

(19)
(12)

(KR)
(A)

(51) 。 Int. Cl.⁷
G02F 1/1337

(11)
(43)

10-2005-0000586
2005 01 06

(21)

10-2003-0041040

(22)

2003 06 24

(71)

416

(72)

602

7 673-73

1052-2

APT242 1104

2

102 1004

(74)

:

(54)

가 . ,

. . ,

.

1 1 .
 2 1 1 .
 3 2 1 가 .
 4 1 2 .
 5 2 .
 6 5 .
 7 6 A .
 8 3 .
 9 6 B .
 10 8 .
 11 4 .
 12 11 .
 13 11 C .
 14 5 .
 15 14 D .
 16 14 .

(Liquid Crystal Display device, LCD) (Liquid Crystal, LC)
 (Liquid Crystal Display panel, LCD panel)
 (back - light assembly) 1
 (first substrate), 2 (second substrate) 1 2
 1 1 1 , 2 1 가 , 2 2
 가 가 ,
 1 2 (cell gap)

. 1 2 (column spacer)가 .
 1 2 .
 , 1 2 1 2 ,
 , , 가 1 2
 . 1 , 2
 , ,
 .
 , ,
 .
 1 1 , 1 1 1 1 , 2
 1 2 , 2 1 2 2 2 2 , 1 2
 , 1 가 , 2 1 2 가 1 가
 1 2 2 가 2 가 2 가
 , ,
 , .
 , .
 _____ 1
 1 1 2 1 가 . 2 1 1 4 1
 2 .
 1 , (600) 1 (100), 2 (200), (300) (400) .
 2 , 1 (100) 1 (110), 1 (first pixel region ;PR1) 1 (12
 0) R1) 1 (110) (PR1) 1 (110) 가 , , 1 (P
 (110) 1024 x 768 x 3 1 (PR1) 1024 x 768 180 1 1 (PR
 1) 2 (195) 가 , 190 2 1 (PR
 , 1 (PR1)
 , (Indium Tin Oxide, ITO) (Indium Zinc Oxide)
 .
 (pixel voltage) 가 . 가
 가 .

2 3 , (130) (132) (132)
가 1 (134) 2 (136) .

1 (134) 1 (110) 1 , 1024 x 768 7
68 1 (134) 1 (134) 1 (134) 1024 x 3 (G)가 2
. 1 (134) , , , , ,
, 1 (134) -

2 (136) 1 (134) , 1 (110) 2 . 1024 x 7
68 1024 x 3 2 (136) 2 , 2 (136)
(G) (S) 1 (134) . 768 (S)가 1
. (D) (C) (S) (PR1)
1 (134) 2 (136) 1 (C), (S)
(132)가 (132) (G), (C), (G)
(D) (C) (S) (D) (138)
(C) (S) (D)가 , (D)

1 (120) 1 (PR1) . 1 (120) 1 (P
R1) 1 (110) . 1 (125) 1 (120)
, 1 (125) (pile) 2 O 45 °
. 2

1 4 , 2 (200) 1 (100) 2 (200) 2
(210), 2 (second pixel region ;PR2), (230) 2 (220)
2 (PR2) 2 (210) . 2 (PR2) 2 (210)
1 (PR1) . 2 (PR2) 1 (PR1)

3 4 , (230) 1 (PR1) (138) 2
(210) (230) (230)
(Indium Tin Oxide, ITO) (Indium Zinc Oxide)
2 (220) (230) . 2 (220) 2 (230)
. 2 (225) 2 (220) 2 (225) 1 (1
25) 1 2 (225) (pile) 4 O
135 ° . 2 (225)

, 1 (120) 1 (125) 2 (220) 2 (225) 90 °
. 1 (120) 2 (220) (127,227)
1 (120) 2 (220) 1 (125)

1 (100) , (300) 1 (100) 2 (200) . (300) 1
(PR1) 1 (302)가 , 2 (200) 2 (PR2)
2 (304)가 . (300) 1 (100) 2 (200)
, (300) 2 (220)

1, 2 4 , 1 (120) 1 (125) 2 (220)
2 (225) 1 (120) 2 (220) (127,227)
. (127,227) 1 (120) 2 (220) 1 (125)
2 (225)

1 (125) (127) 1 1
(300) . (127) L2 5μm , (127)

가 1 (PR1) , 1 (PR2)

, 2 (225) (227) 2 2
(300) L3 5 μ m 가
2 (PR2) , 2 (PR2)

1 (127) 1 (300) 가 (300)
1 (110) (PR1) 1 (PR1) 1 L1
(300) 1 (PR1) , L1 5 μ m 10 μ m
7) 1 (PR1) (12) (300)

, (300) 2 (227) 2 (PR2)
2 L4 (210) (300) 2 (P)
R2) L4 5 μ m 10 μ m (300) 2 (PR2)
, (300) (227) 2 (PR2)

1 , (400) 1 (100) 2 (200) 1 (100)

, , ,

2

5 2 6 5
7 6 A 1 ,

5 7 (300) 2 (200) (300) 2 (200) 2
(PR2) (300) 2 (225) 2 (210)
(300) 2 (225) , (300)

, 2 (220) 2 5 O 135° , 2
(300)가 가 (300) (227) (300) (210)
L3 , 2 (210) , (227) 가 2 L4
(227) L3 (300) 2 (PR2) 2
(PR2) L4가 (227) 가 2

(300)가 2 (210) 2 (PR2) , 2 (220)
2 (300) 2 (PR2) (227)

3

8 3 9 6 B 2

2 , 2

8 9 (310) 2 (PR2) , (310) (

310) 2 (PR2)

312), 3, (313) 4 (314) . , 1 (311), 2 (310) 1 (311), 2 (312) a 3 (313)
 (313) 4 (314) b . , 1 (311) 2 (312) a 3 (313)
 4 (314) 1 (311) 2 (312) 2 90° . 3 (313)
 4 (314) 2 . 9 , 2 O 2 (310) 2 (220)
 135° . (227) (225) (227) 2 (PR
 10) 2 (220) 2 (227) 2 (PR
 2)

10 8

10 , (320) 1 (321), 2 (322), 3 (323) 4 (324) 가 .
 , 1 (321) 1 (321) 2 (322) c , 3 (323) 3 (323) (323)
 323) 4 (324) 2 (324) c d , 1 (321) 2 (322) 2 (323)
 4 (324) 2 , 1 (321) 2 (322) 2

2 , 2 (220) 2 (320) (225) , (320)
 2 (PR2)

4

11 4 . 12 11 1 .
 13 11 C . 1 .
 , 1 .
 11 13 , (300) 1 (100) (300) 1 (100) 1
 (PR1) (300) 1 (120) 1 (110) (300)
 (300) 1 (120) , (300)

1 (120) 1 11 O 45° ,
 (300)가 (127) (300) 1 (110) L2 (300) 1 1
 (300) (PR1) 1 (127) 가 1 (110) L1 (127) L2 (300) 1
 (127) L2 (300) 1 (110) L1 (127) L2 L1
 (127) 가 .
 (300)가 1 (110) 1 (PR1) , 1 (120)
 1 (PR1) (300) (127) (300)
 1 (PR1) (127)

5

14 5 . 15 14 D . 4
 4 . , 4
 .
 14 15 , (330) 1 (PR1) (330)
 (330) 1 (PR1) . (330)
 .
 (330) 1 (331), 2
 (332), 3 (333) 4 (334) . , 1 (331), 2 (332) a 3 (333)
 (333) 4 (334) b . , 1 (331) 2 (332) a 3 (333)

) 4 (334) b , 1 (331) 4 (334) 90° .
 1 (331) 2 (332) 2 , 3 (333)
 4 (334) 2 . 9 , 2 O 2 (220)
 135° . (330) 2 (330)
 2 (320) 2 (225) (227) 2 (PR2)

16 14 .

16 , (340) 가 .
 (340) 1 (341), 2 (342), 3 (343) 4 (344) .
 , 1 (341) 1 (341) 2 (342) c , 3 (343) 3 ()
 343) 4 (344) c d , (340) 3 (343)
 4 (344) 2 , 1 (341) 2 (342) 2

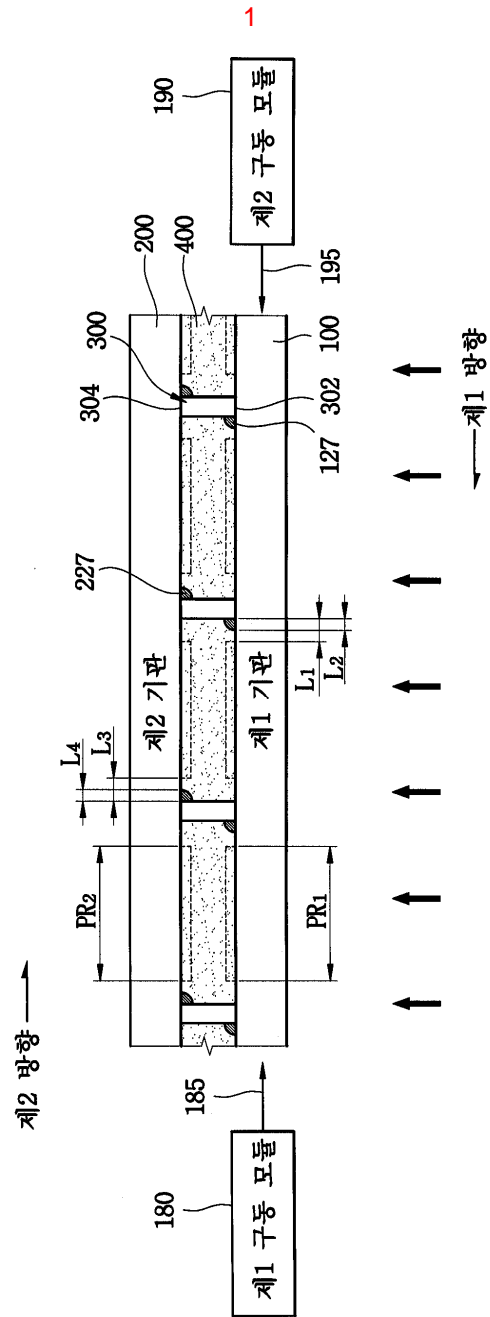
2 , 2 (220) 2 (340) (225) , (340)
 2 (PR2) , .

(57)

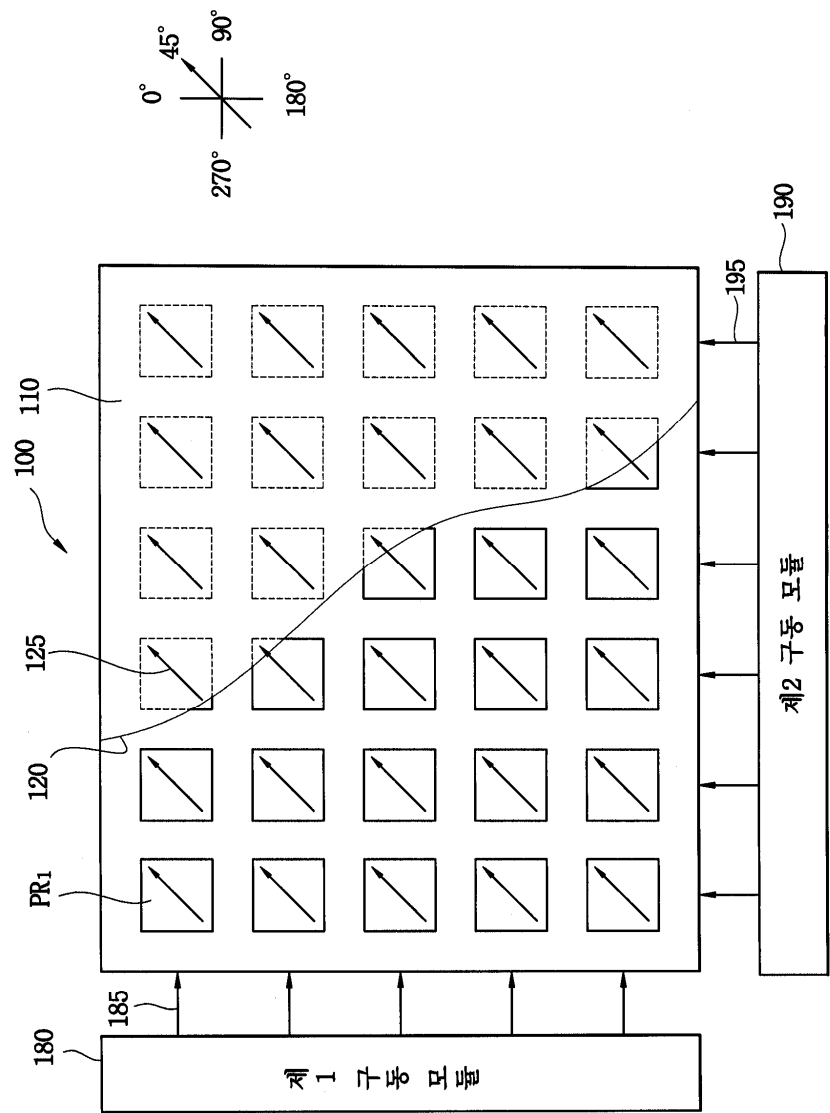
1. 1 1 1 1 1 1
 1 1 ;
 1 , 1 2 2 2 2
 2 ;
 1 가 ; 1 가 , 2 1
 2 가 ;
 1 2 ,
 2 2 2 2 가 2 .
- 2.
- 1 , 2 5 μ m 10 μ m .
3.
 1 , 1 , 1 .
- 4.

- 1, 2, 2, 2 가
1, 2
.
5.
1, 1 2 .
6.
1, .
7.
1, 2 2 .
8.
1, .
9.
8, 2 .
10.
9, 2 2 .
11.
10, 2 가 2 .
12.
1 1 1 1 ; 1 1
1 1, 1 2 2 2 2
2 ;
2 1 가 ; 1 가 , 2 1
1 2
1 1 1 1 가 1 .
13.
12, 1 .
14.
12, 1 1 .
15.
12, 1 $5\mu\text{m}$ $10\mu\text{m}$.
16.
12, .

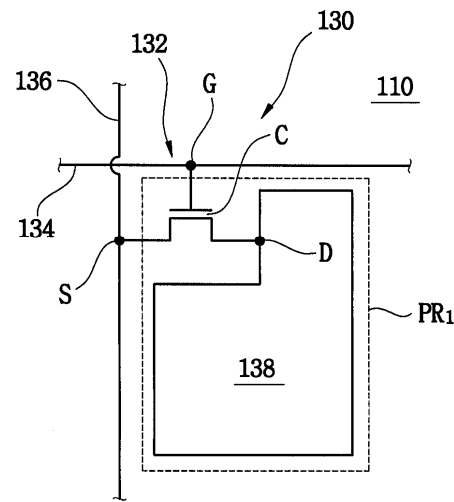
12	17.	,	.
17	18.	,	1
18	19.	,	2 2
17	20.	,	2 가 2



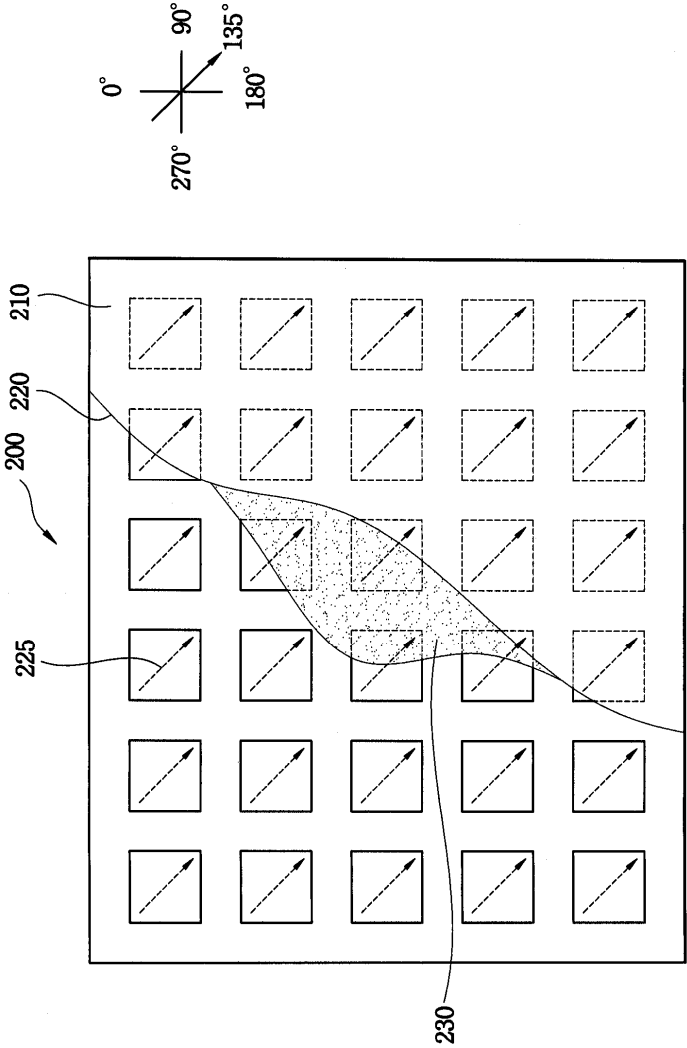
2

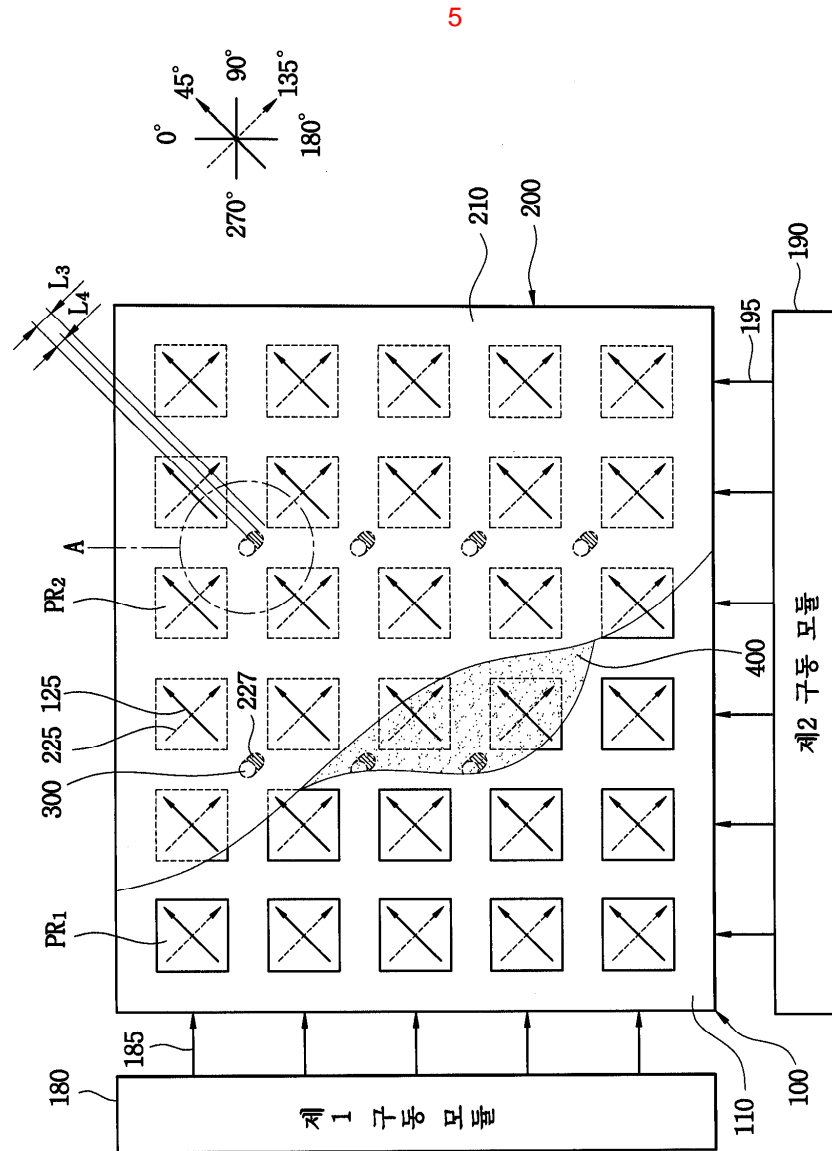


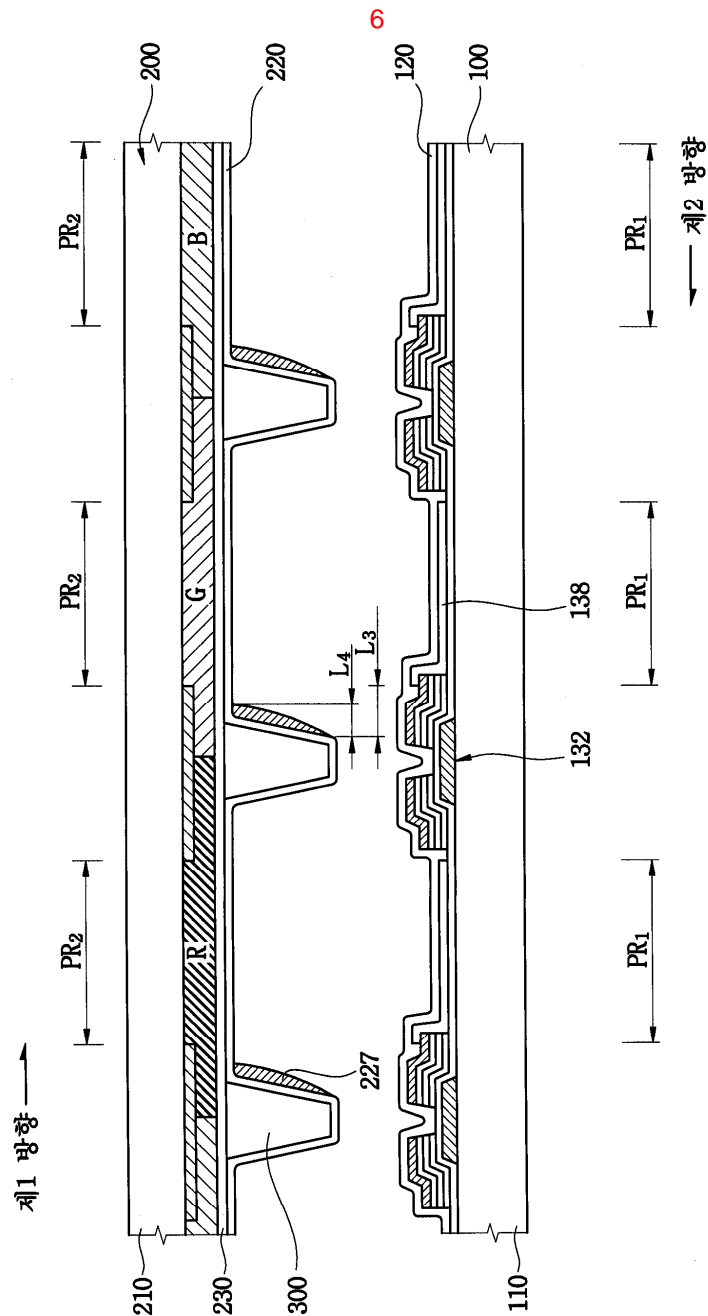
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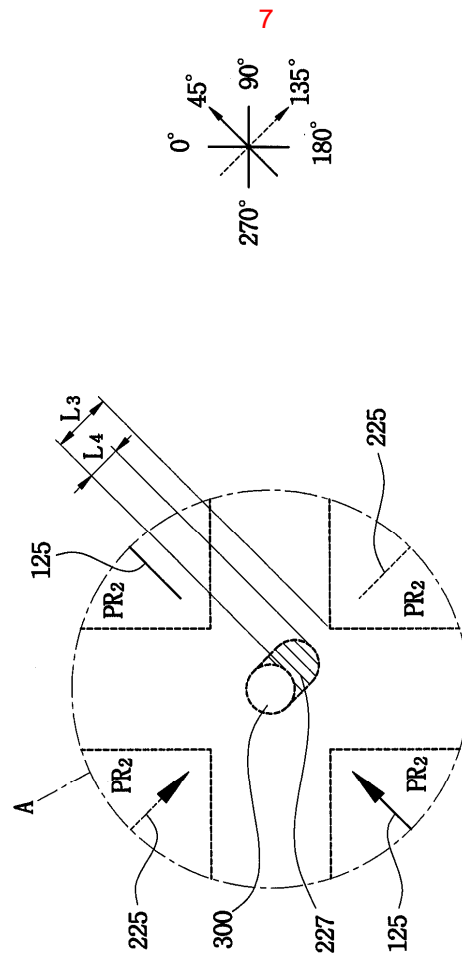


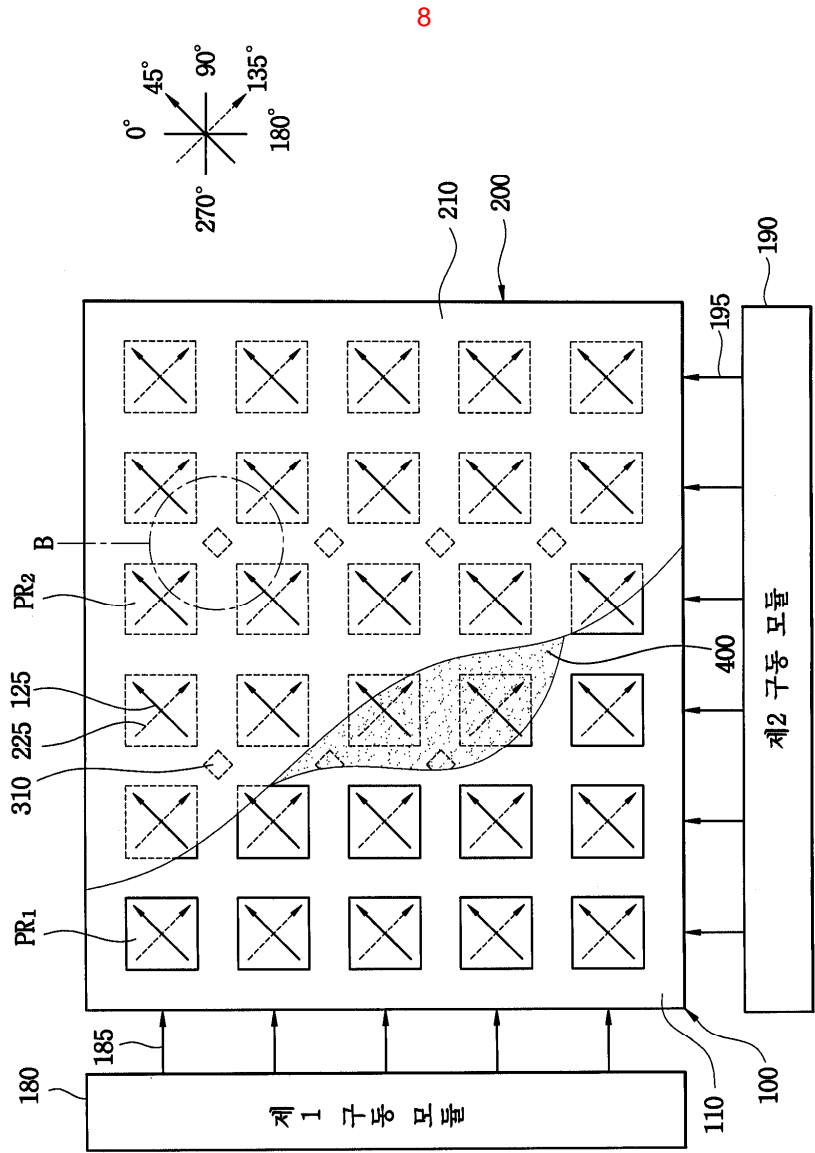
4

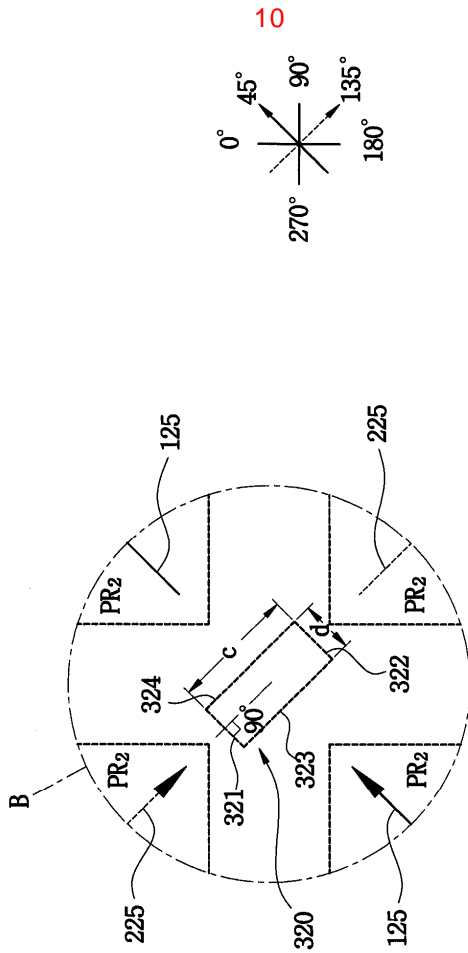
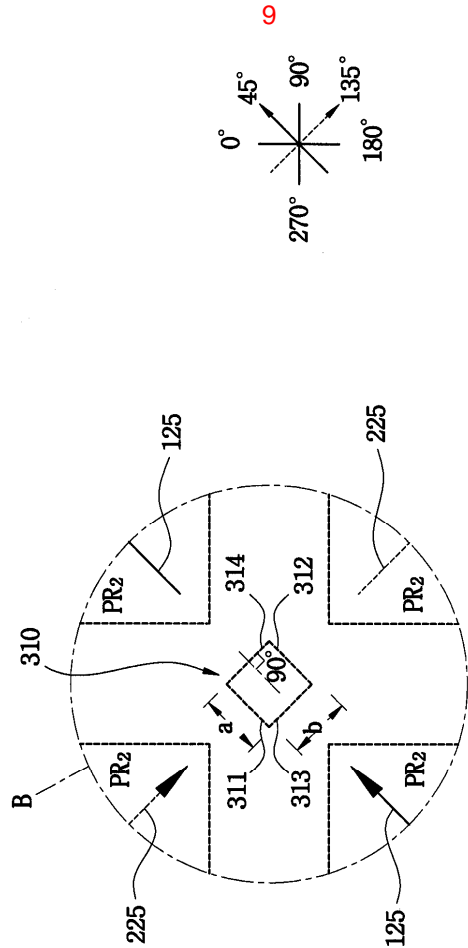


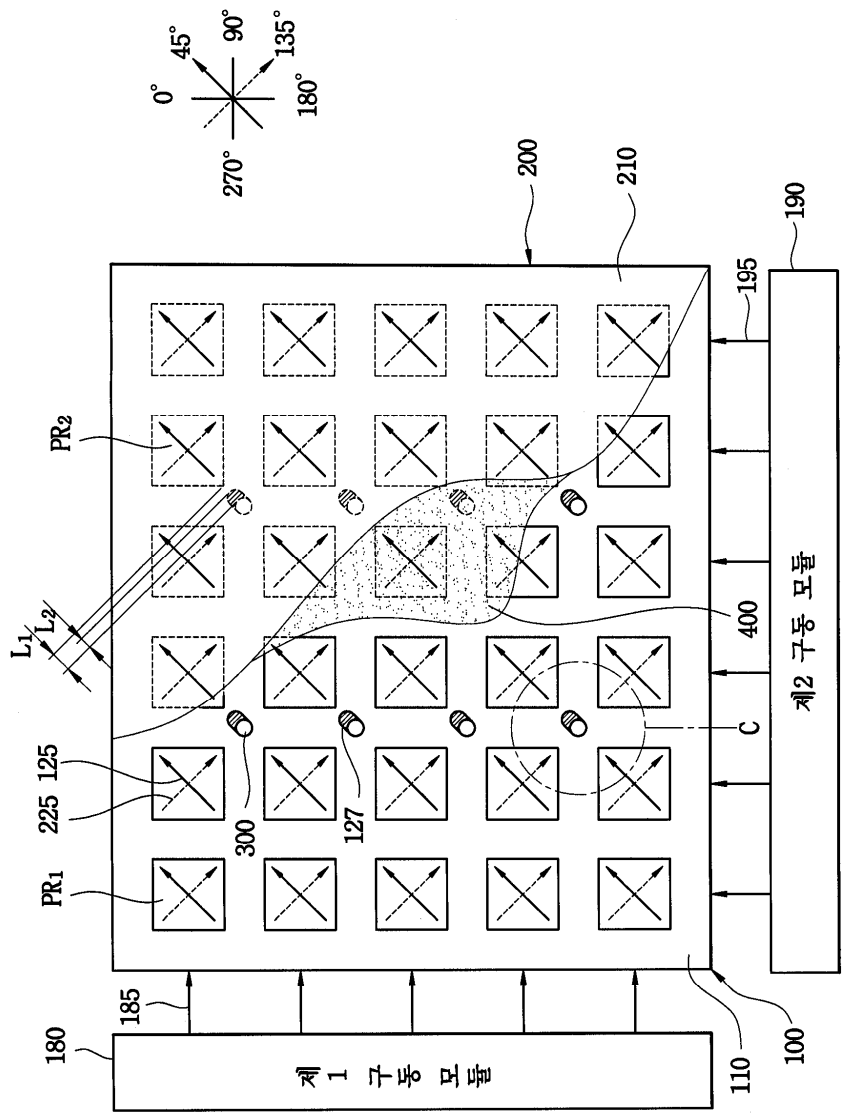


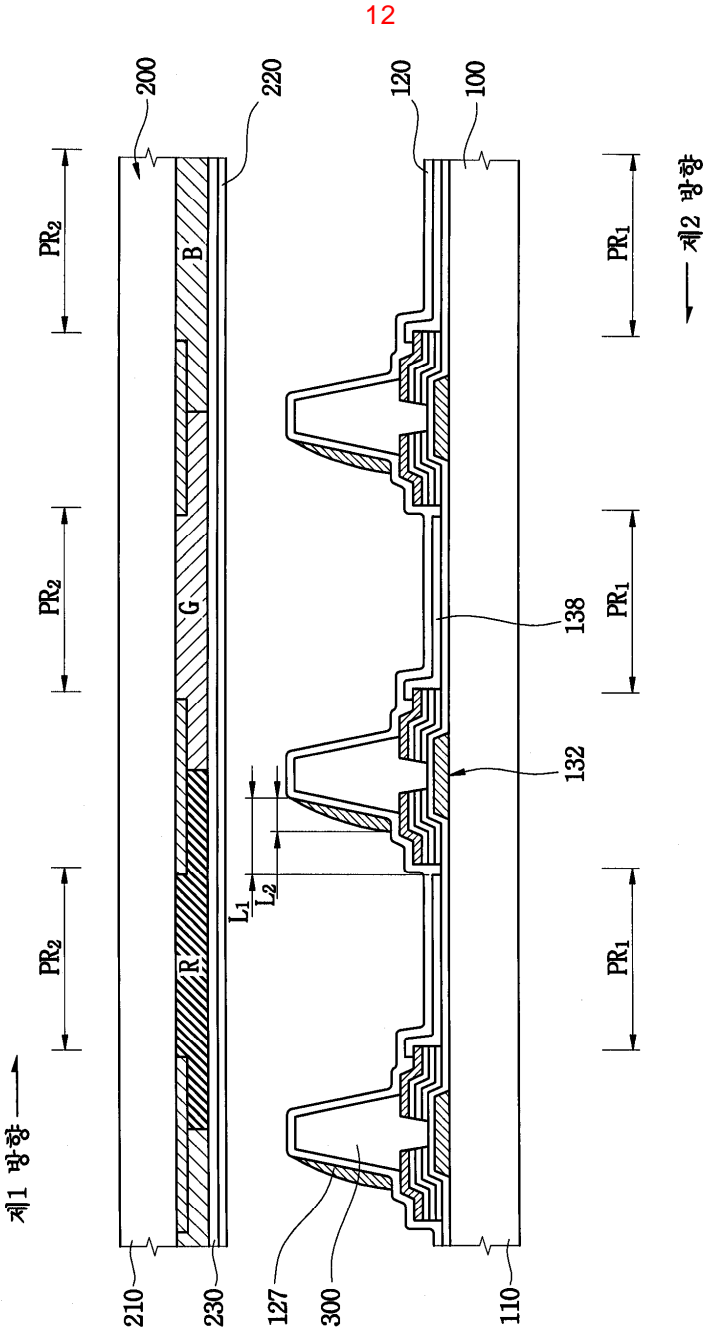


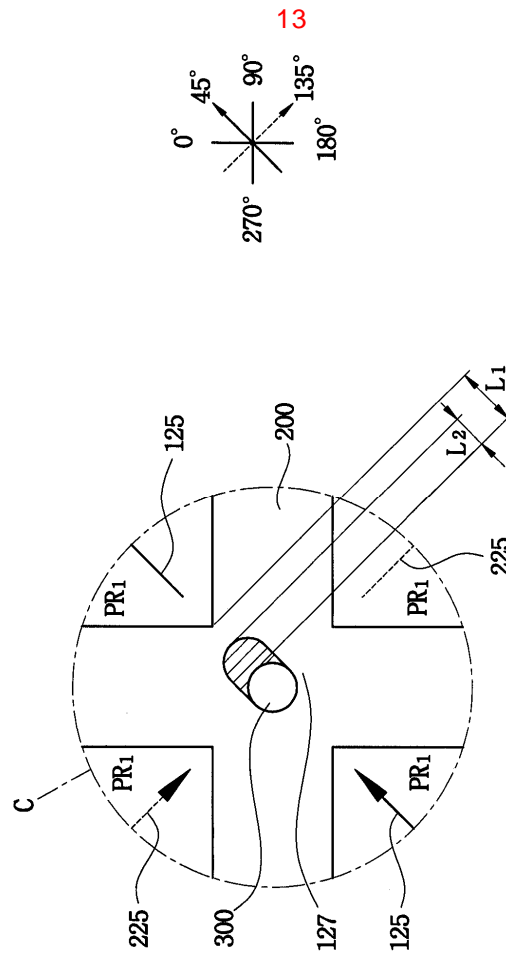




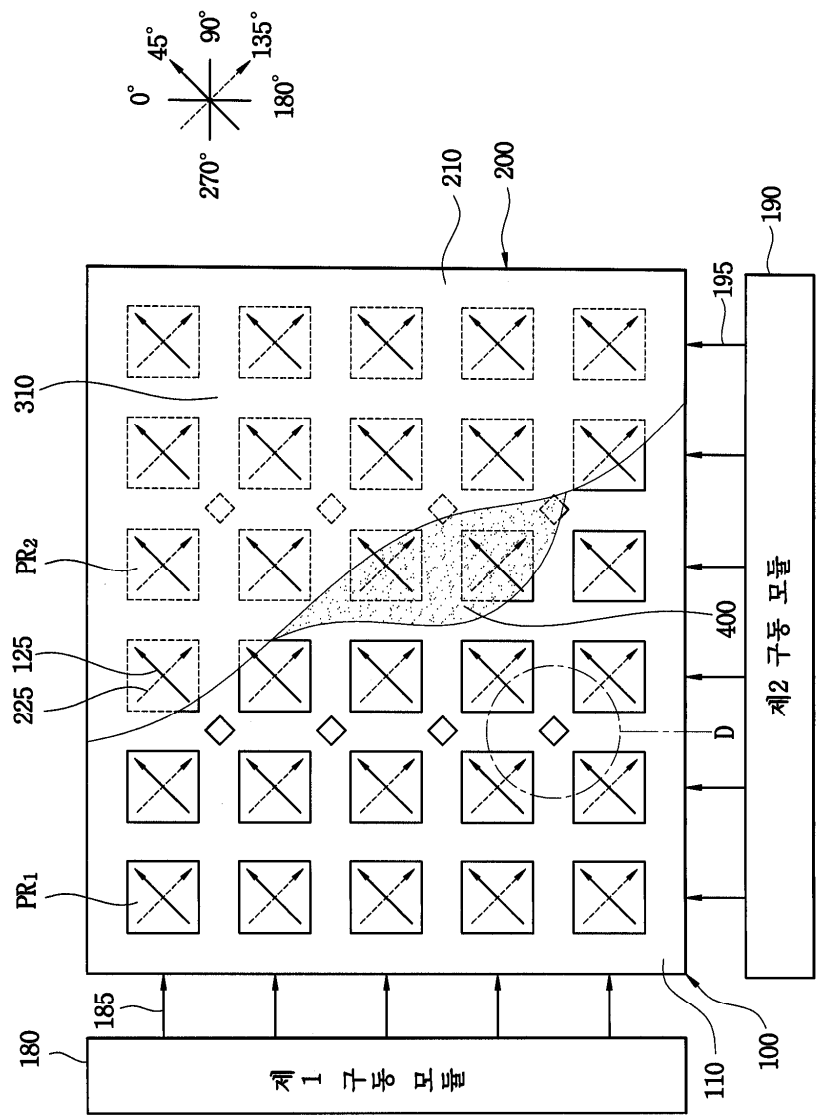


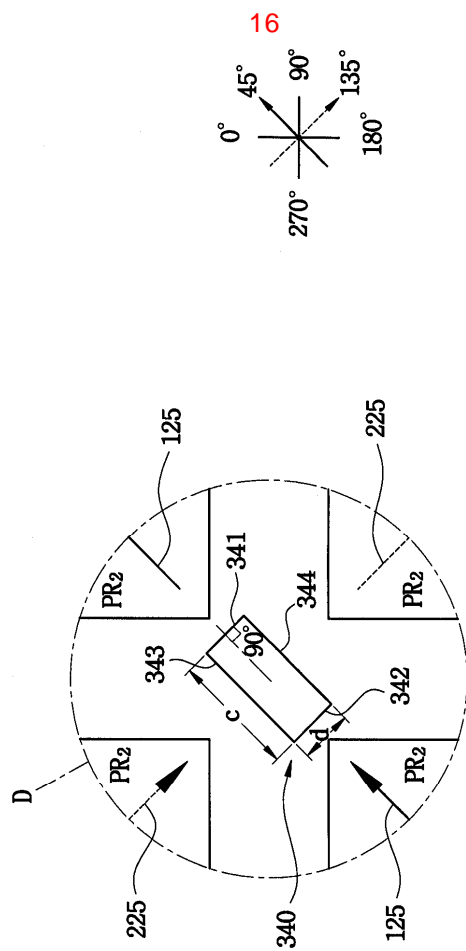
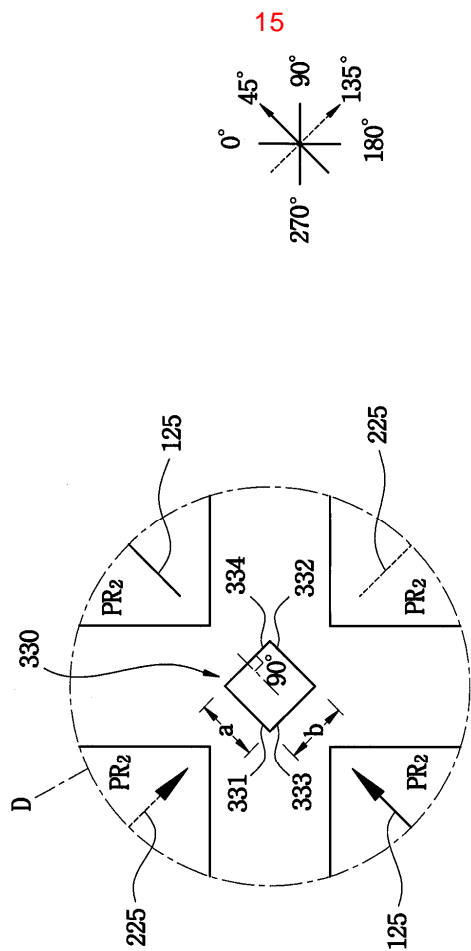






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专利名称(译)	液晶显示器		
公开(公告)号	KR1020050000586A	公开(公告)日	2005-01-06
申请号	KR1020030041040	申请日	2003-06-24
[标]申请(专利权)人(译)	三星电子株式会社		
申请(专利权)人(译)	三星电子有限公司		
当前申请(专利权)人(译)	三星电子有限公司		
[标]发明人	HAN HYERHEE 한혜리 AHN BYEONGJAE 안병재 LEE KYEHUN 이계헌 HUR MYUNGKOO 허명구		
发明人	한혜리 안병재 이계헌 허명구		
IPC分类号	G02F1/1337		
代理人(译)	PARK , YOUNG WOO		
外部链接	Espacenet		

摘要(译)

公开了一种改善图像显示质量的液晶显示装置。当在用于对准液晶的取向膜中形成对准槽时,改变间隔物的布置和形状,使得从取向膜产生的异物不会流入显示图像的像素区域。使间隔物和像素区域之间的距离比附着在间隔物上的异物的长度宽,从而防止附着在间隔物上的异物流入像素区域。另外,间隔物的形状形成为多边形柱状,从而防止从配向膜分离的异物粘附到间隔物上,从而防止异物流入像素区域,从而提高图像的显示质量。1 指数方面 液晶显示装置,取向膜,隔离物

