

(19)
(12)

(KR)
(A)

(51) 。 Int. Cl. ⁷
G02F 1/136

(11)
(43)

2002 - 0012794
2002 02 20

(21) 10 - 2000 - 0045989
(22) 2000 08 08

[illegible][illegible]

(74)

(54)

4

1

2

1

3

2

4

5

1

6

2

7a

1

7b

8

7a

1

,

7a

-

9

7a

2

,

7a

-

10

7a

3

,

7a

-

11a

11c

119a :

119b :

118 : 1

141 :

(liquid crystal display device)

(Transflective liquid crystal display device)

(backlight)
(power consumption)

1
 , (11) (16) (17)
 (13) (15) (P) (A) (C)가
 (19) (T) (21) (15)
 (21) (23)
 (21) (T)가 (matrix type)
 , 가 (25) (27)
 , (P) (25) (27)

2 3

2 1
 / , (15) (21)
 , (21) (15) (17) (13)
 (13) $\lambda/4$ (plate) 가 (45) (quarter wave plate : QWP)
 (55) (15) (21)
 (19) (" ")
 , 2 (19a) (19b) (18)

52) (19b,19b) (21) (QWP) (54) (18)
 , (52) (41)가

(21) (15) 가 (23)
 가 ($V_{on} = off$), (TN : twisted nematic)
 nd1 $\lambda/4$ ($\lambda = 550nm$)가 (1)
 (d_2)

, $d_1 \Delta n = \lambda/4$ - - - (1)

$d_2 = 2d_1$ - - - (2) , $d_2 \Delta n = \lambda/2$

(1) d_1 , d_2
 , $\lambda/4$ (19b) (23)

17) (19b) (52) (

(A) 가

3

3 2 2 .(3

2 .)

(A) (B) 2 (A)

(17) (d₃) (C) (17) (d₄) 가

(A) (C)

(C) (17) (51)

(51) (A) (d₃) (51) (C) (15)

(17) (d₄)

1 2 (18) (21) () (21)

(18) (F) ()

(contrast ratio)가

(18) 가 가

1, 2 ; 1

1 ; 2

가 ; 1 2

2

lobutene) (SiN_x) (SiO₂) (benzocyc
(acryl) (resin)

가

ITO IZO

4

(119b) (G) (H) (119) (120) (119b)
2 (175) (119a)
(G) (d₅) (H) (d₆) 2
(117) (118) (H)
(G) (H)

가

(117) 가 가 (141)
가

가

(117) 가

가

5 6

5 4 1

open) (115) (117) (4 P) ()
(116)

bon) , (optical density)가 3.5 (Cr) (Cr
가 / (Cr/CrO_x)
() (151)
(buffer layer)(151) (117) , (SiN_x) (Si
O₂) (benzocyclobutene)
μm
(117) 가 (spin coater)
6 4 2
(115) (117)
(115) (HF) (
(black matrix) (Cr)/ (CrO_x) (116)
d), (green), (116)가 (115) (sub) (re
(yellow) (color resin)
(117)
2
7a 7b
(132) (125) (127) (125, 127)
(133) (165) (T)가
(P) (119) (119a) (119b)
(D) (E)
(D) (E) (119a) (119b)
(167) (165)

(167) 1 2 ,

1 2 .

7b , (119a) (119b)

가 ,

가 .

(119a) (119b) (165)

가 .

8 10 .(

7a .)

8 10 7a - .

(121) , (161) (7a

125) .

(7a 125) (SiN_x) (SiO₂) ,

(benzocyclobutene) (acryl) 1

(162) .

(162) (a - Si:H) (n+a - Si:H)

(161) (active layer)(171)

(ohmic contact layer)(173) .

(173) (121)

(163) (165) , (163)

(7a 125) (7a P)

(7a 127) .

(163, 165) (121) (benzocyclobu

tene) 1 (167) (P) (118) (169) , (165)

(169) 1 (118) (162)

1 (118) (121) - - (Indium - tin - oxide : ITO)

(Indium - zinc - oxide : IZO) 1

(167) (165) , (169) (P) (119

a) .

(119a) (121) 2 (175)

1 (167) 2 (175) 2

(167') .

2 (167') (121)

(169) (123) (119b) .

, 9
 ,
 , (119a) (119b) (165)
 1) , 1 (118) , (165) 1 (18
 , 1 (181) (119b) (165)
 , 2 (175) , 1 (181)
 (165) 2 (183)
 , (119a) , (119a) 2 (183)
 (165)
 , 10
 ,
 , (185) (165) (119b) (119a)
 가 (165)
 , 1 (118) (G) (169)
 2 , (119a) (119b) , 1 (118)
 (175) (119b) (119a)
 ,
 , 5 6 4
 , 11a 11c 5 6 가
 11a 1 , 11b , 11c ,
 가 (18
 1a, 181b, 181c)
 , 11b 11c 가 , 가 11a
 (peak) 가

가

가

가

(57)

1.

1, 2 ;

1 ;

1 ;

2 가 ;

1 2

2.

1 ,

2 .

3.

1 ,

4.

1 ,

lobutene) (SiN_x) (acryl) (resin) (SiO₂) (benzocyc

5.

1 ,
가 , .

6.

5 ,
.

7.

5 ,
.

8.

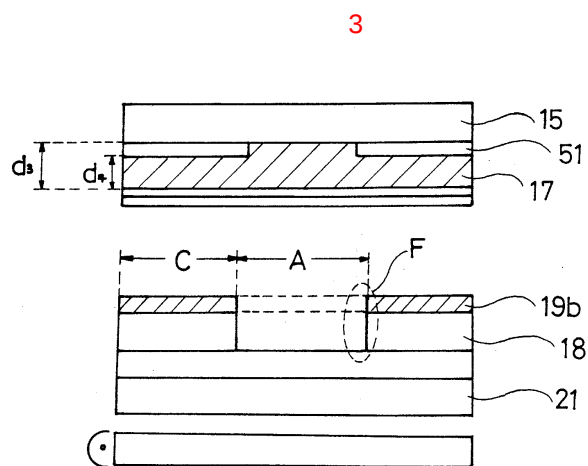
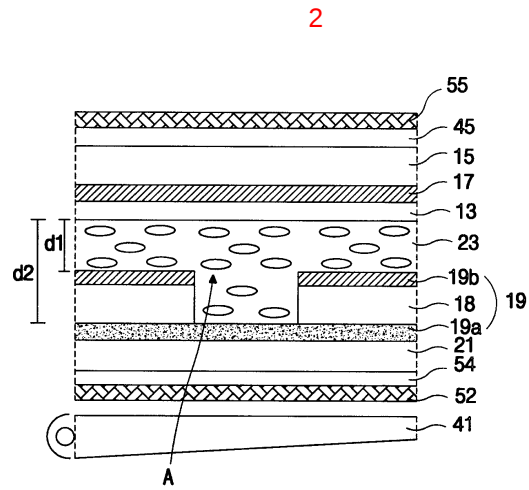
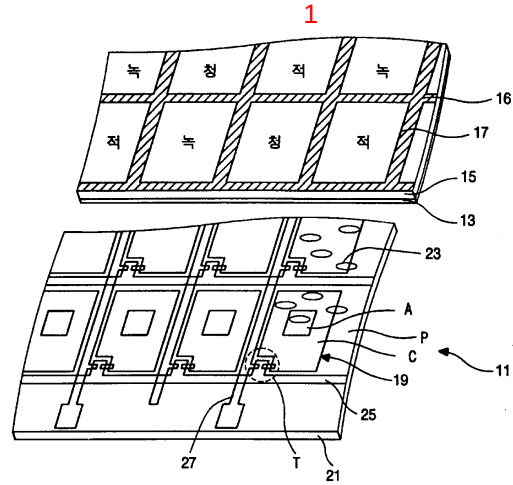
5 ,
ITO IZO .

9.

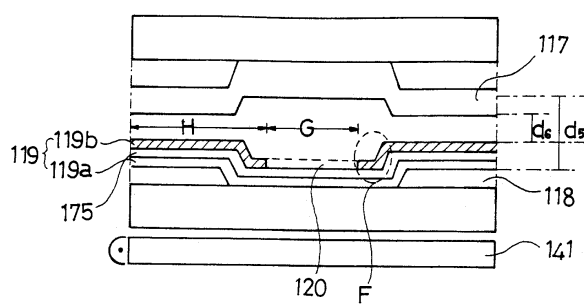
1 ,
.

10.

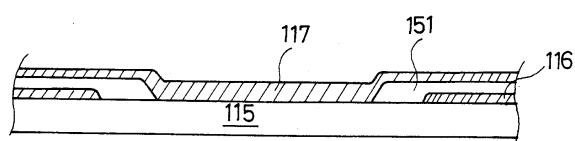
1 ,
.



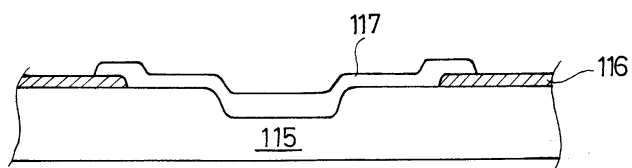
4



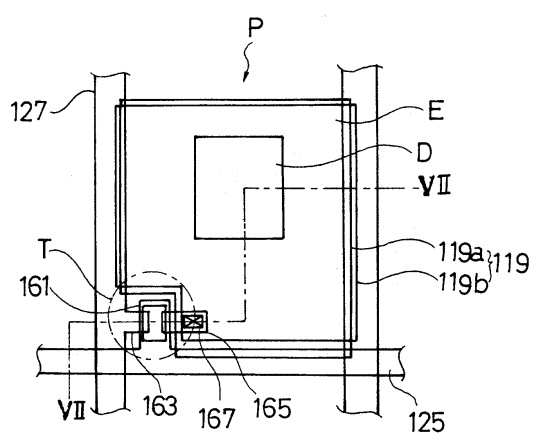
5



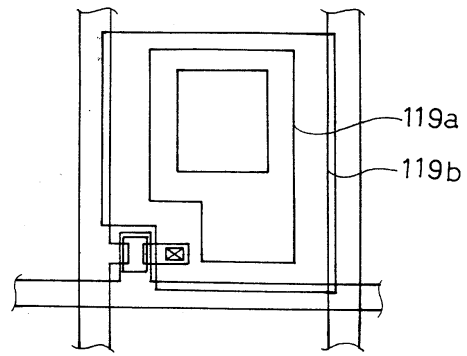
6



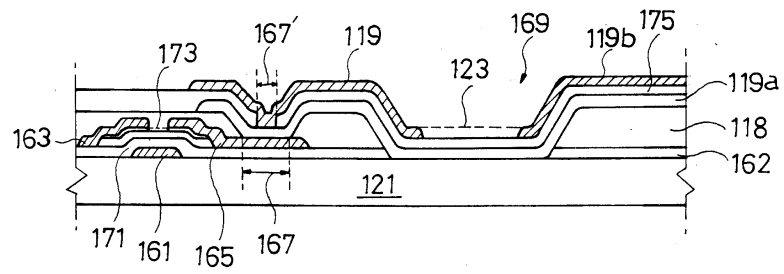
7a



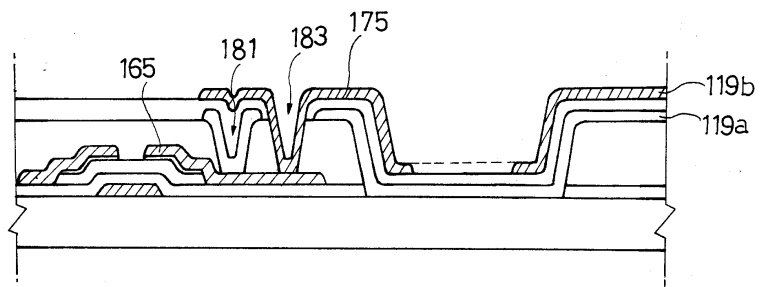
7b



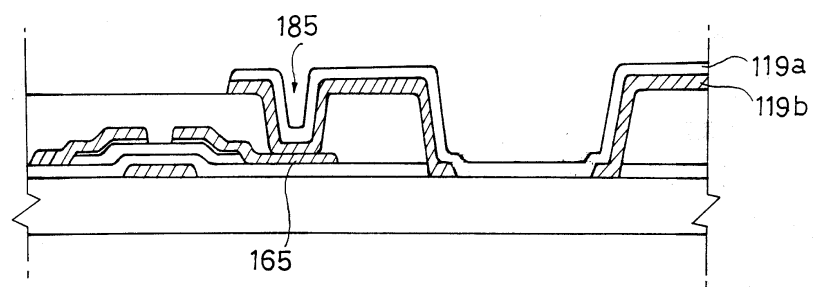
8



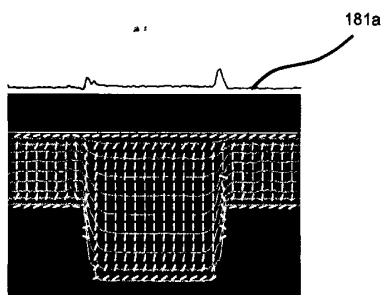
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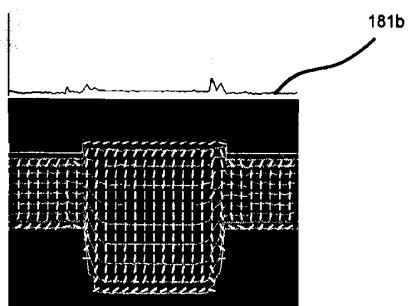
10



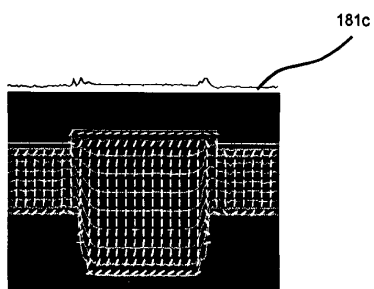
11a



11b



11c



专利名称(译)	透射反射型液晶显示装置及其制造方法		
公开(公告)号	KR1020020012794A	公开(公告)日	2002-02-20
申请号	KR1020000045989	申请日	2000-08-08
[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		
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IPC分类号	G02F1/136		
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外部链接	Espacenet		

摘要(译)

反射透射型液晶显示装置本发明涉及一种反射透射型液晶显示装置，它既可以用作反射型液晶显示装置，也可以用作透射式液晶显示装置，并且透射部分的单元间隙形成得大于反射部分的单元间隙，以匹配反射部分和透射部分的颜色特性，位于透射部分的上部对应于保护层的滤色器层以及位于透射部分下方的保护层可以是阶梯式的，以降低下保护层的台阶，可以制造其中透射模式和反射模式之间的色差最小化的反射透射型液晶显示装置。

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