

(19)
(12)

(KR)
(A)

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10-2004-0011670
2004 02 11

(21)

10-2002-0044692

(22)

2002 07 29

(71)

.

20

(72)

2 1027-3

998-905

(74)

:

(54)

(patterned spacer)

(active area)

1,

2 , 1 2 , 1 , 2

1 2

.

5

, , EPD ,

1 .

2a

2b 2a - '

3a
3b 3a - '
4a
4b 4a - '
5
6a 5 1
6b 6a - '
7a 5 2
7b 7a - '
8 5 - '
9a 9d
10a 10c

*
1 : 1 2a :
3 : 3a :
3b : 4 :
5 : 6 :
7 : 8, 15 :
9 : 9a : EPD
10 : 11 : 2
12 : 13 :
14 : 16a, 16b :
17 : 20 :

(patterned spacer) (activce area) , (cell gap)

가 LCD (Liquid Crystal Display Device), PDP(Plasma Display Panel), ELD(Electro Luminescent Display), VFD(Vacuum Fluorescent Display) 가 가

CRT(Cathode Ray Tube) LCD가 가

1, 2 , 1, 2

1 (TFT) ,

가 2 (R, G, B) , 가 1 (,) 1, 2 (spacer) (sealant)

가

가 (ball spacer) 가 (patterned spacer or column spacer)

1

substrate) 가 (mother (panel))가 (scribing) (breaking)) 가

1 (, A/A) (10) (20) .

가 1 .

2a 1 1 , 2b 2a - ' .

가 1 (1) , 2a (2) , (3) , (2) (3) (4) , (2) (3) (4) (TFT)가 . (3)

(TFT) , 2a 2b (2) 1 (1) (2a) (5) (6) (3b) (3) (9) (7) (8) (3b) (4) , (9) (7) .

(3b) (5) (7)) (9) 가 (7) EPD(End Point Detection) (9a) .

(3b) (9) b) (9) EPD (9a) .

가 2 .

3a 1 2 , 3b 3a - ' .

2 (11) R, G, B (13) (12) (13) (14) (14) (16)가 , (16) (16) (15) .

(16) , 1 2 , 1 가 (10) (20) .

4a 4a - ' .

EPD (9a) (20) (20) EPD (9a) .

2.5 μ m , EPD (9a) EPD (9a) EPD (a) (20)가 (30)

가
가 EPD

EPD , 가 EPD , 가 .

가 , EPD

[illegible]

$$\begin{aligned} & \left(\frac{\partial}{\partial t} + \mathbf{v} \cdot \nabla \right) \rho = -\rho \nabla \cdot \mathbf{v} \\ & \left(\frac{\partial}{\partial t} + \mathbf{v} \cdot \nabla \right) \mathbf{v} = -\nabla p / \rho + \nu \nabla^2 \mathbf{v} \end{aligned} \quad (10)$$

가 1 .

6a 5 1 , 6b 6a - ' .

, 가 1 (1) , 6a ,

(2) , (2)

(3) , (2) (3)

(4) , (2) (3)

(4) (TFT)가 .

1 (1) (TFT) , 6a 6b (2) (5)
(6) (2a) , (2a) (5) (6) (3b) . (3b)
(9) (3a) (7) , (9) (8) .
(4) , (7) (9) (8) .
(3b) (9) (7) (9) (7) (9a) .

, (3b) (9) , (3)
 b) (9) EPD (9a) ,
 , 가 2 .
 7a 5 2 , 7b 7a - ' .
 , 2 (11) (12) ,
 R, G, B (13) , (13)
 (14) (14)
 (16a, 16b)가 , (16) (15)
 , (16a) , (16b)
) EPD (9a) (20) ,
 , (15) (16a)
 (16a) (12)
 .
 , 1 2 , 5 , 가 (10) 2 (10)
) (10) (20) , 1 2
 .
 8 5 - ' .
 , EPD (9a) EPD (9a) (20) (20)
 (16b) (20)
 .
 , EPD (9a) , EPD (a) , 2 μ m
 EPD (9a) EPD (9a) (20)가 (1
 6b) EPD (9a)
 .
 9a 9d , 10a 10c
 .
 , 10a ,
 1 (1) , ()
 (2a) , (2a) (2a) (5) (6) (5)
 . (2a) (5)
 9b , (6) (3) (3a)
 (3b) , (7)
 9c , (3b) (9, 9a)
 (3b) (3b) (9) ,
 Detection) (9a) , EPD (9a) () EPD(End Point
 (7) (5) (7) (5)
 , (9) (3b) (4) .
 9d , (8) 5
 , (10) (20) .

10a () , 2 (11) ,
(12) ,
R, G, B (13) ,
(14) .
(13)
, ,
가 (12) .
10b , (14) (16a, 16b) ,
(16a) , EPD (9a)
(16b) .
10c , (16a, 16b) (15)
.
1 2
(10) (20) 2 (16a, 16b) 1

가 .

EPD 가

(57)

1.

1, 2 ;

$$1 \quad 2 \quad ;$$

1 2 ;

1 2 ;

1	2
---	---

2.

1 ,

1 2 가

3.

1

가 1 EPD

4.

1 2 ;

1 2 ;

1 2 ;

1 2 ;

1 2 .

5.

4 ,

1 2

.

6.

4 ,

1 EPD

.

7.

4 ,

EPD .

8.

1 2 ;

1 , / ;

EPD ;

;

2 ;

2 ;

1 2

;

1 2 ;

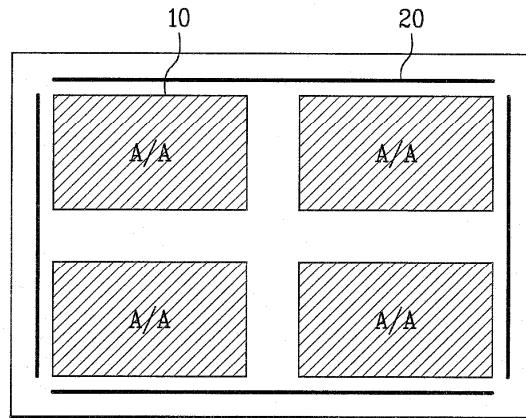
1 2 .

9.

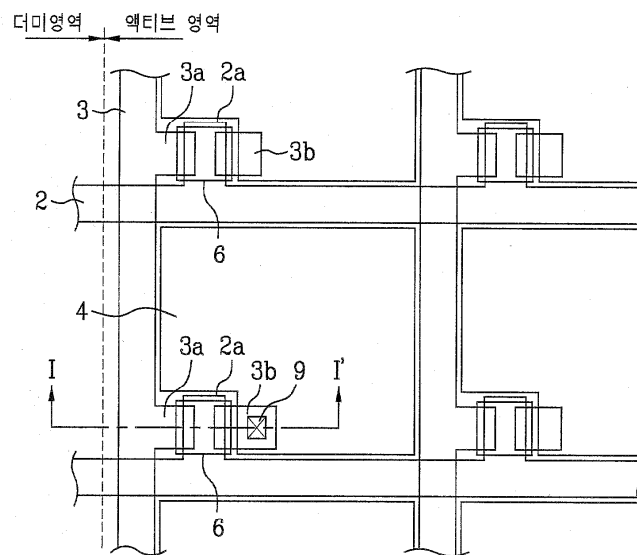
8 ,

EPD .

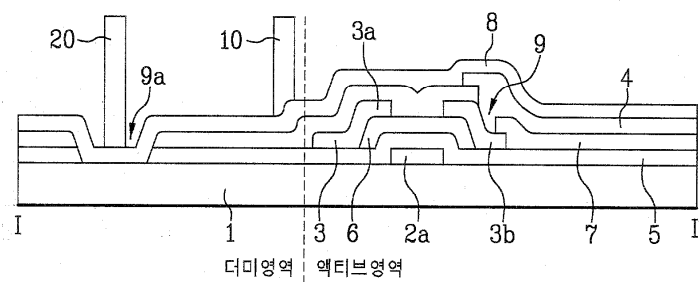
1



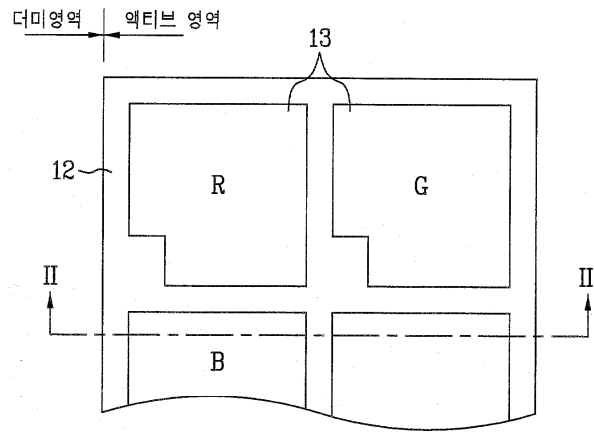
2a



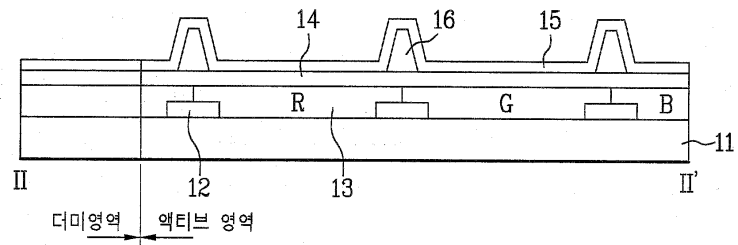
2b



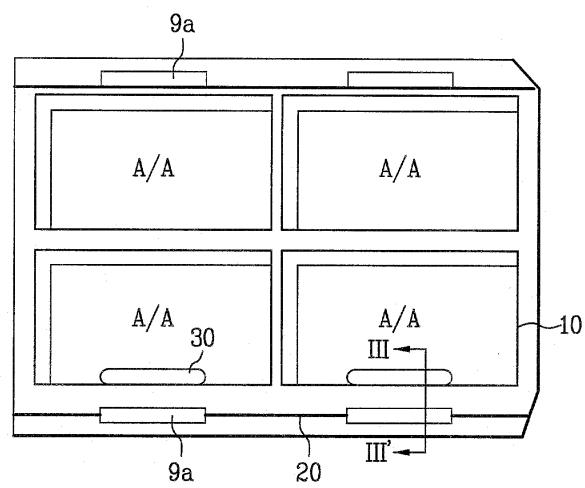
3a



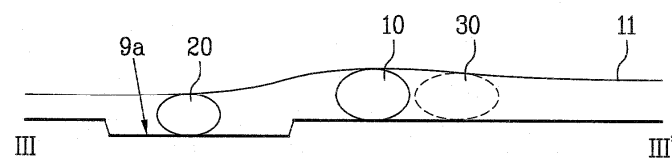
3b



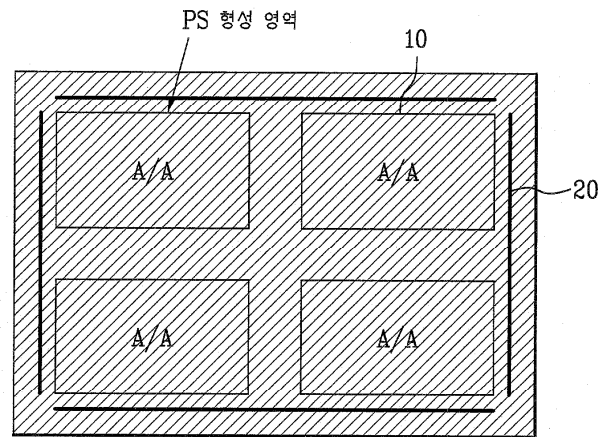
4a



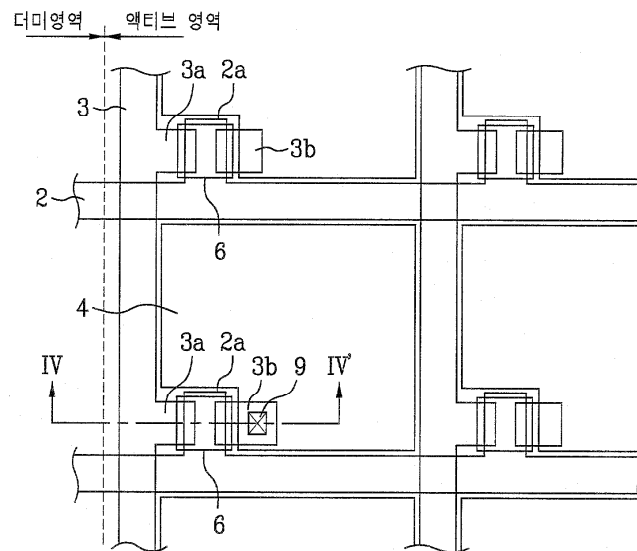
4b



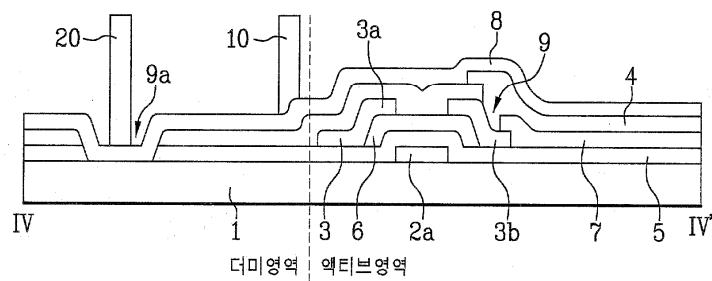
5



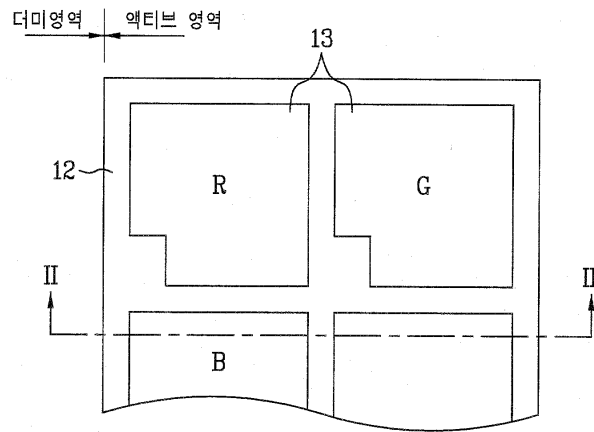
6a



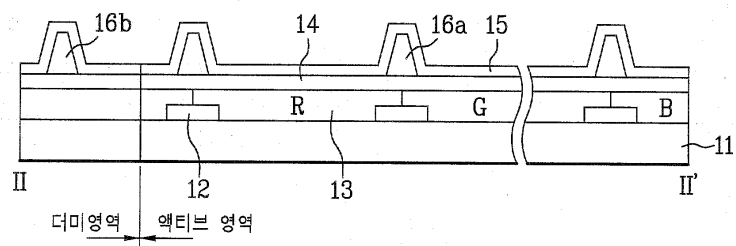
6b



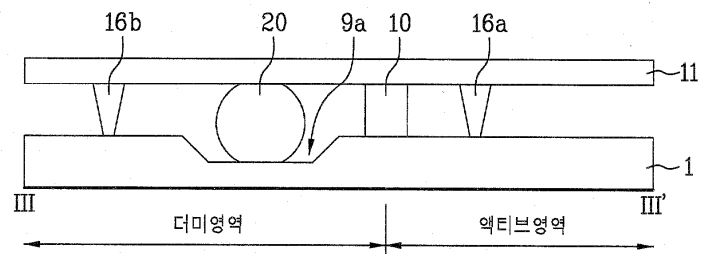
7a



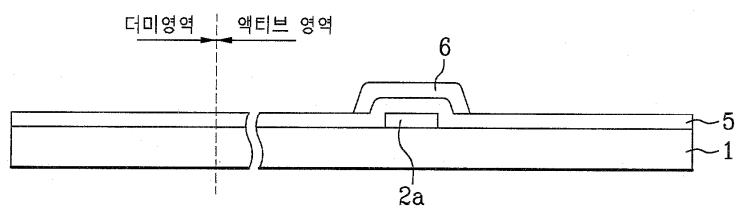
7b

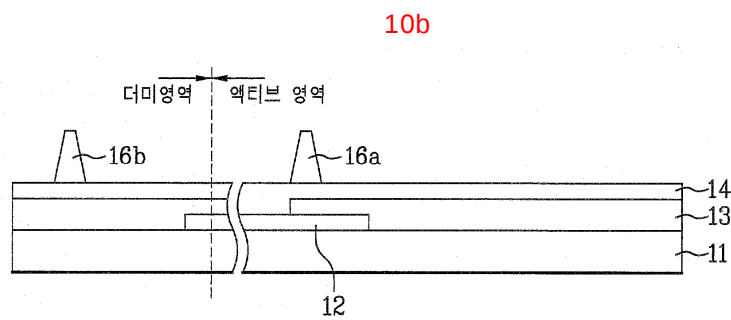
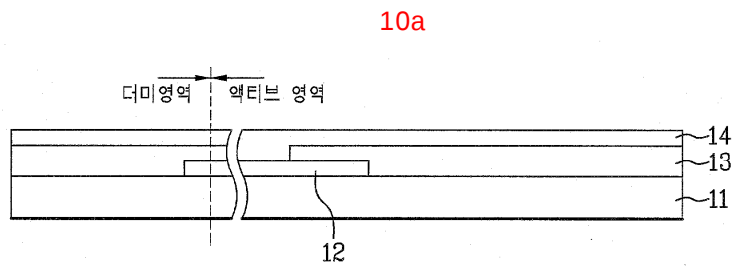
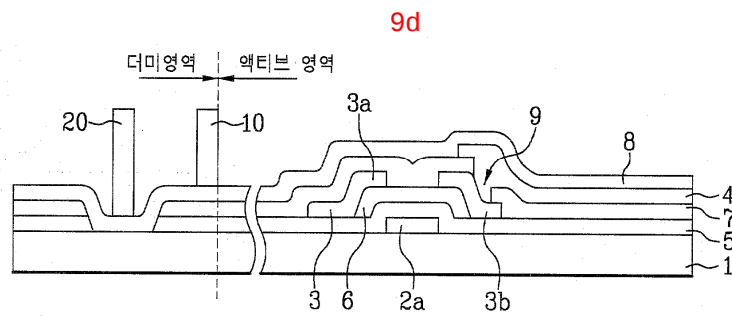
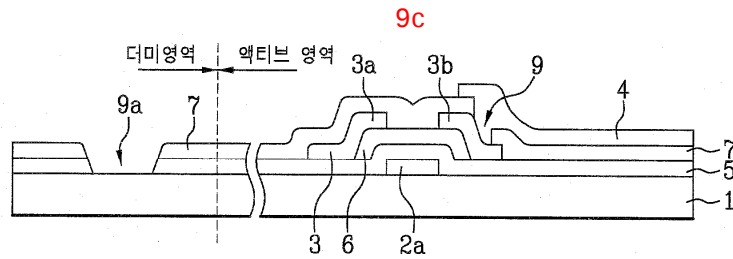
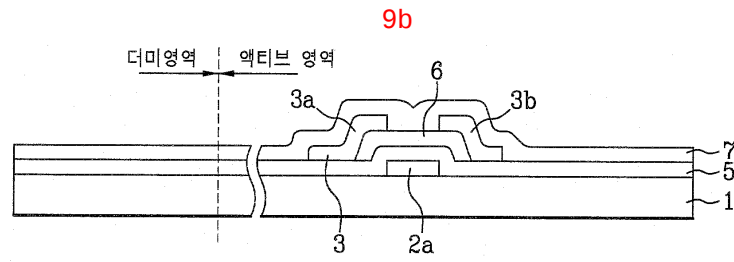


8

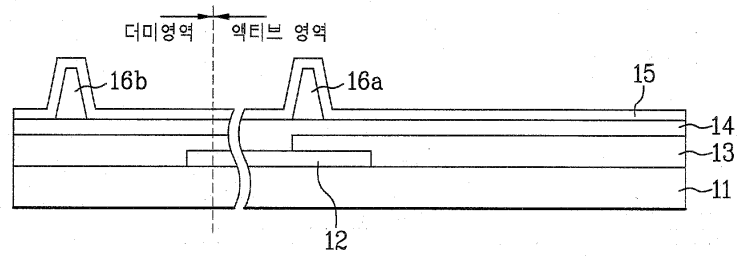


9a





10c



专利名称(译)	液晶显示元件及其制造方法		
公开(公告)号	KR1020040011670A	公开(公告)日	2004-02-11
申请号	KR1020020044692	申请日	2002-07-29
[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		
[标]发明人	BAEK HEUMIL 백흠일 NAM MISOOK 남미숙		
发明人	백흠일 남미숙		
IPC分类号	G02F1/1339		
CPC分类号	G02F1/13394 G02F1/1339		
代理人(译)	金勇 新昌		
其他公开文献	KR100698042B1		
外部链接	Espacenet		

摘要(译)

用途：提供液晶显示器和制造液晶显示器的方法，以通过形成在虚设区域的图案化间隔物来保持单元间隙。

