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10-2004-0016404
2004 02 21

(21) 10-2003-0056125
(22) 2003 08 13

(30) JP-P-2002-00236497 2002 08 14 (JP)

(71) 가 가 1 1 1

(72) 가 1 1 1 가 가

1 1 1 가 가

가 1 1 1 가 가

1 1 1 가 가

1 1 1 가 가

1 1 1 가 가

1 1 1 가 가

(74)

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(54)

, 1/4 , , ,

1 ,

2 1 ,

3 2 가 ,

4a 4d 2 3

5 2 3 ,

6 2 가 ,

7 2 6 ,

8a 8c 1 3 ,

9a 1 ,

9b .

< >

2: (),

3: ,

4: ,

7: (),

8: (TFT),

9: ,

9a~c: (, ,),

10-1: ,

10-2: ,

11: (),

15: (),

16: ,

17: (),

25: ,

31,32: ,
 100: ,
 101: ,
 102a,102b: (),
 103a,103b: 1/4 ,
 105a,105b: .

(Nematic) (, TFT) (active device) (switching device)
 10inch TFT - TN(Twisted Nematic) 가 ,
 , TN 가 (dynamic picture image) , (viewing angle)
 가 , 가 (tailing) ,
 , TNT 가 , (response time)
 tic) 가 , OCB(Optical Compensated Birefringence) , VAN(Vertical Aligned Nema
 , IPS(InPlane Switching) (smectic) ,
 , VAN TN 가 , 가 (home
 otropic alignment) (tilt) (rubbing) 가 , VAN
 , TN VAN (declination)
 TN VAN

1 2 , 1 2 , 1 ,
 2 , 2 , 1 ,
 1 1/4 , 1 ,
 가 1 2 , 1 2
 2 1 , 1 2 , 1
 2 2 , 2 , 1 2 , 1
 2 2 , 2 , 1 ,
 1 1/4 , 1 ,
 가 1 2 , 1 2 , 1
 1 2 , 1 2 , 1
 2 1 , 1 2 , 1
 2 2 , 2 , 1 2 , 1
 2 2 , 2 , 1 ,
 1 1/4 , 1 ,

()

1 (100) VAN (101) (102a) (101) (101) (102b) (102a) 102b ,
 (102b) 1/4 (103b) (102a) 1/4 (103a) (105a) (105a) 1/4 (103a) (105a) 1/4 ,
 1/4 (retardation film)

2 1 (100) (101) (2) (3) (4) 2
 (2) (3) (3) (4)
 (8)가 (2) (7) (9) (10) (7) (11)
 (7) (8) TFT (10) (10) 가 가 (2)
 (9) (9a 9c) (8) (9) (9a 9c) (contact hole) (coloring dye) (10) (coloring pigment)
 (10) ITO (10)
 (10) (11) (11)

(3) (16) (17) (15) (2) (16) (17) (10) (11)

(16) (10) (11)

3 2 (101) 가 3

10a 10d (slit:10-2) (10) (10) (10a 10d) (10-1) (101) 4

(10) (10) 2 (10a 10d) (10a 4a) (10d) 4d

4a 4d 2 (101) 3 4a 4c 4a 4d 4b 4d 4a 4c

(10) (16) 가 (11 17) (4)

(25), (25) (11)

(10) (16) 1 가 (10) (10-2) (stray electric field)가 4b

(10) (16) 가 (25) (11 17) (25)

4a (25) (25) 가

4a (25)

4a (10-1) (25)가 (31) ()

(32)

4c (10-1) () (10-2)

(10) (25)가 (31) () 4c (32)

(25) (10) (25) (16) 가 1 가 2 (11) (25) (homogeneous alignment) 가

1 (10 16) 가 (25)가 (32) (10 16) 가 (25)가 (31) 1 2 (25) (10 16) (10-1) (10-2) 가 (10-2) 1 2

(10) 4 (10a 10d) (10-1) (10-2) (25) 3 1 (25)

10-1) 4 (10-2) (25) 가

(4) (10-1) (10-2) 가 (4)

10-1) (10-1) (10-2) (25) (25) (4)

가

5 2 (101) 3 (transmission easy axis) (10 16) 1 2 $\pm 45^\circ$ 가

(暗) 가 5 (10a 10d) (+)

(101) (102b) 1/4 1 (103a 103b) (101) (102a)

(10a 10d) (25) 1/4 (103a 103b) (明)

(4) 가 1/4 (103a 103b) (10-1) (10-2)

1/4 (103a 103b) (25) 가 (25)가 1/4 (103a 103b)

3 5 (10-1) (10-2) (10-1)

) (10-2)

6 2 (101) 가 (101) 6 (10) 4 (10a 10d) (10a) 7 6 (10a)

6 7 (10-2) (10-1) (10) 가 (10-2) (10-1) (10-2) (10-1) (32) 6 7

(10) (10-1) (10-2) (10a 10d) 가 (10a 10d) 가

(10-2)가 (10) (10-2) (noborac) 가 가

(10-2) (10) (10-2) (10-2) (10)

(100)가 (transmissive type) (100)가 (reflective type)

(W2) (W12) 20 μ m (4) 가 (W1) 가
 가 (W12) 6 μ m (4) 가 (W12) 6 μ m

(W12) (10) (10-1) (10-2) (10) 3
 가 가 20 μ m 가 6 μ m

(W1) (W2) 8 μ m (W1) (W2) 4 μ m

(W1) (W2) (10) (10-1) (10-2) (10) 3 가
 가 8 μ m 가 4 μ m

(W1) (W2) (4) 가 (W12) 2 가

(4) 가 4c

(負) 가 VAN (

(normally black) 가 400:1 가 VAN

가 45° (102a 102b)
 22.5° 가

(10) (10a 10d) (10a 10d)
 2 4

3 가 가
 (2) (2) (3) (2) (3)

(9) (3) (2) (COA:color filter on array) (2) (3)

(9) (100)가 (105a) 가

(1) 1 (100)

(10) 8a TFT (7) TFT(8) (9)

(7) (9) ITO ITO (10-1)

(10-2) 8a 5 μ m (10) (10-1)

(7) (10) 70nm (11) (燒成) (2)

(15) (16) ITO (17)

(16) (3) (2)

(2) (3) (11) (17)

(101) 4 μ m (101) (gap) (2) (2) (3)

(2) (3)

(空) (101) (101) 1/4 (103a) (4) 103

b) (100) (102a) (102b) (102a) (102b) 1 (103a) (103b) (103a) (103b) (102a) (102b) (100)

(10) (16) 가 가 1.5V 5V (10) (10-1) (10-2) (16) 5V 가

(10a) (10d) (10) (10-1) (10-2) (16) 5V 가

()

1/4 (103a) (103b) (100) 1 (10) (16) 5V 1 가

(57)

1.

,
1 2 , 1 2 , 2

1 ,

1 1 1/4 ,

가 1 2
1 2 1 , 1 2

2.

1 2 , 2 , 1 2 2 ,
2 2 1/4

3.

1 , .

4.

1 , 1 ,
2

5.

1 , 1 ,
2

6.

1 ,

7.

,
1 2 , 1 2 , 2

1 ,

1 1 1/4 ,

가 1 2
1 2 1 , 2 1

8. 7 , 1 2 가

9. 7 , 1 2

10. 7 , 2 , 1 2
2 2 1/4

11. 7 ,

12. 7 , 1 ,
2

13. 7 , 1 ,
2

14. 7 ,

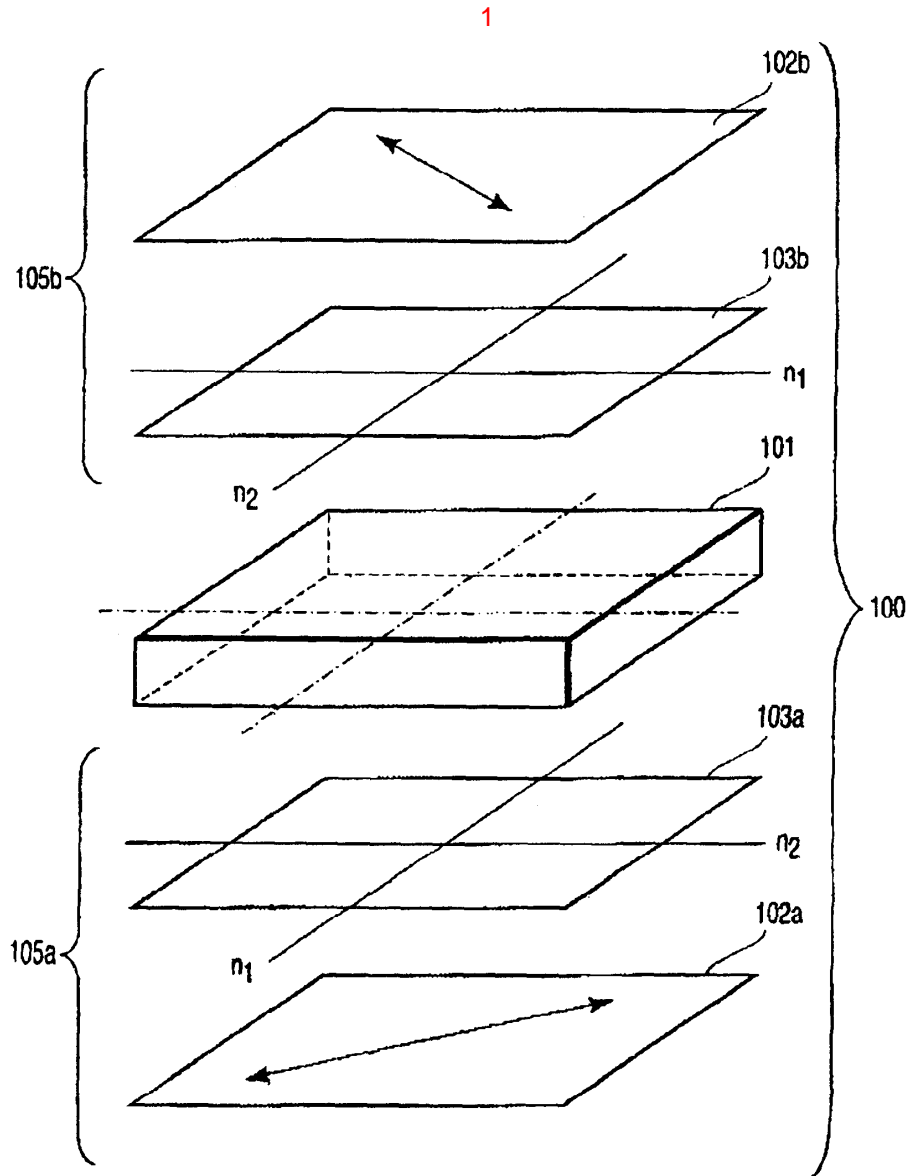
15. , 2 , 1 2 , 1 2
1 ,
1 1 1/4 ,

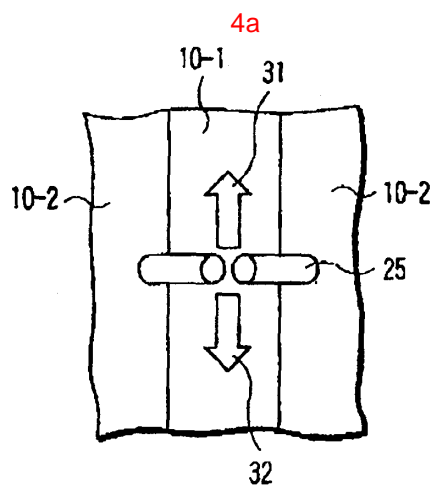
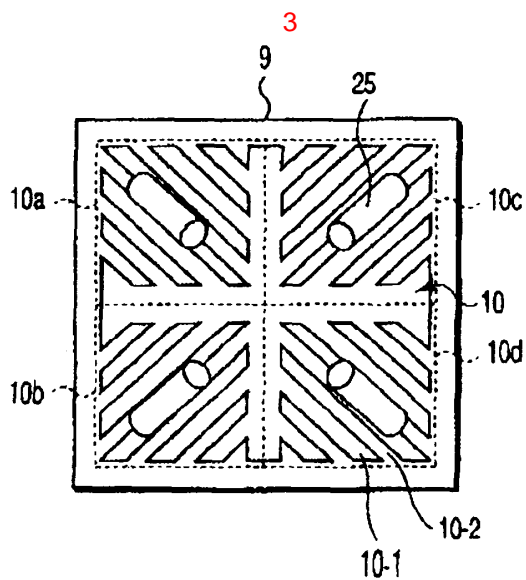
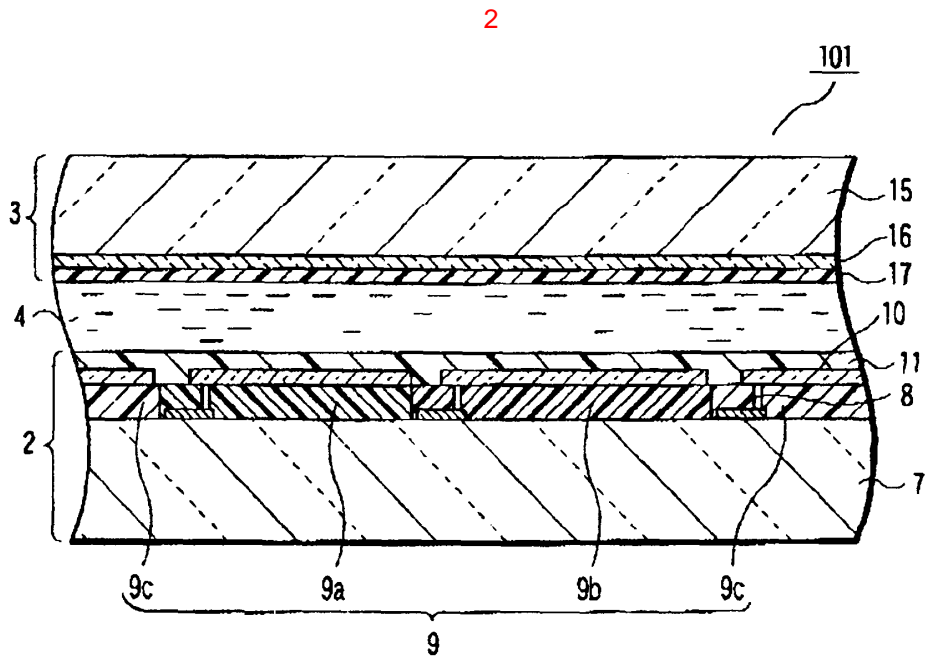
16. 15 , 2 , 1 2
2 2 1/4

17. 15 ,

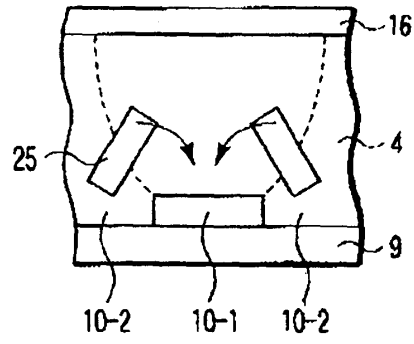
18. 15 , 1 ,
2

19. 15 , 1 ,

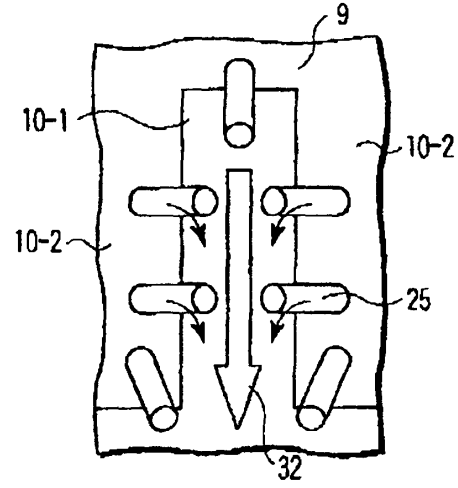




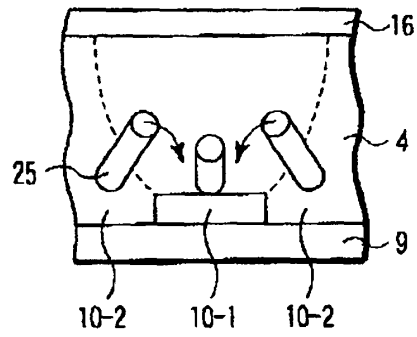
4b



4c



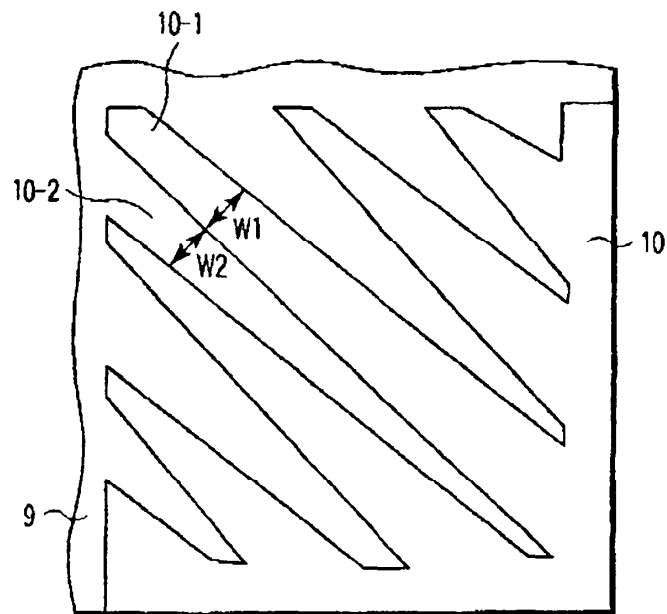
4d

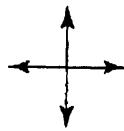
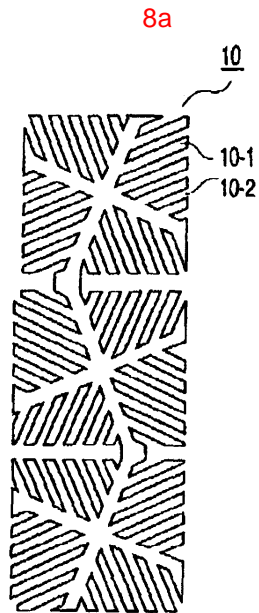
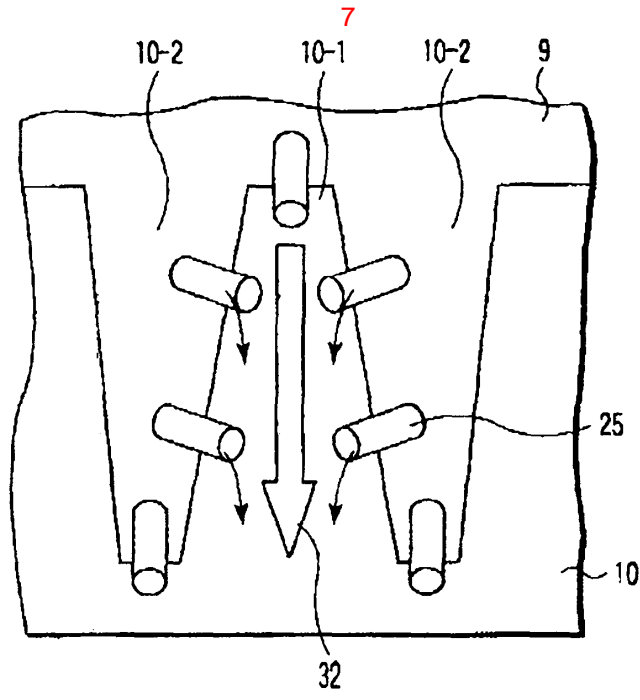


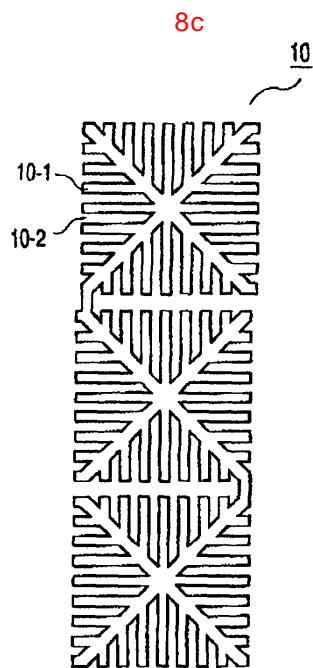
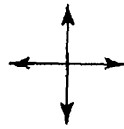
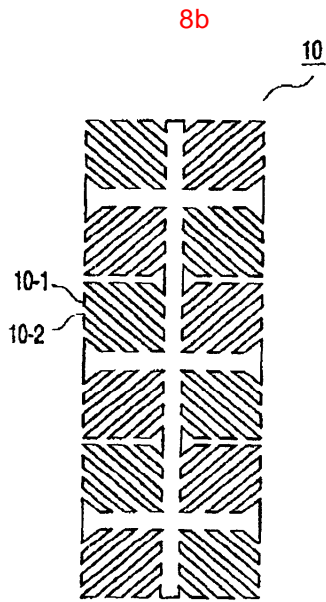
5

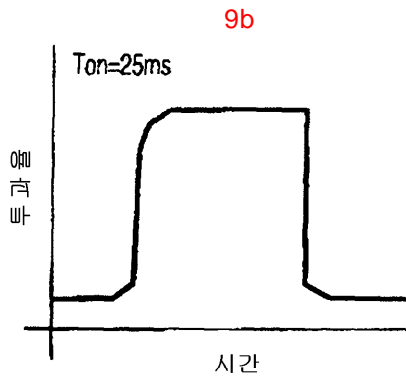
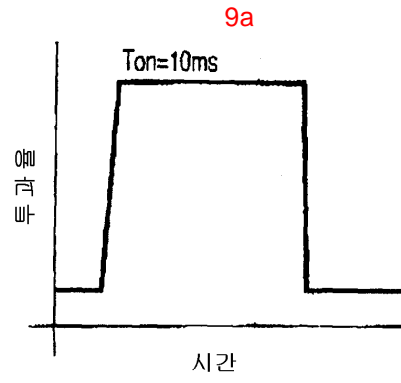


6









专利名称(译)	液晶显示器		
公开(公告)号	KR1020040016404A	公开(公告)日	2004-02-21
申请号	KR1020030056125	申请日	2003-08-13
[标]申请(专利权)人(译)	株式会社东芝		
申请(专利权)人(译)	Sikki东芝股份有限公司		
当前申请(专利权)人(译)	Sikki东芝股份有限公司		
[标]发明人	KAWATA YASUSHI 가와타야스시 MURAYAMA AKIO 무라야마아키오 SUNOHARA KAZUYUKI 스노하라가즈유키 HISATAKE YUUZO 히사타케유우조 YAMAGUCHI TAKESHI 야마구치다케시 NINOMIYA KISAO FUJIYAMA NATSUKO 후지야마나츠코		
发明人	가와타야스시 무라야마아키오 스노하라가즈유키 히사타케유우조 야마구치다케시 니노미야기사오 후지야마나츠코		
IPC分类号	G02F1/139 G02F1/1333 G02F1/1343		
CPC分类号	G02F1/133707 G02F2001/133541 G02F1/1393		
代理人(译)	KIM , YOON BAE		
优先权	2002236497 2002-08-14 JP		
外部链接	Espacenet		

摘要(译)

本发明提供一种包括多个梳形导电层的物体，其包括面向液晶显示单元的圆偏振光装置，该液晶显示单元面向具有液晶显示单元的液晶显示单元，并且插入1/4波片在液晶单元和圆偏振光装置之间，液晶显示单元中的每个像素电极电连接，而梳齿的纵向方向不同。

