb - Vlb' ,
7 4 .

(color filter)

가 ,

,
(fringe field)

1 2 . . , 2
1 가 2 2 가 3 , 2
가 3 , 1 1 , 2 가 1 , 2 .

(1) (3)

$$<FONTIDJAPAN=1|ETC=1|SPECIAL=1>V_{DCE} = V_p + V_p \frac{\varepsilon d'}{\varepsilon' d} = V_p \times (1 + \frac{\varepsilon d'}{\varepsilon' d}) </FONTID> \quad (4)$$

가

1

가

(turn-on)

가

가

1 2 3

가

(refresh)
(on) 가 가가
(T₂)가

C_{LC} , 2
가 , V_{DCE} > V_p
ting) 가 .

, C_{DCE} C_{LC} C_{DCE} ,

가

가
(floa

가

V_{n-1}

가

$$\frac{C_{LC}}{2C_{DCE}+C_{LC}} |V_p + V_{n-1}| > \frac{\varepsilon d'}{\varepsilon' d} |V_p| \quad (5)$$

2
, C_{gs}
, C_{LD} C_{DG}

3 , C_{st}
, C_{LD}
3 C_{st} C_{LC}

가
V_{on},V_{n-1},가
V_{off}, V_n,

$$V_p = V_n - \frac{C_{gs}}{C_{LC} + C_{LD} + 2C_{gs} - \frac{(C_{LD} + C_{gs})^2}{C_{DCE} + C_{LD} + C_{gs}}} (V_{on} - V_{off}) \approx V_n \quad (6)$$

$$V_{DCE} \approx V_p + \frac{C_{LC}}{2C_{DCE} + C_{LC}} (V_p + V_{n-1}) \quad (7)$$

C_{DCE}, C_{LC} >> C_{LD}, C_{gs} 가

(80) 1 (75a) (81) () () 가
 , , (40) 가 , , 2mm×60μm
 , 0.5mm×15μm

(80) (81) 1 (75a) X
 (91) (92) 가 , (90) (92) 3 4 (91)
 (76) X (80) (33c, 33d) ()

IZO(indium zinc oxide) () 가 (90) ITO (90)
 , (90) (76) , 2 (92) (91) (91, 92) 가 , 1
 (91) (76) , 1 (91) (76) (90) (76) (90)
 , (31, 33a, 33b, 33c, 33d) (90)

(76) (21, 23a, 23b) (76)
 (80) .

(100)
 , , (130) ITO IZO (100) (170) (110)
 (200) 가 (10) (100) (90) (170) 가 가
 , (10) 1 (100) 2 (91, 92) (130) , , ,
 , (76)

6a 3 , 6b 6a VIb - VIb'
 .

3 (100) 2 가 (200) (10)
 (10)

(10) 가 (23a, 23b) (21) 1 2 (23a, 23b) 1 2
 (23a, 23b) (33a, 33b, 33c, 33d) (31) (31) 가 (10) (31)
 d) 1 (33a) 2 (33b) 3 4 (33c, 33
 21, 23a, 23b) (31, 33a, 33b, 33c, 33d) , Cr Mo
 1 , Al Ag 2

(21, 23a, 23b) (31, 33a, 33b, 33c, 33d) (40)
 (51a, 51b) , 1 2 (51a, 51b) n

n+	(63a, 65a, 63b, 65b)	(40)	(71, 73a, 75a, 73b, 75b)	(21)
	(71), (71)			가 1 2 (
(73a, 73b),), 1 2 2 75b)	(71) (73a, 73b)	(73a, 73b) (21)	(63a, 63b) (65a, 65b)	(23a, 23b) 1 2 (+) (75a, 1 (75b)
		(71) (76) (71, 73a, 75a, 73b, 75b)		(76) 2 , Cr Mo
	1 ,	Al	Ag ,	2
	(76) (55)	(31)		
	(71, 73a, 75a, 73b, 75b)			(80)
(80)	1 , , 0.5mm×15μm	(75a) (40) 가	(81) (80) (82)	() () 2mm×60μm (82)
) 가				
(80) (91) (76) (31)	(81) (92) 1 (91) 가 (91)	(75a) (90) (92) 3 4 (80) 가 (90)	,	(+) (91) (33c, 33d) (80) () IZO(indium zinc oxide)
(91)	(90) (76)		(90) ITO	(91, 92) 가 , (31)
(90)	(76) 1 가	(91) (76) (82)	(92) (76) (82)	(33c, 33d) 1 (91) (90) (76) 가
	(31, 33a, 33b, 33c, 33d) (76)		(90) (21, 23a, 23b)	
(100)	2		가	
(200) (10)	(10, 100) (100) 가 가			가
(90)	(131)	(10, 100)		가
1 3	가	(10, 100)		

3.

1 2 ,

1 1 2 3
1 1 2 가 1
 , 2 2 가 3**4.**

3 ,

1 2 2

5.

3 ,

1 2

2

6.

1 ,

1

7.

1 ,

2

8.

1 ,

가

9.

1 ,

1 1 ,

1 1 2 ,

1 2 가 ,

1 , 2 1 ,

,

,

1 2 ,

2 ,

1 2

V_{DCE} ,
 $V_{DCE} \geq V_p \times (1 + \frac{\varepsilon d'}{\varepsilon' d})$

V_p ,
 $\text{epsilon}, d,$
 ε', d'

10.
9 ,

가 1 2

11.
9 ,

가 1 2

12.
9 ,

2

13.
12 ,

2 1 가 1 가

14.
12 13 ,

1 1 , 2 3 , , 2 3
1 1 , 2 1 , 1 2 3
가 가 .

15.
14 ,

C_{LC} ,
 C_{DCE} ,
 V_{n-1} ,
 $\frac{C_{LC}}{2C_{DCE}+C_{LC}} |V_p + V_{n-1}| > \frac{\varepsilon d'}{\varepsilon' d} |V_p|$

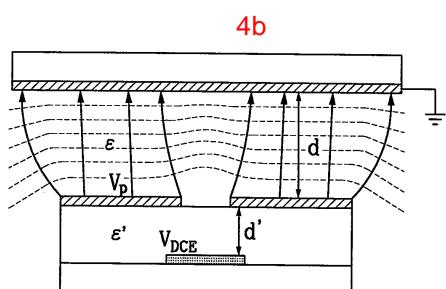
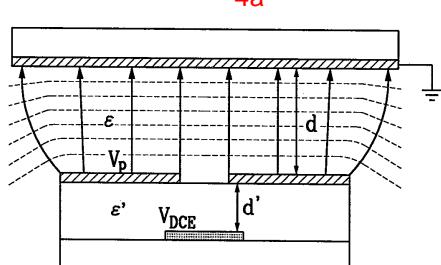
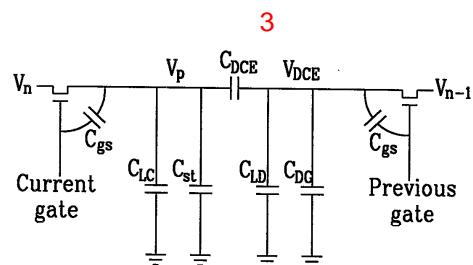
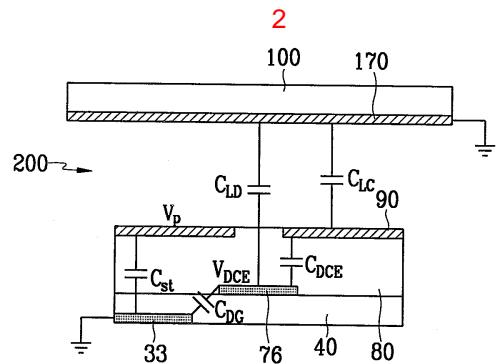
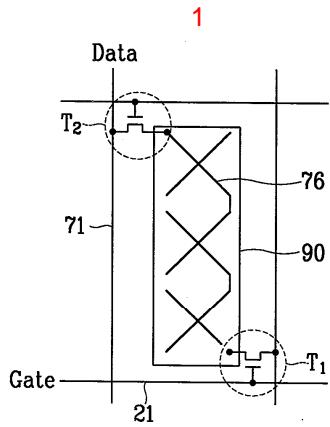
16.
14 ,

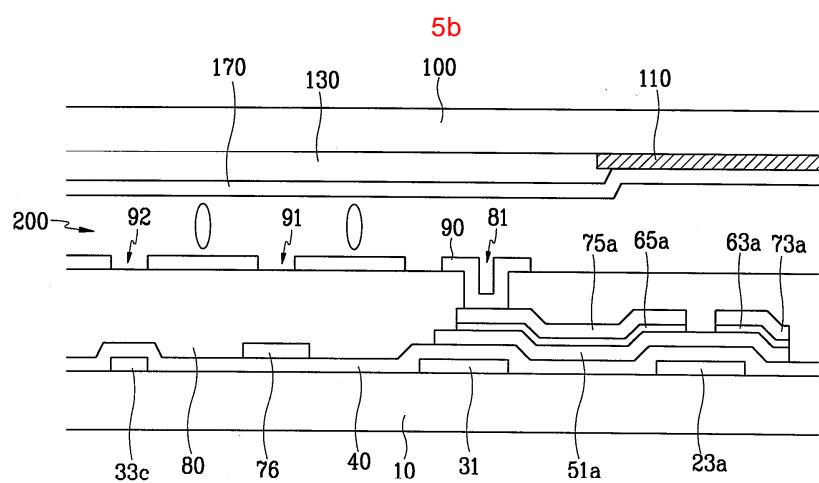
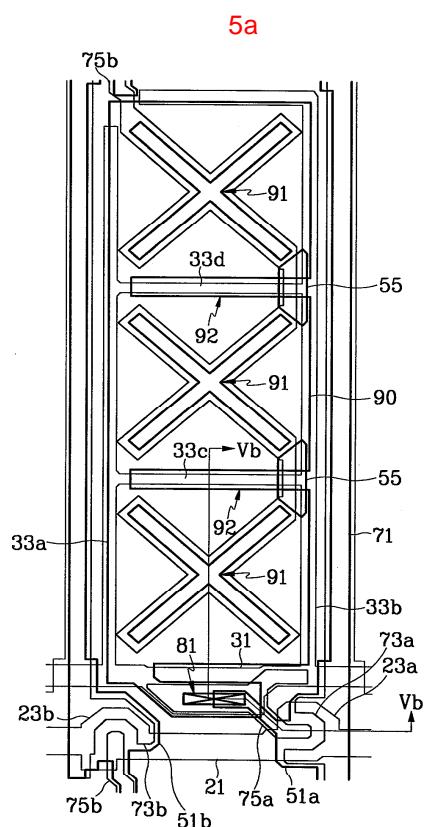
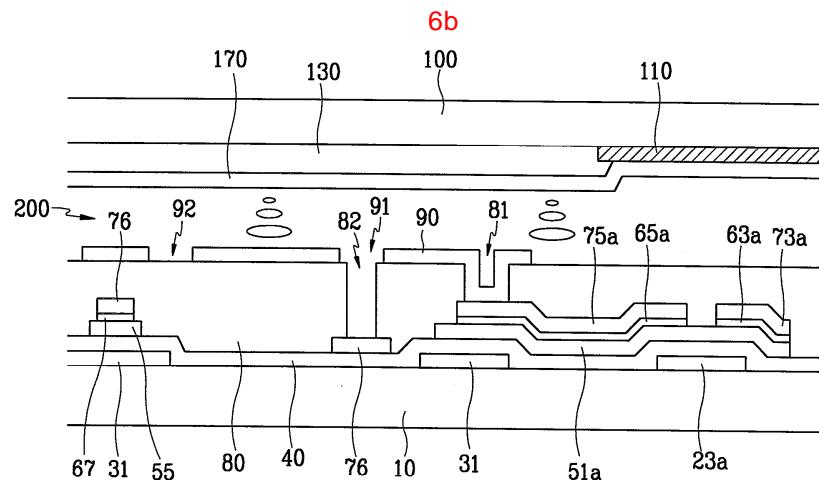
1 2 2

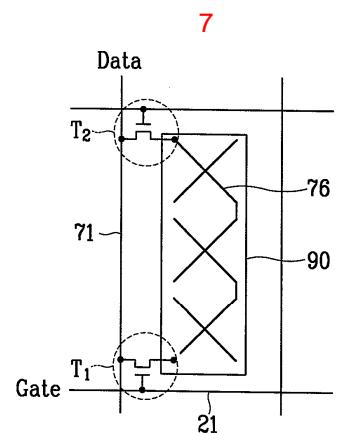
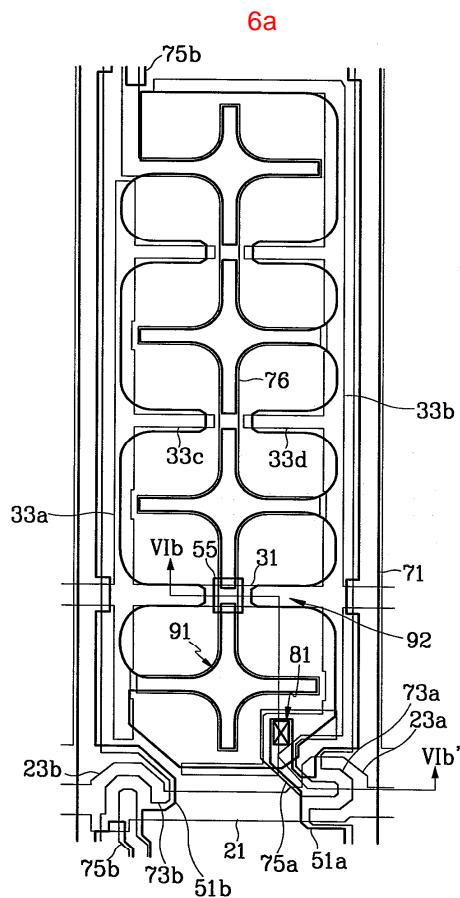
17.
14 ,

1 2

2







专利名称(译)	多畴液晶显示器件及其薄膜晶体管基板		
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[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		
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发明人	이백운 김희섭 홍성규 신경주 양영철		
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其他公开文献	KR100870005B1		
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摘要(译)

在绝缘基板上形成栅极线，并形成数据线以与栅极线交叉。栅极线和数据线彼此绝缘，并且具有栅电极，源电极和漏电极的三个端子的两个薄膜晶体管形成在通过栅极线和数据线交叉形成的像素区域中。并且分别形成方向控制电极和像素电极。此时，两个薄膜晶体管中的第一薄膜晶体管用于切换像素电极，第二薄膜晶体管用于切换方向控制电极。第一薄膜晶体管的栅电极，源电极和漏极每个电极连接到相应像素级的栅极线，数据线和像素电极，并且第二薄膜晶体管的栅电极，源电极和漏电极分别连接到前一级的栅极线和数据线。方向控制电极是用于控制液晶分子的预倾斜的方向控制电压并与对电极形成方向控制电场。1指数方面 液晶显示器，域，开口，方向控制电极，薄膜晶体管

