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(71) 가 가
5 7 1(72)
5 7 1 가 가
5 7 1 가 가
5 7 1 가 가
5 7 1 가 가

(74)

:

(54)

(14) (12) (13) 가 (14) TFT (15)
, (14) (17) (18) , (disclination) (19)
, (18) (12) (12ba) . (12)

1

LCD, , (definition), ,

1

2 1

3a 3i 1

4 (definition)

5

6

(color filter; CF)

가

()

(disclination)

n) (contrast)

(rubbing)

()

(aperture ratio)

(optical modulation)

n)

" CF(Color Filter) - On TFT
3 - 237432

가
2758410

CF - On TFT ,
 ,
 , CF - On TFT 가
 , CF - On TFT ,
 (taper)가
 (,)
 , 가
 , 가 , 가
 () , CF - On TFT
 가
 () 가 , CF - On T
 FT 가 , 가
 ,
 ,
 가 (masking)

(300); (101, 201) (101, 201); (101, 201)

(13) (12); (13)

(12) (15); (15) (14);

(14) (14b) (18) (104 106);

(104 106) (18) (14) (14b) (18)

(17); (17) (300) (107) , (18)

가 .

(104 106) (104 106)

(18) (104 106)

a 106a) 가 .

(104), (104) (104 106) (15)

(106) , (18) (105), (104) (105)

(104a 106a) , (104a 106a) (104), (105) (106)

.

, (14), (18)

.

(11), (11), (12), (13), (18)
(15) (11), (11) (18) (11) (11)

(12b) 가 (12) (18) /

(16) (13), (12b) (13) (16) (16a) 가 ,
, (12b) (14)

(14), (14) (17), (15), (15)
4 106) ; (14) (14b) (17) (107)
; (14) (18) (17) (14) (104) (106)
; (107) (17) (18) (104) (106)
(18) , (18)

106) , (18) , (104 106) (104 106) (104a 106
a)

(104), (104) (105), (15) (104) (105)
(106) , (18) , (104), (105) (106) (
104a 106a) , (18)

(TFT)

1 (11) TFT (100) (11a)
A - A' 2 (11) TFT (100)
B - B' 1

2 (11) TFT (100), (200), (300)

TFT (100) (200) (spacer,) . TFT (100)
(200) (109) (300) TFT (100), (200)
(109) ()

TFT (100) , (12) 1 (101) 가 1 (101)

(12) 1 X (가) , (11a) X

(12a) , (12) 1 (11a) TFT (12b) 가 1

(12a) TFT

2 (12b) (12ba) (capacitance) (12bb) 가 (12ba)

(108) (12ba) (108) (12c)가,

(12b) (12bb) , X (12ba) 가 Y

(12ba) (11a) (12bb)

(14)

2 (102) 1 (101) (12)

(102)

(103) (12) 1 (12a) (102) (103)

(103a) (103)

1 (12a) TFT(15)

2 (102) (13) (14) (13)

(14)

(13) 1 Y (11a) Y

(13) (13a) 가 , (11a) TFT(15) X

2 (13a) TFT(15) (103) (2

) , TFT(15)

(14) , Y (11a) (12) 2 (12b)

(14) (14a) (103) , TFT(15)

(14) (14b) , 2 (12b) (12c)

(18) (17)

(14) (11a) (12) (13) , (

short)

2 (102) (104) (13), (14), (1

03) (104)

(104) (105) (105)

(104) (105) (11a)

(105) , (16)가 . (16) (() , 1 , (16) (13) (13) , (13) 가 .

16a) TFT(15) (16) 1 (16a) 2 (16b) 가 X . 1 ((12) 2 (12b) (12 ba) (13) 2 (16b) (14) (14b) .

(106) (105) (16) . (106)

(106) , (170) . (17) , ITO(Indium Tin Oxide) .

(17) (14) (18) . (18) (104), (105) (106) . 1 , (18) (14) (14b) 가 .

(18) TFT(15), (13) 가 가 . (14) (18) (14) (14b) 가 () .

(18) , 2 (104) (104a), (105) (105a) (106) (106a) . (105a) 106a) . , (105) (105a) (106) (17) .

(17) (106) , (107) . (107) (107) () . (107)

16a) TFT(15) (100) .

16b) (200) 2 (201), (202) (203) .

2 (201) , .

(202) ITO (17) . (203) , 2 (201) TFT (100) (202) .

(11) , ()가 (12) 가 , (display gradation) (13) 가 , . 가 가 (12) () TFT(15) . , (13) 가 (13a), (103), (14a), (14), (14b) (18) (17) 가 .

가 , TFT(15) . , (17) 가 (17) (202) () , (14) (12) (12b) .

(300) , (11a) (300) 가 ,
 () , (105) .
 (11) , (107) , .
 , .
 가 , 1 , 1 , (11a) (1 (11a) TFT ,)
 , (11a), 1)
 (alignment restriction power) .
 , 1 (11a)
 (19) .
 , 1 , (18) ((19))
 , (18) (11a) (11a) TFT
 (downstream) . (18) 가
 () . , 가 (19) 가 가
 , 가 .
 , (16) 1 (16a)가 (14) (14b)
 (13) , (14) (13) (19) (16) 1
 (16a) , (19) ((11a)) (12) ,
 , ((19)) 가 (14), (12) (16) .
 , (19) 가 , , ,
 가 .
 3a 3i (11) .
 , 가 .
 , .
 , 1 (101) , 3a
 (12) , 3b , (102)
 .
 , 3b , 가 (103) (103)
 102) . (103) ,
 .
 , 3c (110) (102)
 , 3d , (13) (14)
 , (103) (103a)가
 (103) .
 , 3e (104) (105)
 (13) , (102) .

, (105) 가 ,
 (105) (105) R, G B .
 (104a)가 (104) , (105) .
 , 3f , (105a)가 (105) , (103a, 104a) .
 , (105) (105a) 가 .
 , (105) (16) ,
 3g , (resin solution film) (104) .
 , (106) (106) .
 , (105) (16) , (105a) .
 (106) (105a) (105) (105a) .
 가 , (103a, 104a 105a) (18) .
 , 3h , ITO (18) (14) .
 (106) (17) (18) (14) (17) .
 , (107) (17) 가 ,
 , (109)가 , 3i TFT (108) 1 (101) .
 , TFT (100) , (107) , (200) .
 () , (300) , 2 .
 (11)가 .
 , (18) (104), (105) (106) .
 , 3 ,
 , (18) 가 , (18) .
 ,
 가, 가 (105) , 가 ,
 , (18) , (18) 가 .
 []
 (18) .
 4 .
 4 5 (18) (19) .
 5 , (18) , 1 가 .

, 5 , (18) $14\mu\text{m} \times 14\mu\text{m}$ 가 가 .
 (104) $8\mu\text{m} \times 8\mu\text{m}$ (106) (105) 가 1.
 $5\mu\text{m}$, $196\mu\text{m}^2$ (18) (11a)
 가 .
 (18) () (18) , (18)
 :
 , , $100\mu\text{m} \times 300\mu\text{m}$
 , $100\mu\text{m} \times 300\mu\text{m}$, $196\mu\text{m}^2$
 0.65% , (18) , (definition),
 (18) 가 4 .
 4 가 100dpi(dot per inch) , (18) 1% .
 , 가 , (18) (12) (13) , (18)
 .
 , 가 150dpi , (18) 가 가 .
 , 가 $126\mu\text{m}$, 가 200dpi , (18) 3.70% ,
 .
 , 200dpi , 가 . ,
 가 , 가 . 가 ,
 가 . 가
 가 , 5 (14), (12) (16)
 가 가 $126\mu\text{m}$, (18) $8\mu\text{m} \times 8\mu\text{m}$,
 $1.5\mu\text{m}$.
 가 , (19) (18) 1 5 5.5% 가
 , 가 4.0% , 13.8% .
 (18) 가 200dpi .
 .
 , (18) 가
 . 가 .
 가 , 가 , 200dpi . , 가
 , CF - On TFT , (18)
 가 , 가 가
 .
 가 . 가 ,
 가 .

(14) (14b) (18) (14)

(18) 가 (18) (12) (14) 6

(14) (12) 2 (12b) (main line)

(18) / (12)

(104) (13) (104)

가

가, 1 (19) 1 (19)

(19) 1 (18)

가

TFT(15) (17) (18)

(18)

() TFT MIM, TFT(15) ,

1 (101) (forward)

가, (105) TFT (100) CF(Color Filter) - On TFT

(105) (200)

(18)

가

(simple)

IPS(In Plane Switching)

가

(57)

1.

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;

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;

;

,

(disclination)

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2.

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가

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3.

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6.

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/

가

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7.

4

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가

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,

8.

4

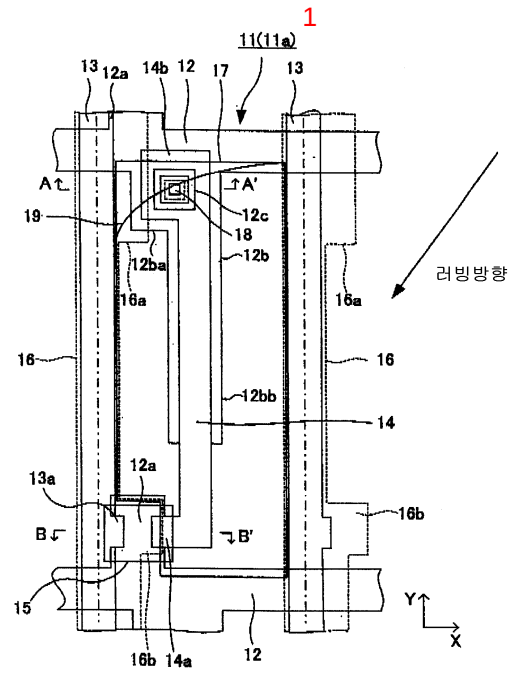
9.

10.

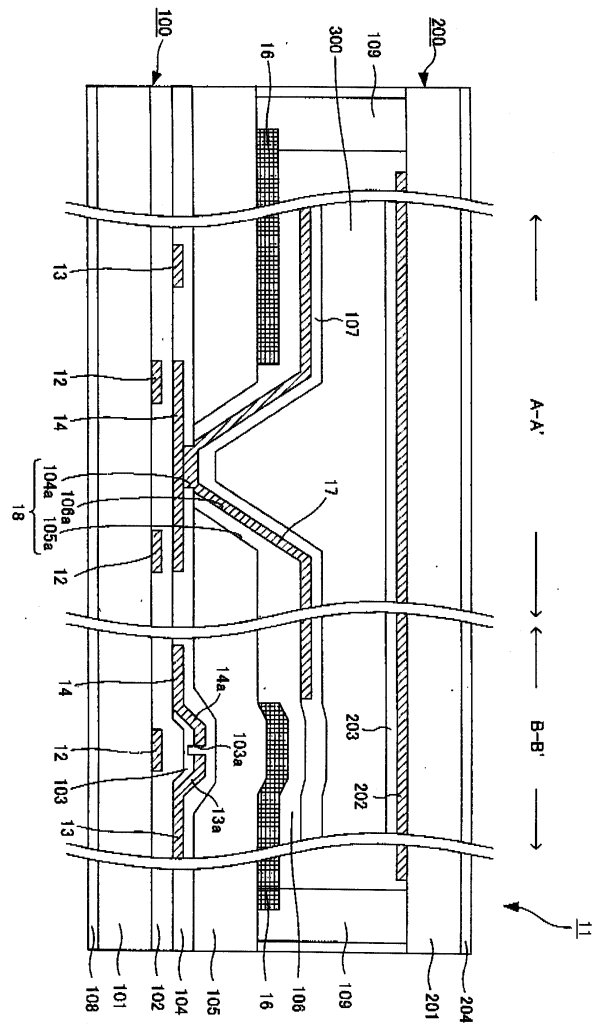
9

11.

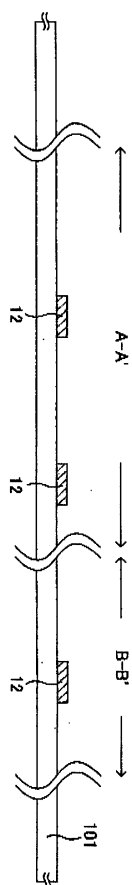
9



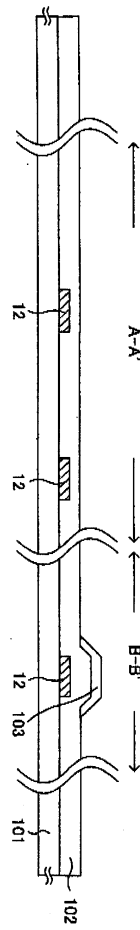
2



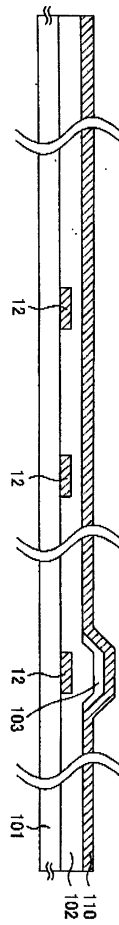
3a



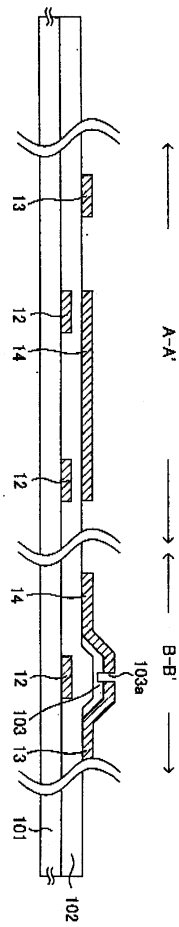
3b



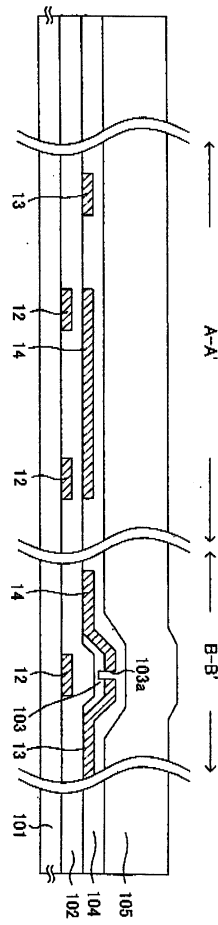
3c



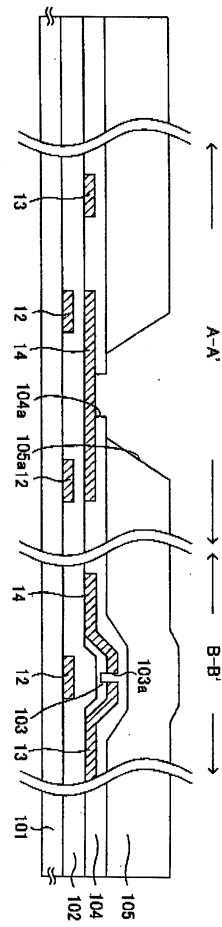
3d



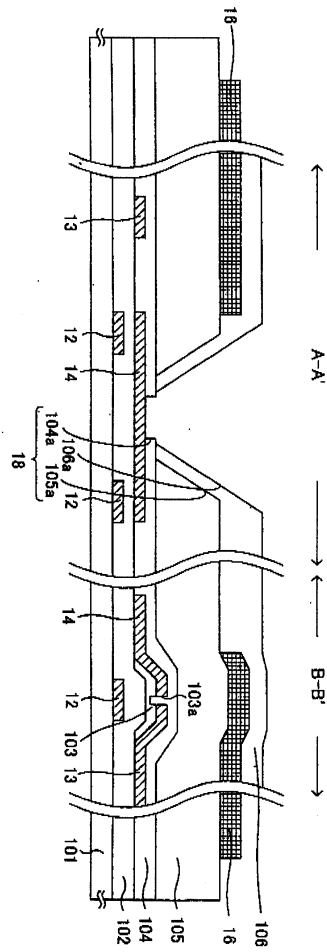
3e



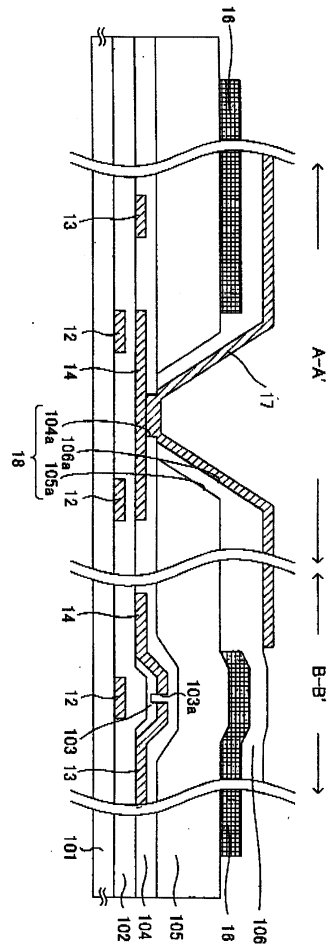
3f



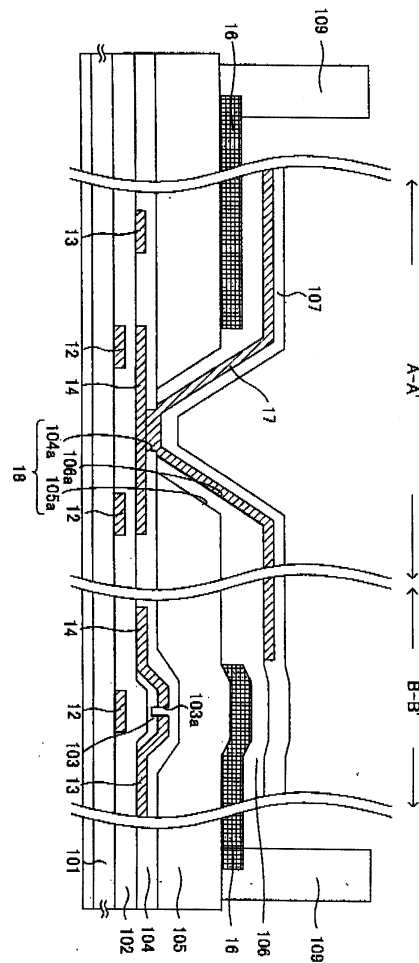
3g



3h



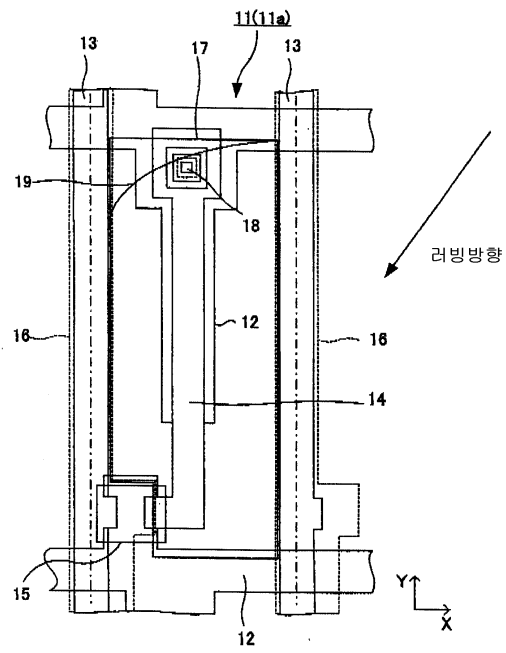
3i



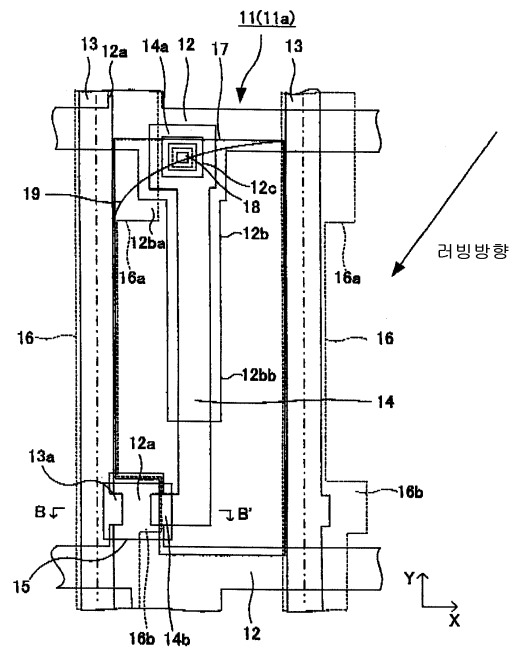
4

도트피치 (μm)	선명도 (dpi)	접촉률 면적비 (%)
300	84.7	0.65
250	101.6	0.98
200	127.0	1.47
150	169.0	2.61
126	201.6	3.70
100	254.0	5.88
85	298.8	8.13

5



6



专利名称(译)	液晶显示装置及其制造方法		
公开(公告)号	KR1020020069179A	公开(公告)日	2002-08-29
申请号	KR1020020009782	申请日	2002-02-23
[标]申请(专利权)人(译)	NEC液晶技术株式会社		
申请(专利权)人(译)	日元号技术可否让这个夏		
当前申请(专利权)人(译)	日元号技术可否让这个夏		
[标]发明人	HIDEHIRA MASANOBU 히데히라마사노부 SAKAMOTO MICHIAKI 사카모토미치아키 KUROHA SHOUICHI 구로하쇼이치 OKAMOTO MAMORU 오카모토마모루		
发明人	히데히라마사노부 사카모토미치아키 구로하쇼이치 오카모토마모루		
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其他公开文献	KR100504685B1		
外部链接	Espacenet		

摘要(译)

在有源矩阵LCD中，栅极线（12）形成矩阵形式，TFT（15）连接到源极线（14）同时具有数据线（13），接触孔（18）用于连接像素电极（17）的源极线（14）形成在与前景（旋错）线（19）重叠的位置。接触孔（18）可以形成在与栅极线（12）的电容部分（12ba）重叠的位置处。准备栅极线（12）和源极线（14），使得栅极线（12）和源极线（14）彼此面对。静电容量存储在它们之间。LCD，开口面积比，清晰度（清晰度），接触孔，前景产生区域。

