

(19)
(12)(KR)
(A)(51) 。 Int. Cl. ⁷
G02F 1/1339(11)
(43)2002 - 0008062
2002 01 29(21) 10 - 2001 - 0043143
(22) 2001 07 18(30) JP - P - 2000 - 0021 2000 07 19 (JP)
9719(71) 가 가
가
5 7 1

(72) 5 - 7 - 1 가 가

(74)

:

(54)

- (in - plane switching type)

(8) , (5) (4) 가 (2) ,
 (12) (13) (9), (8) (9)
 (20) , (26) (27a/27b) (F) (G)
 , (27a/27b) (24)
 , (20)

- 1 -
- 2 1 A - A'
- 3 -
- 4 -
- 5 3 4 B - B'
- 6 -
- 7 6 E - E' -
- 8a 8e -
- 9
- 10
- 11
- 12

(indium tin oxide)

가

(black light)

(capacitive pixel)

. , (picture) ,
 . , (image)
 " " " "
 , 가
 , (red) , (green)
 , (blue) 3
 가 1 가
 " " 2 1
 " 2
 " -
 , , / 가
 (picture) 가 (image) 가
 (gap) , 가
 , 가
 (column) , (photo - sensitive) (micor - pearl)
 earl) 가 (p
 가
 , 가
 가
 ,

1 2 -

(100) (3) (4) (100)
 (10) (5), (7), (6) (2) (4)
 (8) (2) (6) ,
 (2) (6) (1) (10)
 (1) , (7) (6)
 (7) (5) (6)
 (6) (2) (2) (4)
 가 (11) (22) (18) (100)
 (5), (7), (6) 가 1

(200) (12) (13) (200)
 (H) (12) (13) (12)
 (13) (15) , (11) (15) (200)
 (16) (17) (16)
 (11) (20) (11)
 (18) (2) 가 (20)
 (19)

- 3
 (micro - rod ; 23) (micro - pearl ; 25) (2
 3) (24) (24)
 - (25)
 - (25)
 (11) , - (25)
 (11) (23) (24)
 (23)
 0) , - (25) (23) (23) (2
 (24) (20) 가

4 - 가
 (23) (spacer column ; 26) (23)
 (24) 3 (2)
 6) (26) (12) (5)
 (26) (15)
 (26) (15) (26) (11)
 (26)

가

가

(5), (C) 가 (D) 가 (C) (2) (4) 가

가 (C) 가

1

가

1

2

(a) ,

(24) (b) ,

(c) ,

(d)

.

1

6 7 , - 7 (20) (8/9)
 (20) . 7 (20) (8)
 , (13) 7 (20) (9) " " "
 (8) (9) " "
 " .

(8) (100) () (4)
 (100) (10) . (5), () , ()
) (2) (4) (22) . ()
 6) (2) (6) .
 () (10) . ,
 (7) (5) , (2) (2)
 . , (10), (2) ,
 , (2)

(2) (4) 가 . (11) (22)
 , (18) (100) .

, (9) (200) , (12) (13) (200)
 . (H) (2) (4) ,
 (13) (2) (4) . (2), (4)
 (13) . (13) , , (13)
 3 (dot) .

" " " " " "

F" " G"

(11) (12) (13) (15) , (11) (15) .
 (2) (200) (16) , (17) (16) (2)
 . (12) (G) , (13a) . (13a)

2) (13) (30) (30) (G) (13a) (1
(F) (G)

0

(26) (27a/27b) (26/27a/27b) (24) (26) (F), 6
(F) (G) (26) (15)
(5) (12) (5) (12)
(7). , (26)

(27a/27b) (G) (24)
(27a) (27b) 가 (27b)
(27a) (24) (27a)
(27b) (27a/27b) (end
portion) (port ;31) (31) L (31)
(20) (31) (31) , (31)
(31) (8)가 (9) (27a/27b)
(26) (24)

(9) (11) (8)
(20) (31) (11)
(20) (31) (32)
(27a/27b/32)

(20) (32) (24) 가 (3
1) 가

1 - 8a 8e

(8, 9) (8) (9)
(9) (9) 가 (200) (deposit)
(200) (H) (image) ()

(post)
(12) (12) (30)
(F) (G) (H) (F) (1
2)

, 3가 가 (12) (13) (13a)
 , (H) (13),
 , (13a) 8a (G) (12)
 , (12), (13) (13a) 8b (15)
 , (15) (28)
 가 가
 가
 (28)
 (28) (28a, 28b, 28c) 8c
 (28) (28a/28b) (27a)
 (27b) (F) (loop) (F) (G)
 28c) (26) (F)
 (27b) (27a) (26) (F) (26),
 (G) (loop) (31) (27a/27b) 가 (26) (26) (27a/
 00) (27a/27b) (12) / (13/13a) (15) (26) (30) (27a/27b)
 27b) (30) (28) 가 가 (27a/27b)
 (27a/27b)
 , 가 (20)
 , (11) (G)
 (G) (24) (27b) 가 (27a/27b)
 (24) (27a/27b)
 가
 , (8) (9) (8) 8e
 (9) (9) (8) (24) (27a/27b)
 8f (8)가 (9) (24)
 (8) (9) (24)
 , (8) (9) (24) (8)
 (9)

, (20) (31) , (31) (32)
 . (20) (8) (9)
 (24) (24) , (27a/2
 7b) (20) (27a/27b)
 (16) (17/18)
 , () (back light source ;) -
 , (27a/27b) (G) (24)
 . , (24) (20) 가
 (27a/27b) (20) (20)
 , (27a/27b) (20) , (20) (20)
 , (27a/27b) (24) 가 (G)
 (27a/27b) (26) 가 (28)
 (27a/27b) (27a/27b)
 2
 9 , - (27a' /27b')
 2 (27a' /27b') 1
 가 1
 (27a' /27b') , (27a/27b) (24)
 , E - E' 7 (27a/27b) (31)
 , (27a' /27b') (loop)
 (27a' /27b') (27a' /27b')
 2 - 1
 . 2 1
 가
 (28a/28b/28c) 2
 (8) (9) (27a' /27b') , (27a' /27b') (26)
 , (27a' /27b')

(27a'/27b') 가 . , 2
 1
 3
 10 . 3
 (27C) . 3 (27C) 1
 . , 1
 가 ..
 (27C) (27a/27b) (24) .
 (27C) (port) . , (27C)
 , (27C) 2 (loop) .
 (27C) . , (27C) (20)
 . (8) (9) (27a/27
 b) . 3
 1 2 가
 .
 4
 11 . 4
 (27D) . 4 1
 , 가 1 -
 .
 (27D) (27D) (24) , (24)
 (27D) . , (27D) (24) (27D)
 . (27D) (27D) 2 (loop) .
 , (27D) 2
 (27D) (27a/27b) (27D) 가 (27D)
 . , (8/9) 1 . 4
 . , (24) .
 2 1
 .
 5
 12 . 5
 (27E) . 5 (27E) 1
 . , 1
 가 .

(27E) (27E) (27E) (27a/27b) (24) 1
 (24) (27E) (27E) (24)
 (27E) (27E) 2

(27D) (27a/27b) (8/9)
 (27E) 1 5 2

가
 가
 가
 가

(30)
 (step)

가
 가

(8)

가

가

(looped spacer)

(micro - pearl)

2

가

가

(57)

1.

(F)

(F)

(G)

(5; 2; 4)

(8/9) ,

(8/9)

(G)

1

(24) ,

(20) ,

(8/9)

;

(F)

(G)

1

2

(27a/27b; 27a' /27b' ; 27C; 27D; 27E)

2.

1

,

(27a/27b; 27a' /27b' ; 27C; 27D; 27E)

3.

2

,

(27a/27b; 27a' /27b' ; 27C)

(24)

가

4.

3

,

(27a/27b; 27a' /27b' ; 27D; 27E)

5.

3 ,
(27C) .

6.
2 ,
(24) (27D; 27E) .

7.
6 ,
8.
1 ,
(31) .

9.
8 ,
(31) (24) (32) .

10.
9 ,
(27a/27b; 27D; 27E)
1 (31) 2 .

11.
10 ,
1 L .

12.
1 ,
(8/9)가
(26) .

13.

12

,

(F)

(G)

(G)

(30)

.

14.

13

,

(F)

(12) ,

(12)

(13)

,

(12)

(13)

(30)

.

15.

1

,

,

2

1

.

16.

15

,

1

2

.

17.

,

(F)

(F)

(G)

,

(G)

(27a/27b; 27a' /27b' ; 27C; 27D; 27E)

,

(a) ,

(24)

(b) ,

(8/9)

(20)

(c) ,

(d)

.

18.

17

,

(a) ,

(200)

(a - 1) ,

(200)

(12/13/13a/15)

(a - 2) ,

(28) (a - 3) ,

(28) (28a/28b/28c) (a - 4) ,

(F) (26) (27a/27b; 27a' /27b' ; 27C; 27D; 27E)
(a - 5) (28) (28a/28b/28c)

19.

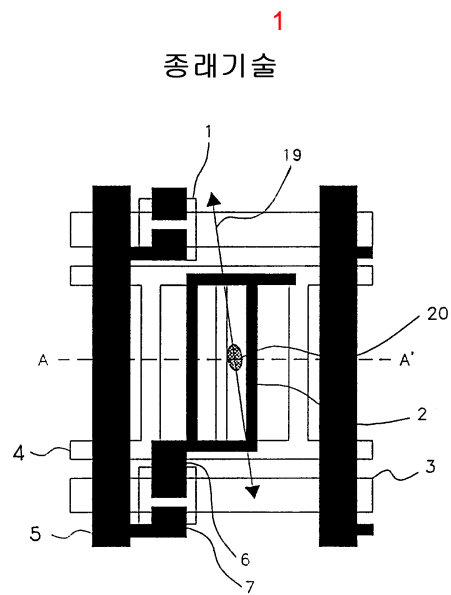
18 ,

(30) (a - 2) (12), (12) (13),

20.

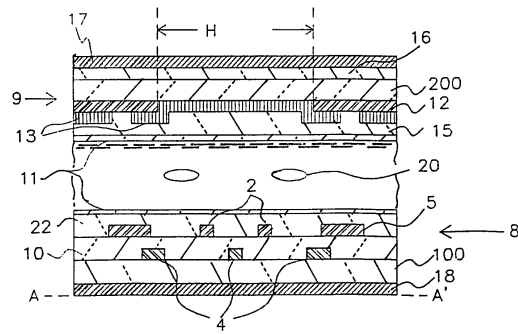
19 ,

3) (30) (12) (13a) (12) , (1



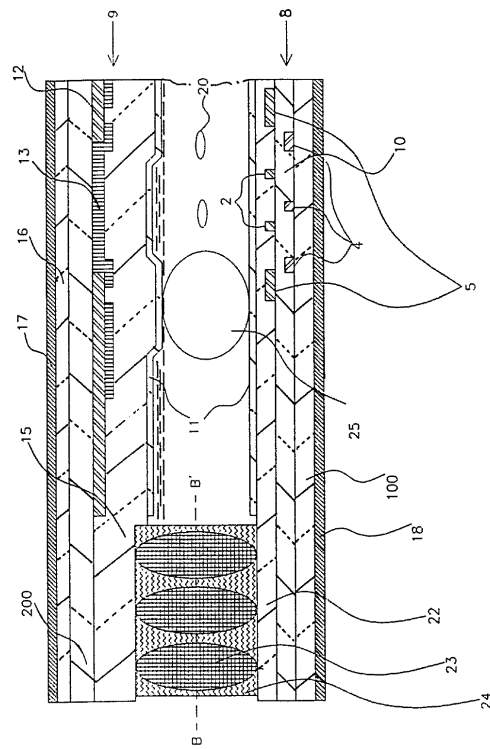
2

종래기술

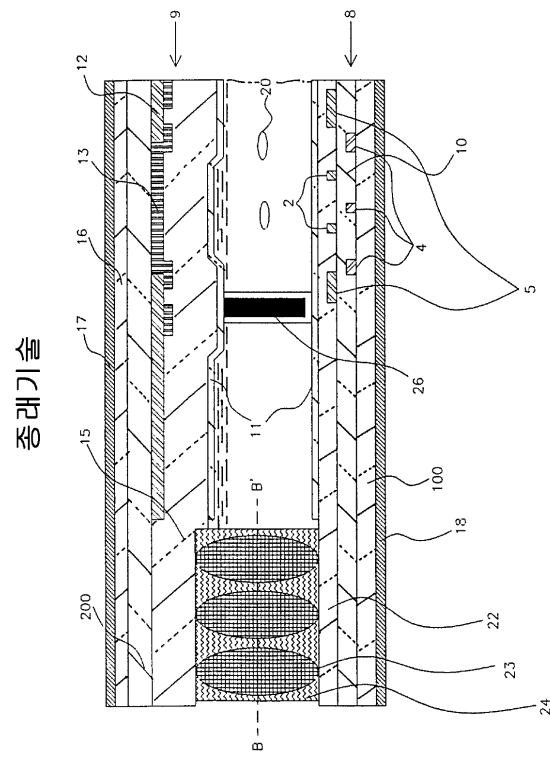


3

종래기술

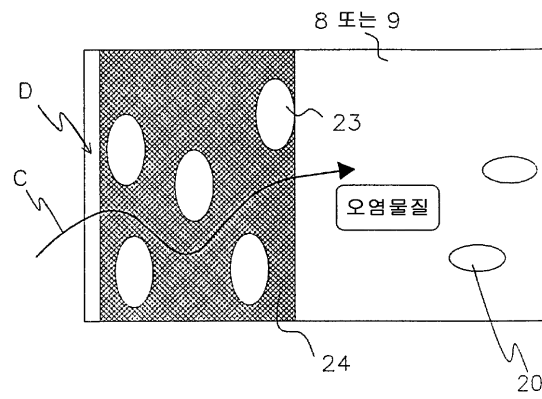


4

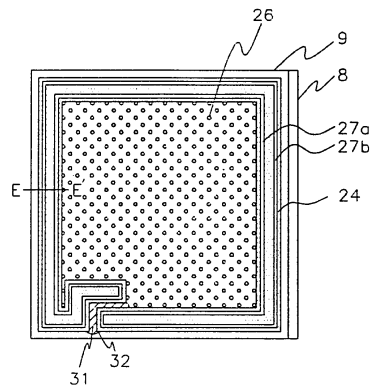


5

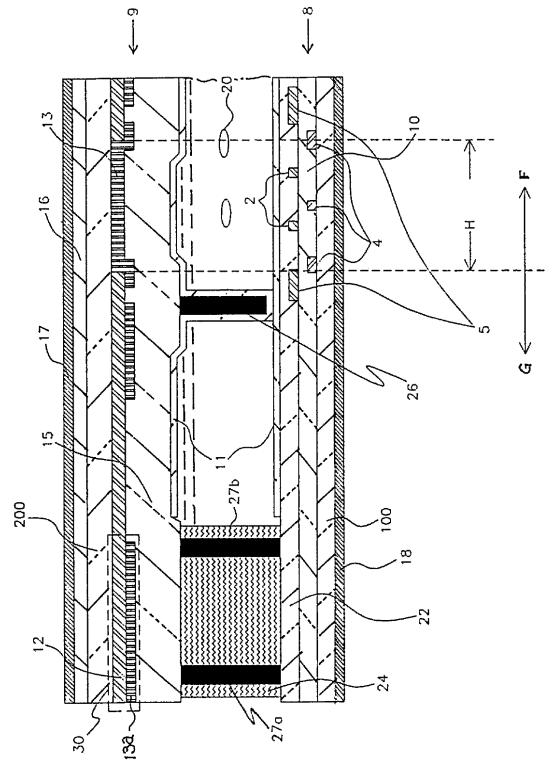
종래기술



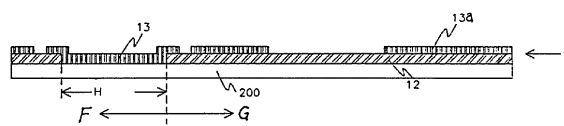
6



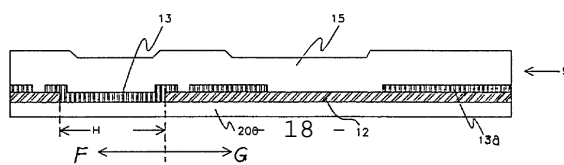
7



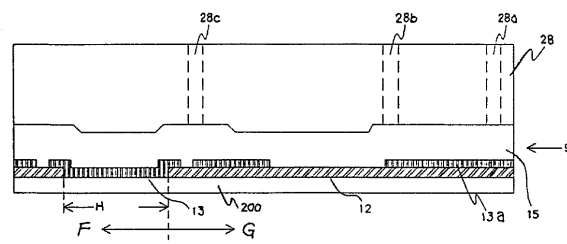
8a



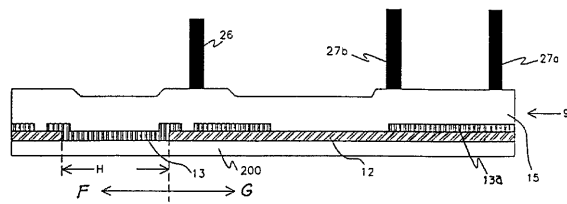
8b



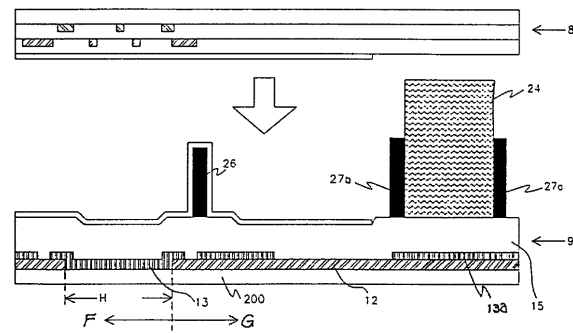
8c



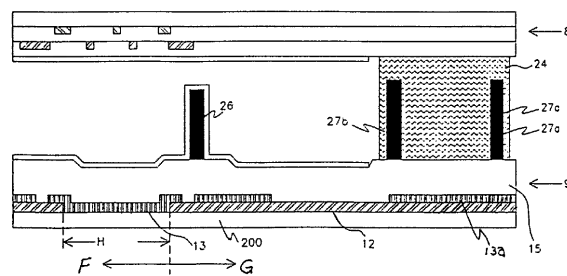
8d



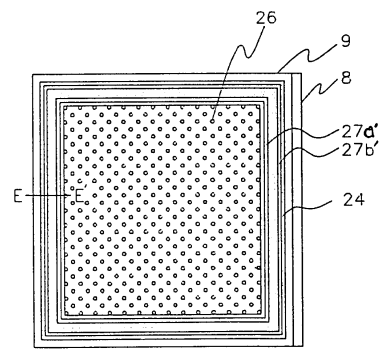
8e



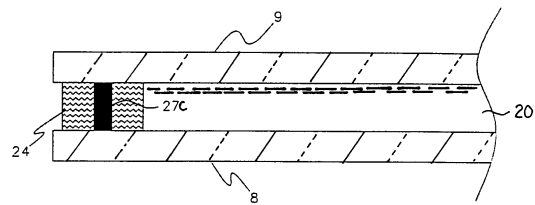
8f



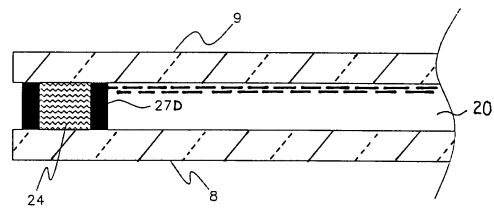
9



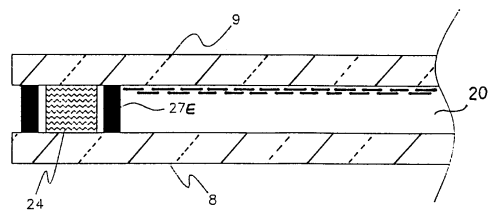
10



11



12



专利名称(译)	具有间隔物的液晶显示装置，其在清洁溶液中具有较小的损坏及其制造方法		
公开(公告)号	KR1020020008062A	公开(公告)日	2002-01-29
申请号	KR1020010043143	申请日	2001-07-18
[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	MATSUMOTO KIMIKAZU		
发明人	MATSUMOTO,KIMIKAZU		
IPC分类号	G02F1/1339 G02F1/1343 G09F9/30 G09F9/00		
CPC分类号	G02F1/13394 G02F1/134363 G02F1/1339		
优先权	2000219719 2000-07-19 JP		
其他公开文献	KR100427500B1		
外部链接	Espacenet		

摘要(译)

面内切换（面内切换型）液晶显示器包括阵列基板结构（8），用于薄膜晶体管矩阵和液晶（20）填充相对板结构（9）之间的间隙。可连接的像素电极（2），黑矩阵（12）和滤色器（13）以及阵列基板结构（8）和相对的板结构（9）通过相应的薄膜晶体管向上数据线（5）和公共电极（4）。并且间隔柱（26）和间隔壁（27a / 27b）分别形成在图像生成区域（F）和框架区域（G）中。它形成有抗腐蚀材料，其中腐蚀性比密封剂（24）减少，其中间隔壁（27a / 27b）粘附到基板结构上但是用在清洁溶液和液晶（20）中的是从而保护其免受酸性清洁溶液引起的污染。液晶显示器，薄膜晶体管，像素电极，黑矩阵，间隔物。

