

(19)
(12)

(KR)
(A)

(51) 。 Int. Cl.7
G02F 1/1343

(11)
(43)

2003-0084770
2003 11 01

(21) 10-2003-0026331
(22) 2003 04 25

(30) JP-P-2002-00127636 2002 04 26 (JP)
JP-P-2003-00045076 2003 02 21 (JP)

(71) 가 가 가 22 22

(72) 17-4-303

(74)

:

(54)

(14) , (13) (14) (2) (13) , (13)
(15) , (13) (14) (13) (15)
(15) (2) (14) (amount of expansion) x , (14)

1

, , , ,

1

2 1

(Twist Nematic : TN)

가

가

가

가

1

2

가

2000-162625

(2000 6 16)

,

2000-187209

(2000 7 4)

가

1

2

가

가

[1]

1
 (2) , (3) , (4) , (5) , (6) , (7) , (1) , (8) , (9) , (10) , (11) , (12) , (13) , (14) , (15) .

(2) , 0.2mm , (2) , (1) , (2) , (3) $1.5 \times 10^{-5} \text{ m} (1500 \text{ \AA})$, $\text{Si}_x \text{N}_y$, (3) , 3 (2) 가 가 (2) , (3) $\text{Si}_x \text{N}_y$, SiO_x , $\text{Si} : \text{O} : \text{N} : \text{Si} : \text{O} : \text{H} , \text{Si} : \text{N} : \text{H} , \text{Si} : \text{O} : \text{N} : \text{H} , \text{Si}_3 \text{N}_4$.

(4) , $2.0 \times 10^{-5} \text{ m} (2000 \text{ \AA})$, (Al) (5) , (4) , SiN_x . (6) , (5) (4) , a-Si (7) , (6) (6) (10) , n + a-Si (7) , Ti (8) , (9) . (11) (8) (9) . (12) (11) (13) , Al 가 (13) (12) , (14) (15) , (14) , ITO(Indium Tin Oxide : (13) (15) , () .

(20) (1) (21) (22) (20) 1 (21) 가 0.2mm (21) (22) (21) ITO(Indium Tin Oxide : (22) (1) (20) (1) (13) (20) (23) 가 (1) (16) (4) (4a) (16) (8) (8a) (1) (4a) (8a) (8a) (5)() (16) (9) (16) (9) (16) () (13) (9) (11)(1), (12)(1) (17, 18) 가 (4), (4a), (8), (8a) (12)(1) (14) (8a) (13) (15) (14) (13) 가, (15) x (13) (14) x (15) (14) (13) : 360mm, 가 : 465mm, 0.2mm (2) , Si_xN_y (3) , 가 1.5×10⁻⁵ m(1500) (2) 190 가 (3) , Al 가 2.0×10⁻⁵ m(2000)가 190 (4) , Al , Al , Ta, TaN/Ta/Ta N, Ti/Al/Ti (4), (4a) CVD(Chemical Vapor Deposition, (5) , 220 , SiN_x)

Si, CVD, a-Si, (6), n + a-

(7), CVD, 220, .

(6), .

(4), (5), 28

(9), Ti, (8a), (8), (9), (8a), Ti, (8), Mo, Al/

Ti, Ag 가 .

(8) Ti, (9) n + a-Si a-Si

(10) .

(11) SiN_x, CVD, 220, .

(11) (17) .

(12), (11), .

(12) (9), (12), (18) .

m(1500)가, (12), ,가 100, 0.1Pa, Al, 가 1.5×10⁻⁵

Al, Ag, Ag, (13) . (13) (13)

(13), 3 (a), (13), (15)

(15) (13) (4a) .

) (8a) (15), (13) (15)

(13) (14) R, (R)

, , 200, .

(15)(

) , .

(90°), 가 , , .

가, (G), (B) , , .

G, B .

3 (a), (14), (8a), .

(13) (13) (15)

(14), (13), . (14),

(13) x .

4, (14), (15) (13)

(13) (15) .

(14) ITO, (13) (14)

(15) (15), (14) (15) (13) (14)

(15) (14) (13) .

(20) , 0.2mm (21) ,
 (22) .

(23), TN (1) (20) .

가 , x . x

(13) R() (2)

(13) G() (2)

(13) B() (2)

(13) (15)() (2)

(2) , (2) (2)

45ppm, 55ppm, 50ppm, 60ppm
 360x465mm .

232.5mm() x 10³ μm x 60ppm ÷ 10⁶ = 13.95(μm)

x 15μm .

x .

(13) (15) 가 (13) (14) ,
 (13) (15) 가 가 .

x , x (2)

(13) (14) (14) (13) (15) ()
 13) (14) (13) (15) .

(15) (13) , (1)

(14) , (14) (2) (13) , (13) (1)
 5) (13) (14) (14) (13) x , (14) (14)

(15) (2) (14) (13) (14)

(13) (14) (14) (2) (13) (13) ,
 (15) (14) (14) (13) (14)

x , (14) (15) (2) (14)

(15) , (13) (2) (14) , (14)
 (2) (15) (14) (2) (14)
 , (13) (14) (14) x , (15) (2)
 (13) (14) (14) (13) (15) ()
 13) (14) (13) (15) . , .
 , (2) , , . , , .
 , (13) , (14) , (13) , (2) 가
 (13) .
 3) (15) (14) , (13) , (1) . , .
) , (14) (13) (13)
 , (13) (14) , (13) (13) .
 , (13) (15) (13) (15)
 , (13) (15) . , .
 [2]
 , , 1 2 . , .
 , 5 6 , . , .
 , , 「 」 「 」
 , , () () .
) , 5 (, 「TFT 」)(40
 (50) , (60) .
 TFT (40) , (45) , (45) TFT() (11) , (44) , (44)
 (46) .
 TFT (40) , (32) , (32)
) , (33), (33a), . TFT (47) , (34) , (35)
 (34) (36), (37a) (33a) (38) , TFT(41) .

, TFT(41) (33a) (33) , (37a) (37) , (38)
 (44) , (36) , (35)
 , (9)

, TFT(41) (42) , (42) , (32)
 (43)

(43) , (44) , (44) , (44) ,
 5 (44a) , (44a) (44b) , (44) ,
 44) (44a) , (42) (43) (42a, 43a)(6) ()
 (38) , (44) TFT(41)가

, (44) (44b) , (44) (45)
 (45) , , ,

, (45) , (45) (46)

(50) , 5 (51) , (51) , ITO((52)
) (52) , ,)

TFT (40) (50) , TFT (40) (50) (60) ,
 , (50) (44) (60)
 (60) (44) , (60) 가 (50) (44) () , (60)

, TFT (40) (32) TFT (32) , (32)
 TFT(41) (32) TFT

, , (32) , Al 가 200nm , Al
 (33), (33a) (47) , Al , Al
 , Ta, TaN/Ta /TaN, Ti/Al/Ti

, (33), (33a) (47) , CVD SiN_x
 (34)

, (34) , CVD a-Si , n⁺ a-Si (3
 5) (36)

, (35) (36) (34) , Ti
 (37), (37a) , (38) , Ti , Mo, Al/Ti,
 Ag

, (37a) (38) , (36) (35)
 , (39)

, (37a) , CVD SiN_x (42) (42)
 , (42) (38)

(42a) .
 , (42) (43) (38) , (43) , , .
 8 (a) 8 (d) , (32) TFT(41) . 7 (a) 7 (d)
 , 7 (a) , (43) (32) (44a) , ,
 (44a) (44b) , (44) .
 , (44b) 0.1Pa , (44a) Al 100nm ,
 IZO 10nm , (43) , (44)
 , IZO In₂O₃-ZnO(90 : 10wt%) ,
 , (44) (45) . , 7 (b) , ,
 7 (c) (가 (15') (44) , , (,
 45)) , (70) (45') , 7 (d) , (()
 가 , (45) , (45)
 가 , (45)
 , (45) , , , , , .
 8 (a) , (45) , (44) (46) , (46') ,
 . (46) (45) (44) IZO (46)
 , 8 (b) , (46') (72) , (74) (45)
) (72) 8 (c) , (74) (45)
 , (72) , 8 (d) ,
 (46)
 , (46) , (45) (45a) (44) (44b)
 , (44) , (46) , (44) 40 (44a) (()
 44b) ((72)) , TFT (40)
 (50) , 가 0.7mm 가 , (51) ,
 (ITO) , (52) , (50)
 TFT (40) (50) , , ,
 가 (TN) (60) , ,
 , TFT (40) (50) (60) ,

가

(57)

1.

2.

1

(amount of expansion)

3.

1

4.

1

5.

1

1 6. ,

1 7. ,

1 8. ,

8 9. ,

가, x

9 10. ,

x ,

10 11. ,

1 12. ,

1

12 13. ,

12 14. ,

12 15. ,

12 16. ,

12 17. ,

17 18. ,

가, x

18 19. ,

x ,

19 20. ,

21.

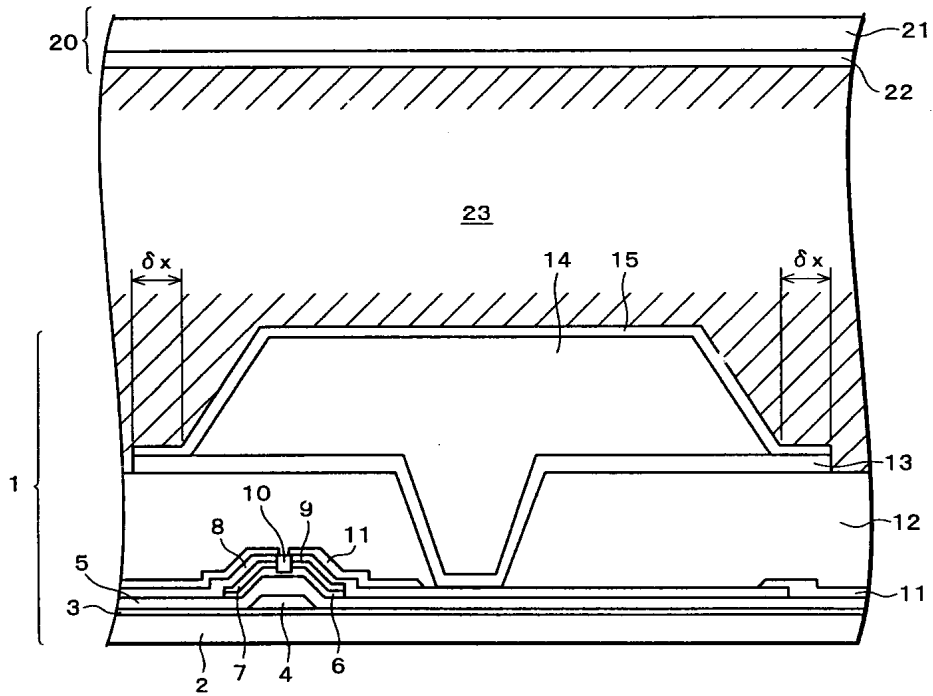
21 22. ,

21 23. ,

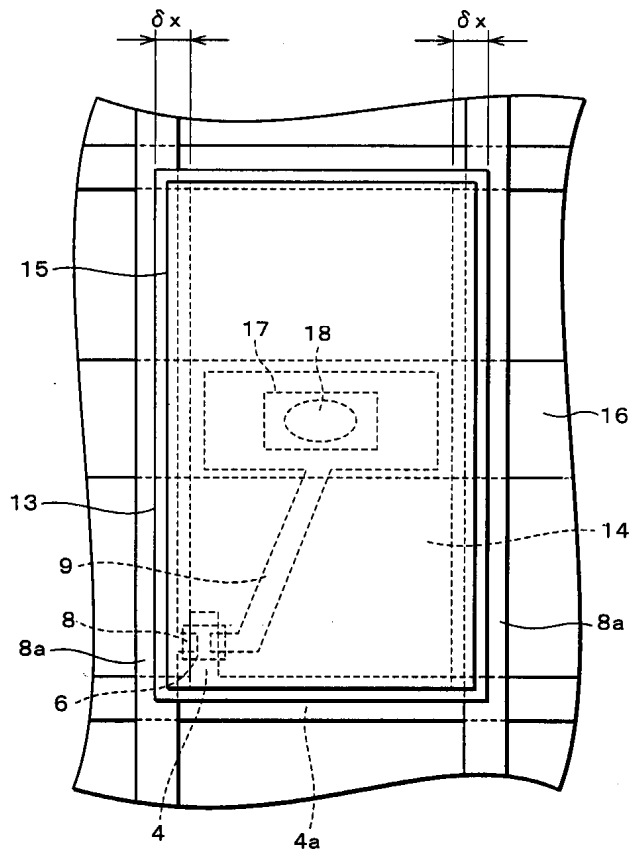
21 24. ,

21 25. ,

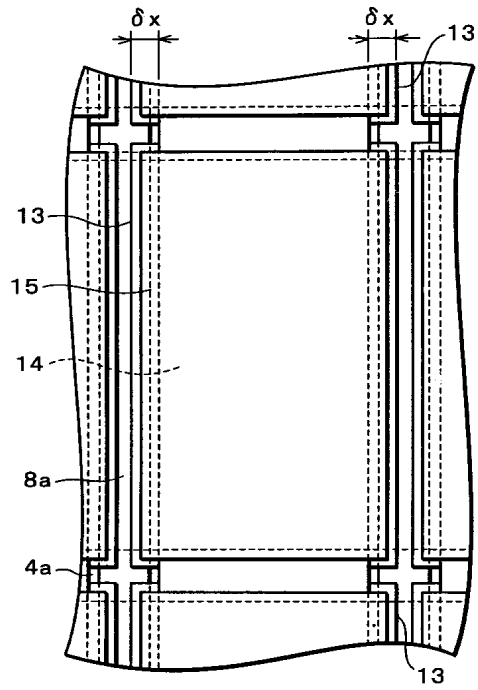
1



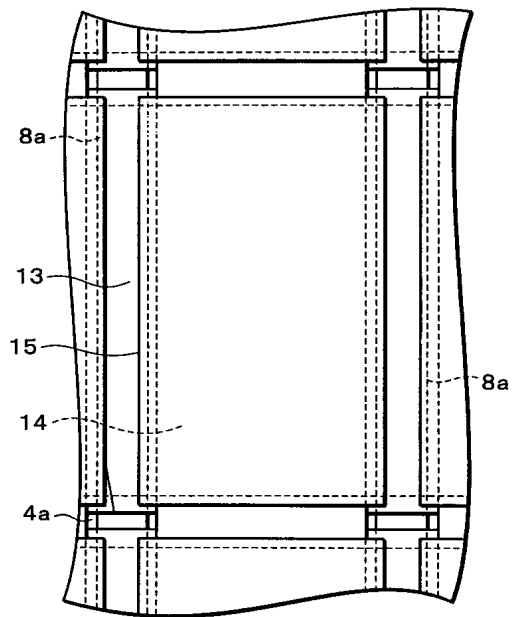
2



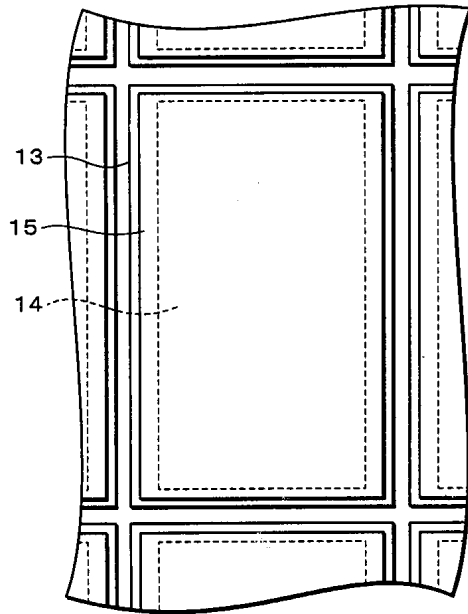
3a



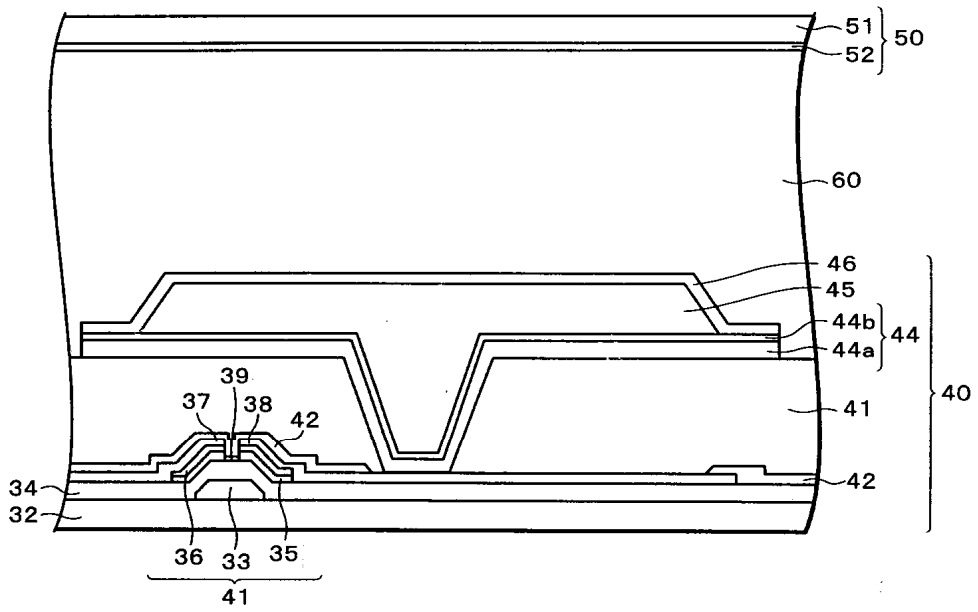
3b



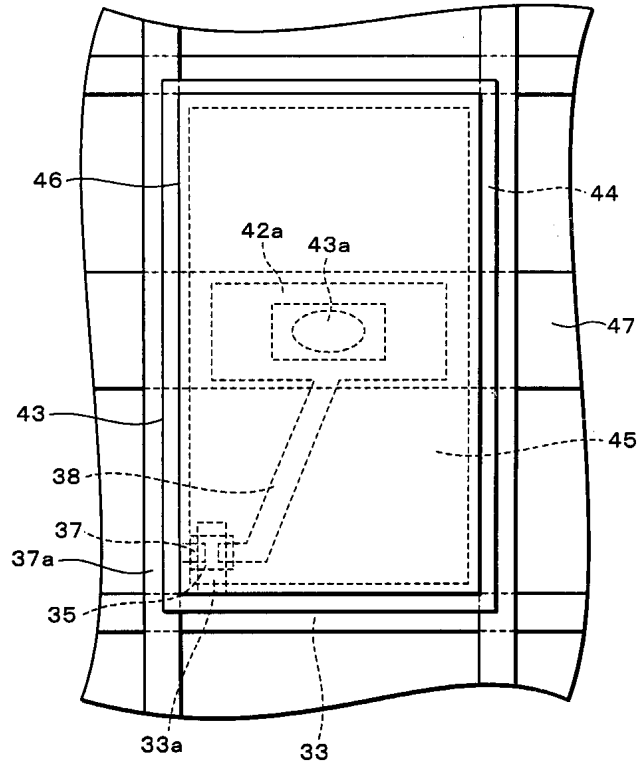
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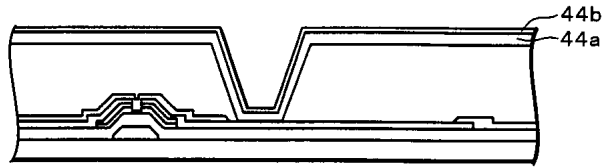
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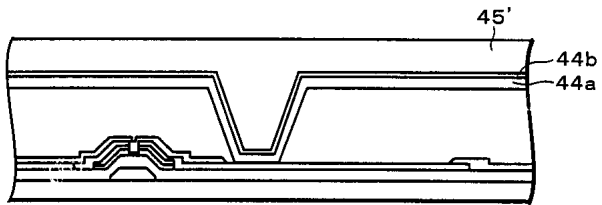
6



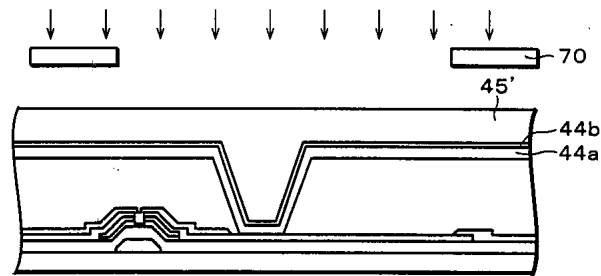
7a



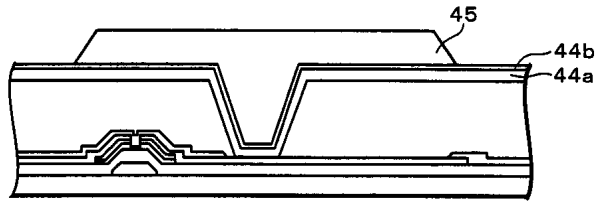
7b



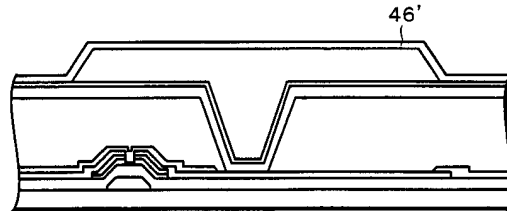
7c



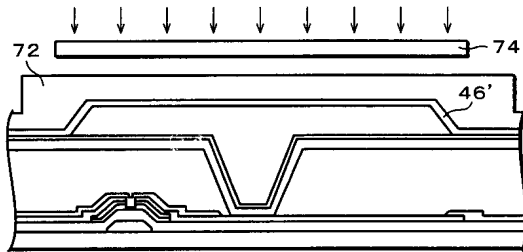
7d



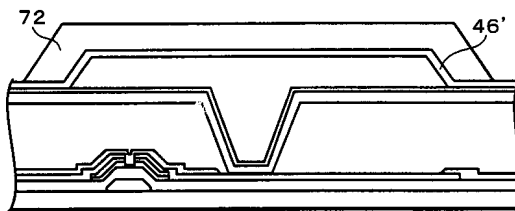
8a



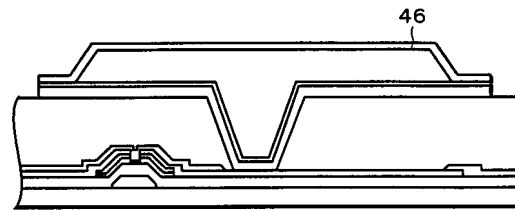
8b



8c



8d



专利名称(译)	液晶显示装置及其制造方法		
公开(公告)号	KR1020030084770A	公开(公告)日	2003-11-01
申请号	KR1020030026331	申请日	2003-04-25
[标]申请(专利权)人(译)	夏普株式会社		
申请(专利权)人(译)	夏普株式会社		
当前申请(专利权)人(译)	夏普株式会社		
[标]发明人	NAKAMURA WATARU		
发明人	NAKAMURA,WATARU		
IPC分类号	G02F1/1335 G02F1/1333 G02F1/1343 G02F1/1362		
CPC分类号	G02F1/1362 G02F1/136213 G02F1/133516 G02F2001/136222		
代理人(译)	CHU, 晟敏		
优先权	2002127636 2002-04-26 JP 2003045076 2003-02-21 JP		
其他公开文献	KR100555009B1		
外部链接	Espacenet		

摘要(译)

作为使用塑料基板的基板，实现了重量的减轻，耐冲击性的提高和低成本。防止了由基板的膨胀和收缩引起的显示图像的尊严的恶化。形成在塑料基板(2)的上侧的反射电极(13)和在形成距离的过程中基于塑料基板(2)的膨胀长度(膨胀量)确定的透明导电膜(15)从反射电极(13)的侧端到滤色器层(14)的侧端的 δx 是滤色器层(14)和它包括的透明导电膜(15)。透明导电膜(15)与滤色器层(14)的周边部分中的反射电极(13)电连接，形成在反射电极(13)和滤色器层(14)上。反射电极，滤色层，透明电极，扩展长度，对准边缘。

