

(19) (KR)  
 (12) (A)

(51) 。 Int. Cl. 7  
 G02F 1/1339 (11) 2002 - 0008062  
 (43) 2002 01 29

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(21) 10 - 2001 - 0043143  
 (22) 2001 07 18

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(30) JP - P - 2000 - 0021 2000 07 19 (JP)  
 9719

(71) 가 가  
 가 5 7 1

(72) 5 - 7 - 1 가 가

(74)

:

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(54)

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- (in - plane switching type)

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

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)

(blue)

3

가

(red)

(green)

가

1

가

2

가

(picture)

가

(image)

가

가

(micor - pearl)

(column)

(photo - sensitive)

가

(p

earl)

가

가

가

1 2

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

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

3  
 (micro - rod ; 23) (micro - pearl ; 25) (2)  
 3) (24) (24) (25),  
 - (25) (25)

- (25) (25) (25) (25)  
 (11) (25) (25) (25)  
 (11) (25) (25) (25)  
 0) (25) (24) (23) (23) (24)  
 (25) (25) (23) (23) (2)

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

가

가

( 5 ),

(C)

(2)

(C)

(4)

(D)

가

가

가

(C)

가

가

1

1

가

2

,

(a) ,  
 (24) (b) ,  
 (c) ,  
 (d)

1

6 7 , - (8/9)  
 (20) , (13) 7 (20) (9) (8)  
 " " " "  
 (100) (8) (100) (5), ( ) (4)  
 ) (2) (10) (2) (22) ( ) (4)  
 6) ( ) (10) , (6)  
 (7) (5) , (10), (2) , (2)  
 " " (2)

(2) (4) (11) (22)  
 , (18) (100)

, (9) (200) (12) (13) (200)  
 (13) (H) (2) (4) (4) (2), (4)  
 (13) (13) (dot) (13) (2), (4)  
 3 " " " " "  
 F" " G"

(12) (13) (15) (11) (15)  
 (11) (2) (200) (16) (20) (2)  
 . (12) (G) , (17) (16) . (13a)  
 . . . . . (13a)

(13) (G) (13a) (1)  
 2) (30) . (30) (F) (G)  
 . 0 .

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

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

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

(H) (image) (post), (F) (G) (H) (F) (1)



, (20) (31) , (31) (32)  
 . (20) (8) (9) ,  
 . (24) (24) , (27a/2  
 7b) (20) (27a/27b)

.  
 . (16) (17/18)  
 , ( ) (back light source ; )

.  
 . , (24) (20) (27a/27b) 가 (27a/27b) (G) (24)  
 . (27a/27b) (20) , (20)

.  
 . , (27a/27b) (24) 가 (24) (G)  
 . ,

. (27a/27b) (26) 가 (28) (27a/27b)  
 , (27a/27b) ,  
 2

9 , (27a'/27b') (27a'/27b') 1  
 2 1

1  
 가 ..  
 (27a'/27b') , (27a/27b) (24) (31)  
 , E - E' 7 (loop) (27a/27b)  
 (27a'/27b') (27a'/27b')

2 1  
 2 1  
 가

(28a/28b/28c) 2 (27a'/27b') , (27a'/27b') (26)  
 (8) (9) , (27a'/27b')

(27a' / 27b')

가

1

, 2

3

10

(27C)

3

3

(27C)

1

(27C)

(27C)

(port)

(27a/27b)

(24)

(27C)

,

(27C)

2

1

(loop)

b)

(27C)

(8)

(27C)

(20)

(27a/27

1

3

2

가

4

11

(27D)

4

4

1

1

가

(27D)

(27D)

(27D)

(27D)

2

(27D)

(24)

(24)

(27D)

(27D)

(27a/27b)

(27D) 가

(27D)

(8/9)

1

(24)

(24)

2

1

4

5

12

(27E)

5

5

(27E)

1

1

가

$$\begin{array}{ccccccc}
 & (27E) & & & (27E) & & \\
 , & (27E) & & , & (27a/27b) & & (24) & 1 \\
 (24) & & , & (27E) & & & (24) \\
 & (27E) & & , & (27E) & & , \\
 (27E) & & , & (27E) & & 2
 \end{array}$$

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

가 . ,

가

# 가

가

가

(30) ,

(step) .

가 ,

가

(8)

가

가

(looped spacer)

(micro - pearl)

2

가

(57)

1.

(F) (G) (F) (G) , (5; 2; 4)  
 (8/9) , (24) , (8/9) ,  
 1 ; (20) , (8/9)

(G)

(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

,

(G)

(30)

(F)

(G)

14.

13

,

(12)

(30)

(F)

(13)

(12)

(12)

15.

1

,

,

2

1

16.

15

,

1

2

17.

,

(G),

(F)

(F)

(G)

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

(8/9)

(20)

(24)

(b),

(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)  
(a - 5)

(26)

(27a/27b; 27a'/27b'; 27C; 27D; 27E)  
(28)

(28a/28b/28c)

19.

18

,

(30)

(12),

(a - 2)

(12)

(13),

20.

19

,

(30)

(12)

(13a)

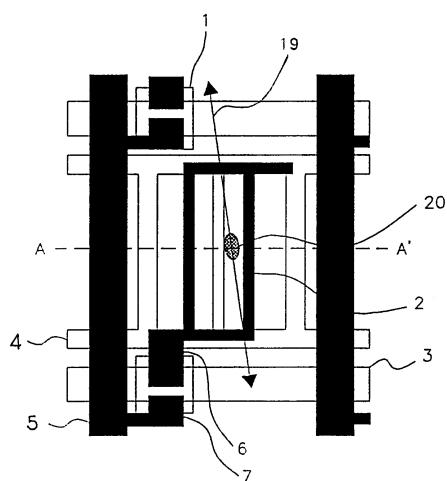
(12) ,

(1

3)

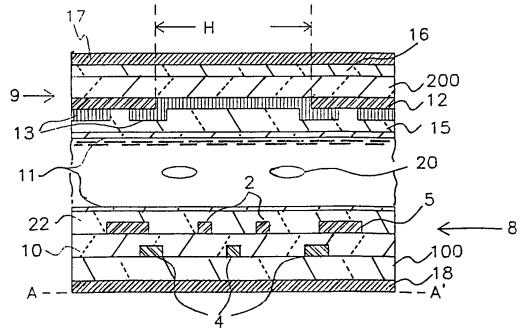
1

## 종래기술

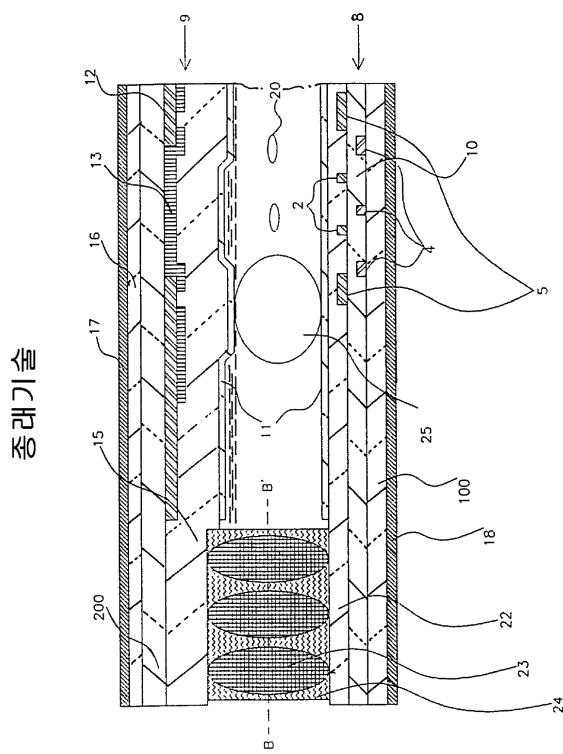


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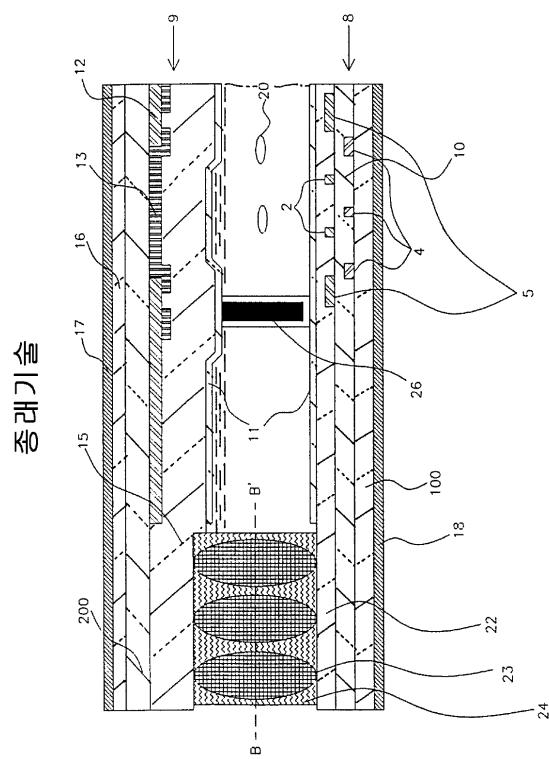
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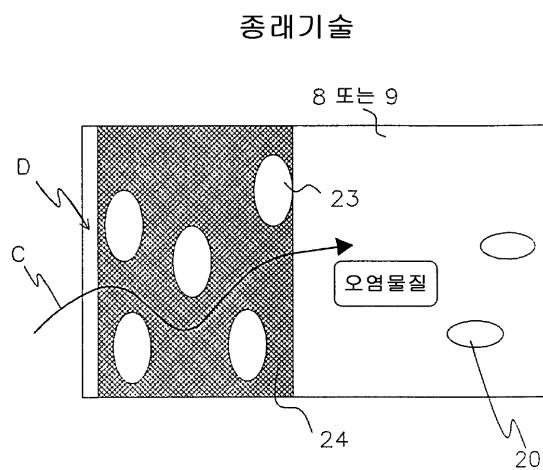


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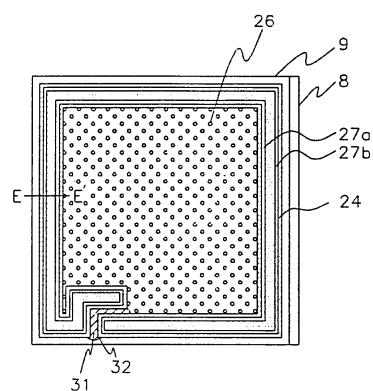
종래기술

5

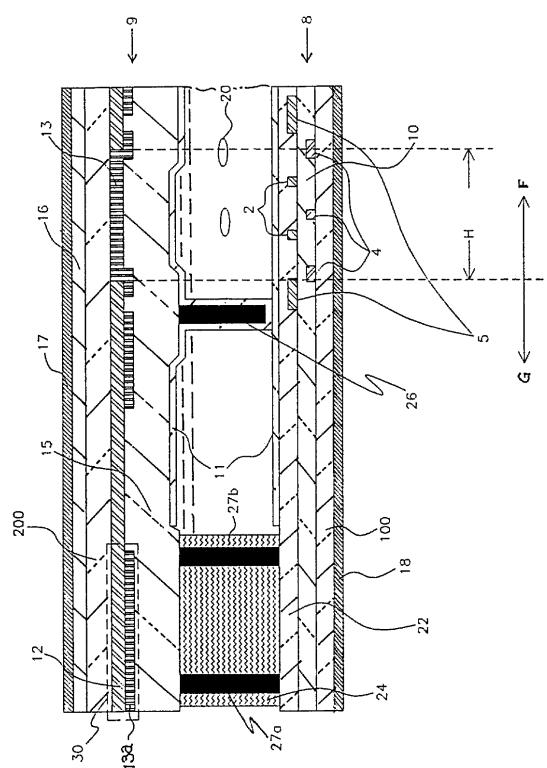


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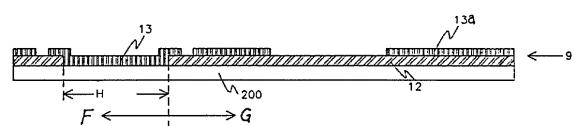
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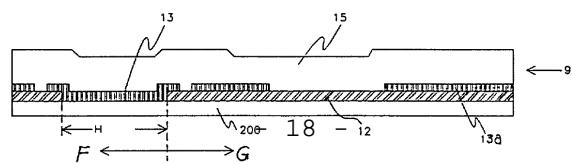
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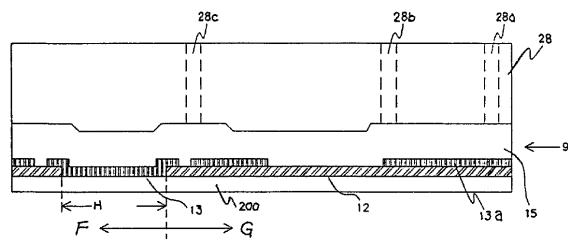
8a



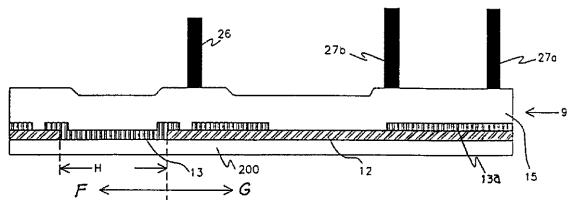
8b



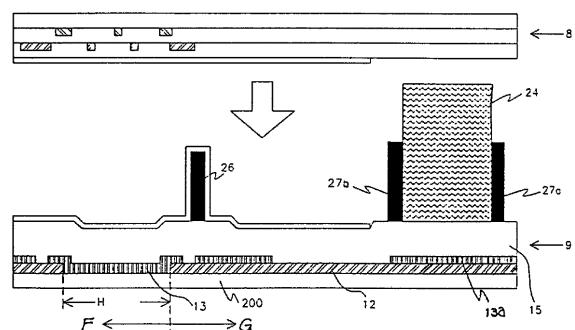
8c



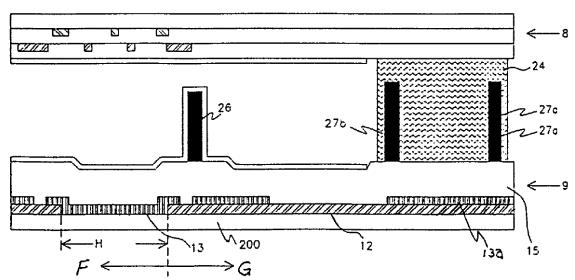
8d



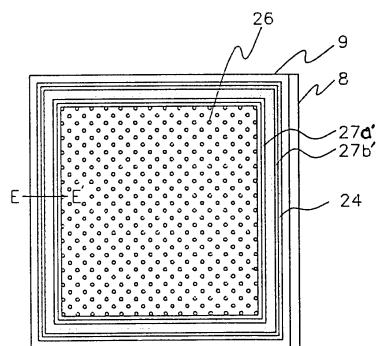
8e



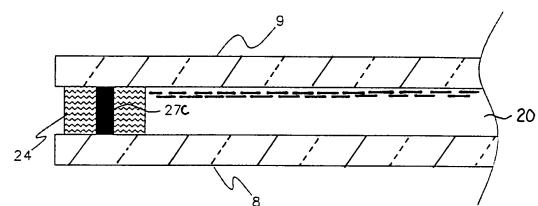
8f



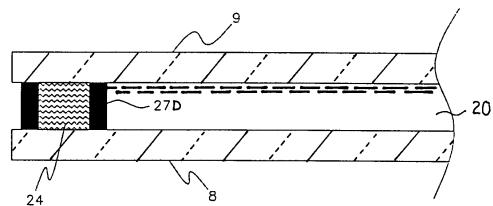
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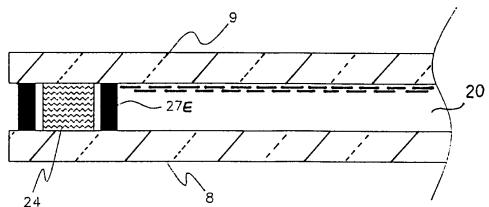
10



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	<a href="#">KR1020020008062A</a>	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	<a href="#">Espacenet</a>		

### 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。

