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2004 11 20

(21) 10-2003-0030790
(22) 2003 05 15

(71) 416

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8	832	1203
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250 1302

1 16-96

(74)

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(54)

가, 가 . 1 1
2 가 . 1 2 가
가 , 1 2 1 가
 . , 1 2 가
 . , 1 2 가

1

‘

1

1

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2		2		.
3	2	A		.
4	2	B		.
5	2	- V		.
6a	6b		2	1
		.		
7a	7b		2	1
				.
8a	8b		2	1
				.
9a	9b		2	2
		.		
10a	10b		2	2
		.		
11a	11b		2	2
		.		
12a	12b		2	2
		.		
13		2	2	가
				.
14		3		.
15		4		.
16		5		.
17		6		.
18		7		.
19		8		.
20		9		.
21		10		.

[illegible]

(220) 1 (100) 가 (190) 가 가 .

1 (100) 2 (200) (120) (220)

가 (300) 1 (100) 2 (200) , 1 (100)

1 가 (100) 1 2 (200) 2 가 (300) 가 (

300) 1 (350) , 2 (390) . (350) 1 (100) 2 (200)

(390) (350)

(400) 1 (100) (120) 2 (200) (220) (400)

1 (100) (120) 가 1 (100) 가 (300)

(220) 가

2 가 , 가 1 가 가

2 가 , 가 1 가 가

_____ 2

2 2 3 2 A 4

2 B 5 2 - V

2 , (600) 1 (100), 2 (200), 가 (300) (400)

5 , 1 (100) 1 1 1 1

(110), (120) (120) 1

3 , (120) 1 가 (110) 1024 x 768 x 3 , (60

0) 가 1024 x 768 , (120) 1 (110) 1024 x 768 x 3

(120) (gate bus line;121), (data bus line;122), (Thin Fil

m Transistor, TFT;128) (129)

2 3 , (121) 1 1 1

(121) (121) (600) 가 1024 x 768 , 768

, 768 (121a) 256 1 (1

21a) (121a) 가 가 3 (gate Tap

e Carrier Package, TCP)가

(122) (121) , 1 2 (122) (600)

(122) 1 1 , 1024 x 3 (122) 256

가 1024 x 768 1024 x 3 , 1024 x 3 (122a) 1 가 가

12 (122a) (122a) 가 가

(data Tape Carrier Package, TCP)가

3 , (128) (G), (S), (D), (C)

(G) (121) (S) (122)

(G) 가 (G) 가 (C)

(G) 가 (S) (D)가

(129) (128) (D)
 (Indium Tin Oxide material, ITO) (Indium Zinc Oxide material, IZO)

4 , 1 (100) 1 (122a)
 가 (123) 가 (123) 1 (100) 1
 가 1 가 (123) 5 (220) 가

2 5 , 2 (200) 2 (210), (230), (220) 가 (30
 0) 2 (200)

2 (210) 1 (110) 2 , 2 2
 2 2 1 (100) 1 , 2 1
 (100) 1

(230) 2 (210) 2 (129)
 (230) (232), (234) (236) ,
 (232), 가 (234) (232), (234) 2 가 (236)
 가 (230) (210) (220) (240) (129)
 (240)가 1 (240) ,

(220) (220)
 (230)가 2 2

5 , 가 (300) (310) (220a)

(310) 2 (200) 2 (310) 1 (100) 1
 가 (123) (310) (310) (230)
 (232a), (232a), (

234a) (236a) 2 2 (230)
 (234a) (236a) 2 (232)
 , (232a) 2 (234) (232a),
 (234a) 2 (236a) 2 (236) 2
 (234a)

, 2 (232a), (234a) (236a)
 (310) 1 (100) 2 (200)

(220a) 2 (310) , 2 (200) (220)
 , 1 (100) 가 (123) , (220a)
 220a) (220) 가 (220a) (220)

1 (100) 1 1 2 (200) 2 2
 (400) (410)가 (410)
 1 2 (400) (drop filing) , 1 (100) 2 (410)
 200) 1 (100) 2 (200) (400) 1 (100) 2 (200)

6a 6b 2 1

6a	6b	, 1 (100)	1 (110)	, ,
,				.
, 1	(110)			1
, 2	6b	1 (110)	1	(121)
,	(121)	2 (G)가	1 (121)	(121)
(G)	가 1024 x 768 (600)	, 768 (121)	1024 x 3	.
7a	7b	2	1	.
1	(110)	(121)	(G)가	1 (110)
	(127)	.		
7a	7b	, (127)	1 (110)	.
, n +	/	.	2	/
, n +	/	.	2	.
가	(122),	(122)	1 (S)	2 (D)
	(S)	(D)	- (etch back) (C)	.
8a	8b	2	1	.
8a	8b	, 1 (110)	(128)	, (128)
		.	(D)	3
	(128)		(D)	(128)
	(Indium Zinc Oxide, IZO)	, 4	(Indium Tin Oxide, ITO)	
(129)				
9a	9b	2	2	.
9a	9b	, 2 (210)	.	,
1		.		(242)가
210)	2	(240)	9b	2 (
10a	10b	2	2	.
10a	10b	, 2 (210)	2	(232a)
-	(240)	(242)	(232)가	, 2
11a	11b	2	2	.
11a	11b	, 2 (210)	2	.
(234a)	, 2	(240)	(232a)	(234)가
12a	12b	2	2	.

12a 12b , 2 (210) 2 (234a) .
 (236a) , 2 (240) (242) (236)가 .

, 2 (210) 2 (232a), (234a)
 (236a) 2 (200) 1 (100) (310) .

13 2 2 가 .

13 , 2 (210) (232), (234) (236)가
 2 (210) (232), (234) (236)가
 ITO IZO가 .

, ITO IZO 2 (210) 2 , 2 (210) 2 ITO IZO
 가 2 (310) 2 (230) (310) 2 (230) ITO IZO
 0) , 2 (210) 2 (230) ITO IZO (220) , 2 (230) (32
 ITO IZO (220a) .

(310) 2 (200) 1 (100) 2 (200) 5 가 (123) . ,
 , 2 (200) (230) 1 (100) (100) (129) , 1 (100)
) 2 (200) , 1 (100) 1 (410)가 1 2
 (200) 2 2 (410)가 .

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

1 (100) 2 (200) (400) 2 가 (121)
 (122) 가 .

2 , 가 1 2 2 , 1 가 가
 가 , , 가
 가 .

3

14 3 2 2 2
 2 . , 2

14 , 2 (200) (230) 가 ,
 2 (200) 2 (210) (272) . , 2
 0) (310) (272) (310) 1 (100) 2 (200) (22
 (272) .

, 가 1 2 2 , 1 가 가
 가 , , 가
 가 .

4

15 4 2 2

15 2 (200) (230) 가 ,
 (274) 2 (200) 2 (210) (274) ,
 (310) (220a) (310) 가 1 (310) 2 (230)
 (274) (220a) 가 1 (100) 2 (200) 가
 20) (310) (220a)가 1 (100) 가 (123) 2 (200) (2

2 , 가 1 2 2 , 1 가
 가 , 가
 가 , 1
 1 2 가
 1 2

5

16 5

16 , (600) 1 (100), 2 (200), 가 (300) (400)

1 (100) 1 가 1 1 (110), (12
 0), (160) 가 (300)

(120) (160) 1 , 가 (300) 1

2, 3 16 , (120) 1 가
 (600) 가 1024 x768 , (120) 1 (110) 1024 x768 x3

(120) (gate bus line;121), (data bus line;122), (Thin Fil
 m Transistor, TFT;128) (129)

(121) 1 1 1 , 768 , 768
 (121) (600) 가 1024 x768 , 768
 (121) 256 (121) 1
 (121a) , 가 가 3 (121a)
 (121a) 가 가 (gate Tape Carrier Package, TCP)가

(122) (121) , 1 2
 (122) 1 1 (122) (600)
 가 1024 x768 1024 x3 , 1024 x3 (122) 256
 , 1 3 (122a) (122a)
) 가 가 12 (data Tape Carrier Package, TCP)가
 (128) 3 (G), (S), (D), (C)
 (G) (121) , (S) (1
 22) (C) (G) 가 (G) (G) 가
 (C) (C) 가 (S) (D)가

) , 1 (100) 1 (122a) 가 (123)
 가 (123) 가 (220) 1 (100) 1 가
 가 . 1

(160) 1 (160) (162), (164) (128)가
 (162), (164) (166) 2 가
 (160) (D)

(129) (160) (129) (160)
 (128) (D) (129) (160) (129)
 29) (121) (122) (122) (129) (1)

가 (300) (310) (129a)

(310) 1 (100) 1 (310) 1 (100) 1
 가 (123) (162a), (164a) (166a)
 a) 1 (160) (162a), (164a) (162a) 1
 (164) (162) (164a) 1
 166a) 1 (166) 1 (164a)

, 1 (310) 1 (162a), (164a) (166a)
 (100) 2 (200)

(129a) 1 (310) , 1 (129)
 (129a) (129a) (129)

16 , 2 (200) 2 (210) (220) 2 (200)
 (240)

2 (210) 1 (110) , 2 2
 2 (100) 1 (100) 1 (220) , 2 1
 20) 가 (220) 가 1 (100) 1 (2) 가
 (300) (219a)

, 2 (210) (220) (219) (240)가 (240)
 (219)

, 1 (100) 1 1 2 (200) 2 (410) 2
 (410)가 (drop filing) , 1 (100) 2 (200)
) 1 (100) 2 (200) (410) 1 (100) 2 (200)
 1 (100) 1 (100) (129a) 2 (200) (220)

1
2
가 1 1 1 2
가 , 가
가 ,

6

17 6
1 5 5
17 , 1 (100) (160) 가 ,
1 (100) 1 (110) (160) (172)
1 (310) (172) -
(129) (121) (129) (122)
가
가 1 1 1 2
가 , 가
가 ,

7

18 7 1 5
5
18 , 1 (100) (160) 가 ,
1 (100) 1 (110) (174) (160)
(174) 1 (310) (129a) (310) 가 1 (100) 2 (120)
(310) (129a) (174) (129a) 가 (310) 가 ()
129a) 2 (200) (220) .
가 1 1 1 2
가 , 가
가 , 가 1 2
1 2

8

19 8 1 5
5
19 , 1 (110) (240) (220) 1
(110) (240) (240) (220) 가 (240)
(220) (242) (129a) (220) (fringe field
) (240) (310) (129a) (220) (24
0) 가

(220) (129z)가 (240) (244) (244)가 (129a) (129a) (220) . 1 2

, 가 1 1 , 1 , 가 1 2

가 , , 가 , .

9

20 9 5 . 5

20 , 1 (100) 1 (310) (129) 2 (200)

2 (220) 1 (220) 1 (129b)가 2 (220b)가 .

1 (129b) (240) (160) (129a) 2 (220b)가 2 .

(220b) (240) (160) (129a) 2 (220b) (310) (129a) (220) 가 1 (100) 2 (100)

1 (200) 가 2 (200) (129a) (220) 가 .

, 가 1 1 , 1 , 가 1 2

가 , 1 2 가

10

21 10 5 . 5

21 , 1 (100) 1 2 (200) 2 , 2

(192)가 . (192) 1 (100) 1 (190) (129) (1

90) 1 (100) 2 (200) , (190) (129)

, 1 (100) 1 2 (200) 2 (300)가 (300)

) 1 (129a)가 2 (129a) 1 (100) 가 2 (200) (300) (220)

가 .

, 1 2 1 2 가 2 가

가 , , 가 1 2 가

가 2 1 2 가 1 2 . 1

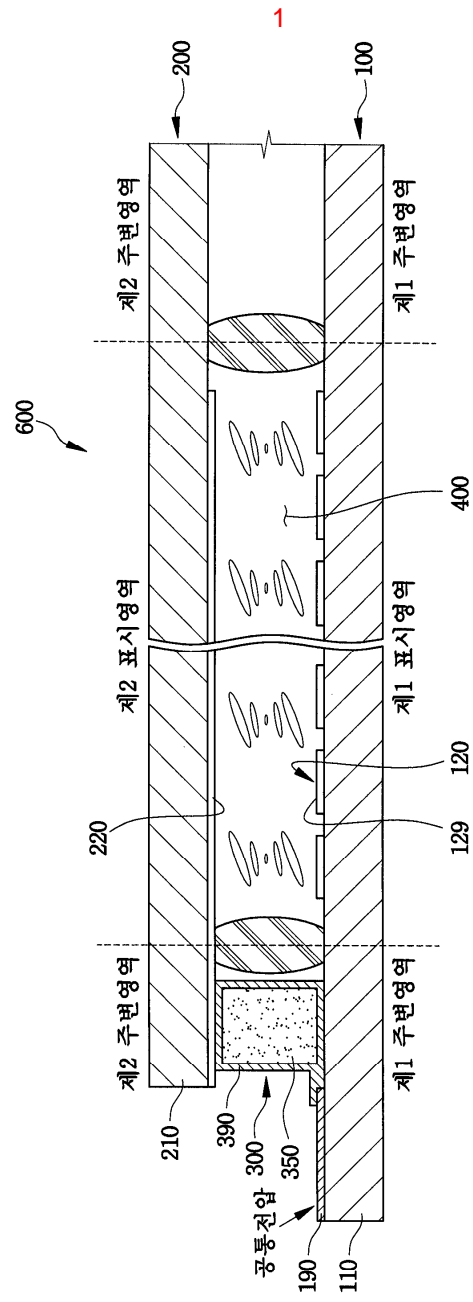
가 2 1 2 가 1 2 .

가 , 1 가 2 ,
가 ,
.

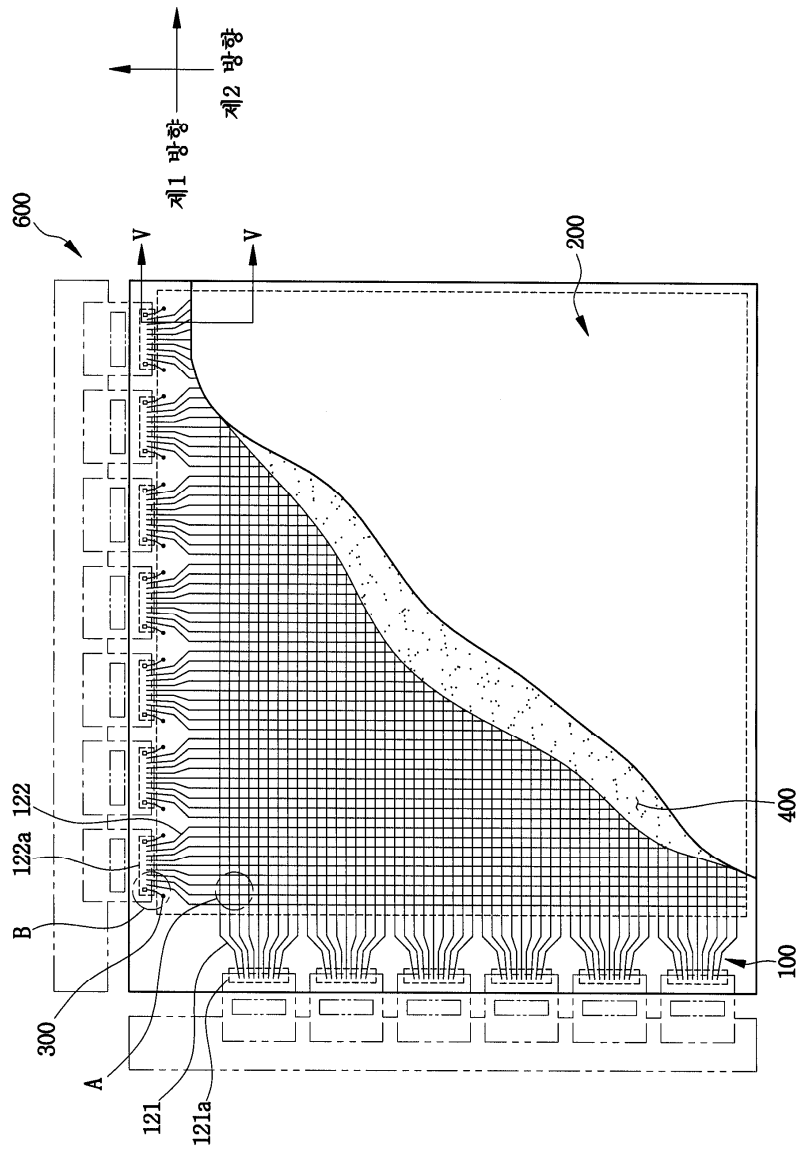
,
.

- (57)
1. 1 1 가 1 ; 1 1
- 2 2 1 2 ; 2 2 2
- 1 2 가 가 ; 1 가
- 1 2 .
2. 1 , 2 2 ,
3. 2 , ITO IZO .
4. 2 2 2 , 2 2 ,
- 2 2 2 .
5. 4 , , ,
- 2 ,
6. 4 , 2 .
7. 4 , 2 .
8. 4 , 2 2 .
- 9.

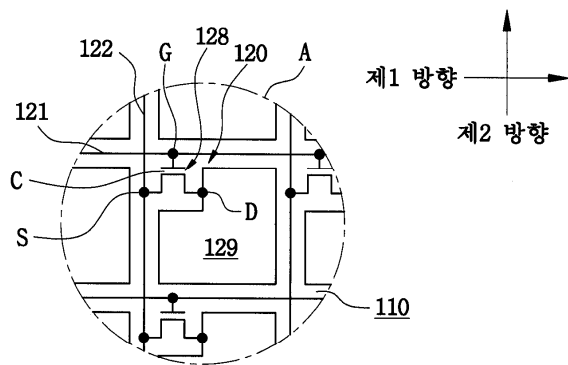
- 2 , 1 가 가 , ,
10. 1 , 1 , .
11. 10 , ITO IZO .
12. 10 , 1 1 , 1 .
13. 12 , , , 1 .
14. 12 , 1 .
15. 12 , 1 .
16. 10 , 1 가 가 , ,
17. 10 , 2 2 가 .
18. 10 , 2 가 .
19. 10 , 1 2 가 1 가 , .
20. 1 , .
21. 1 , 1 1 가 .
22. 1 , 2 , .

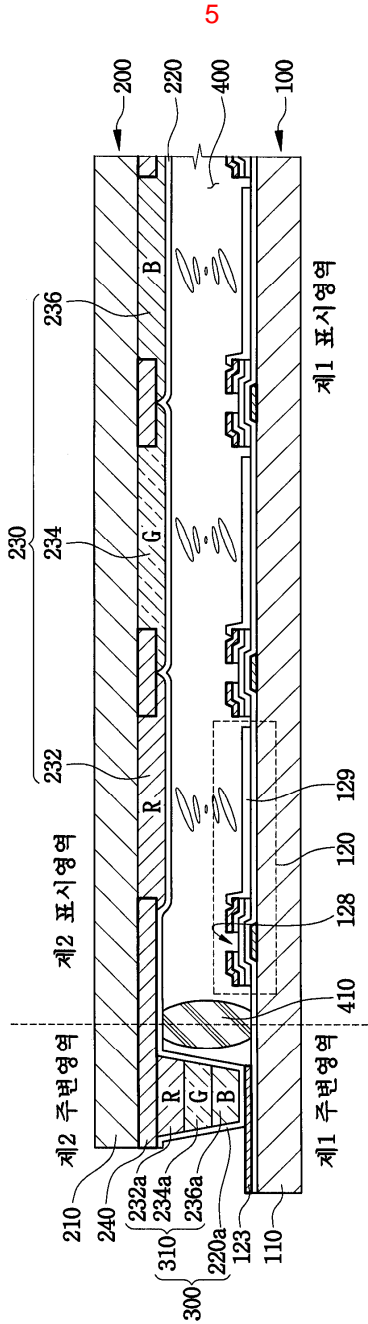
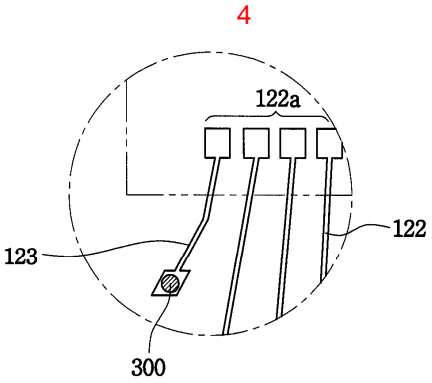


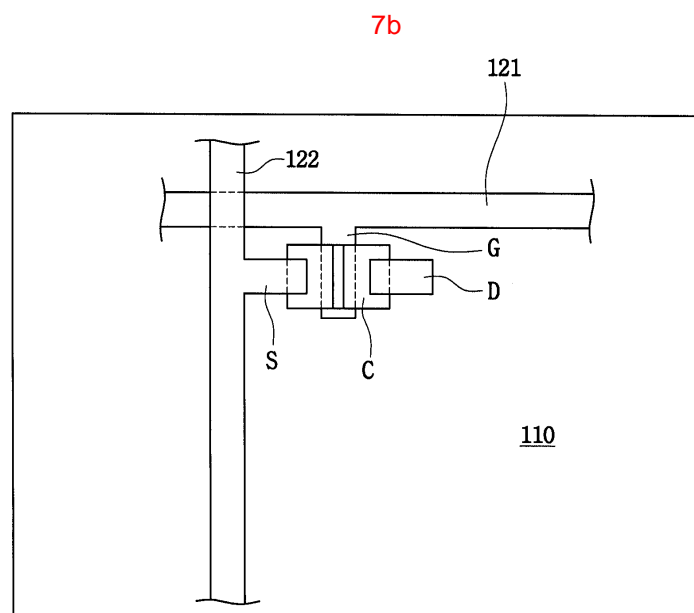
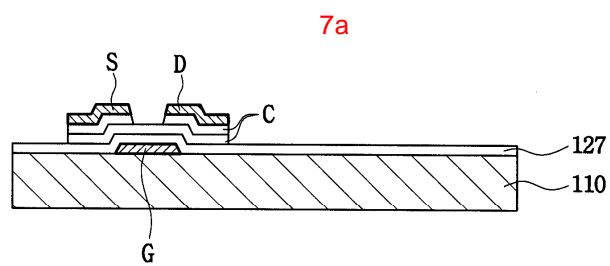
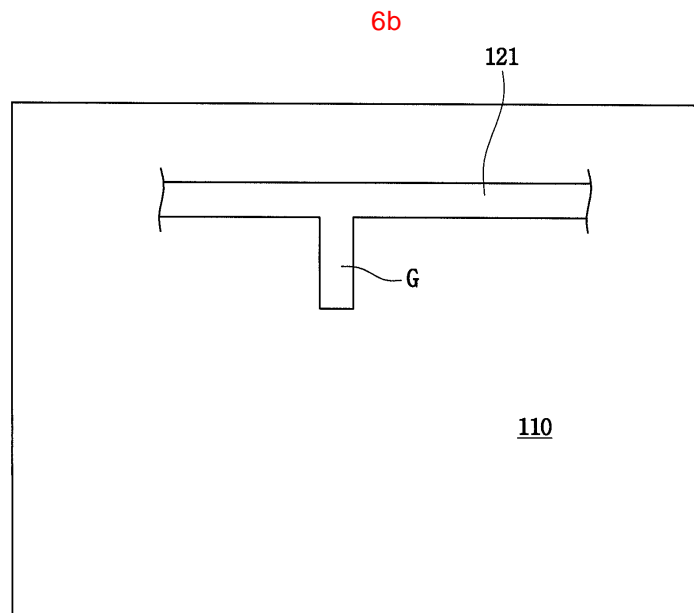
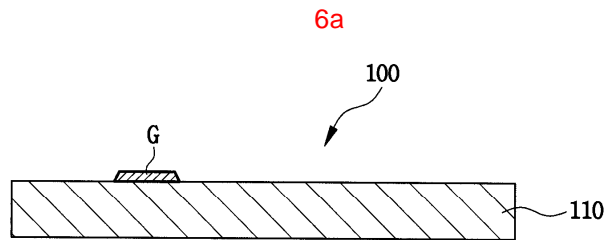
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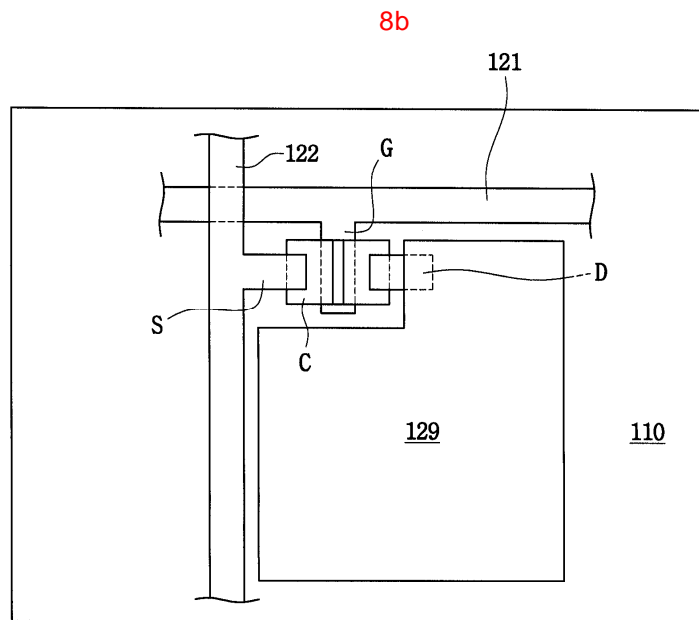
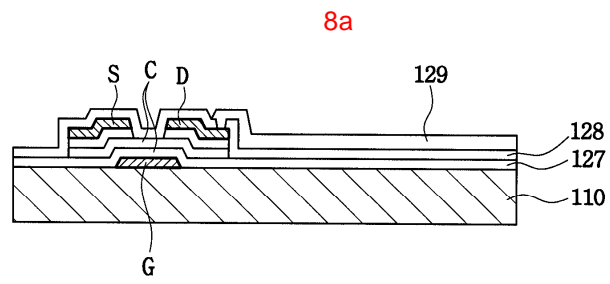


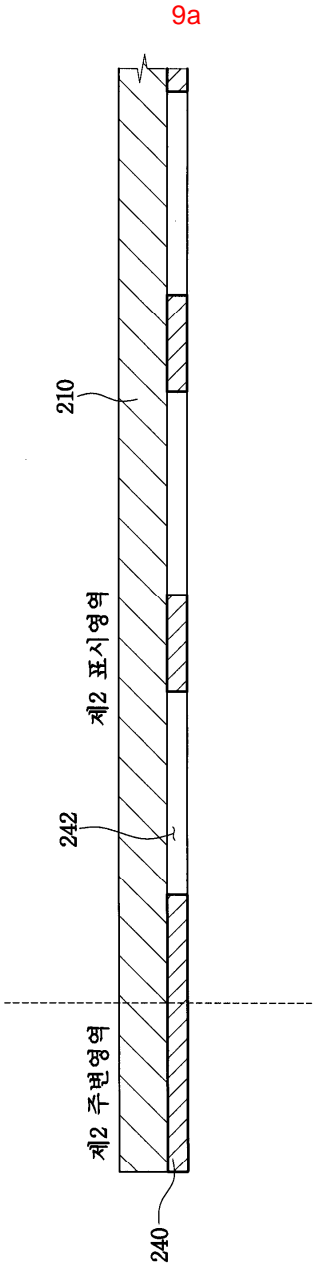
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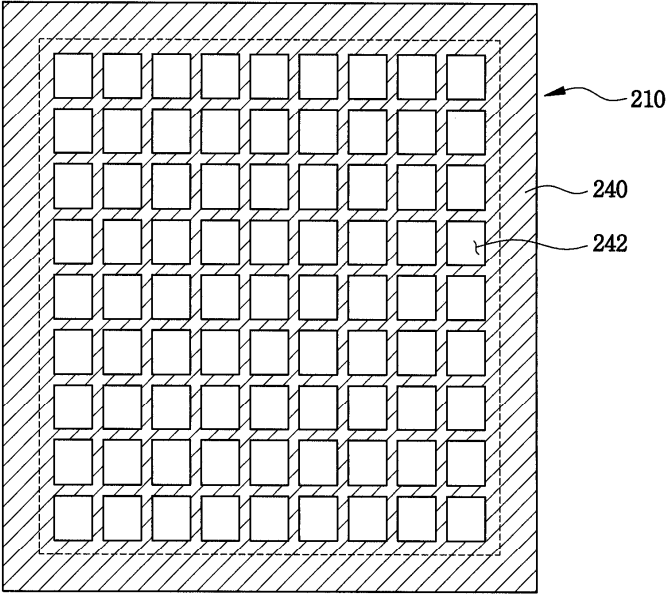


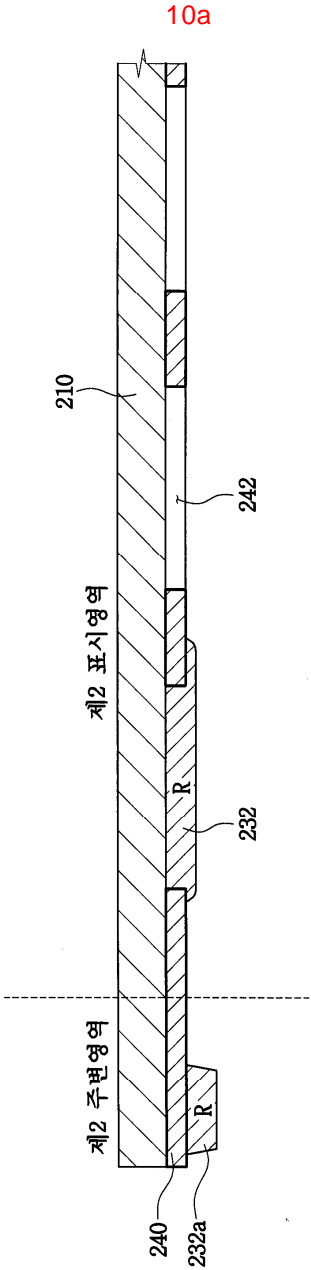


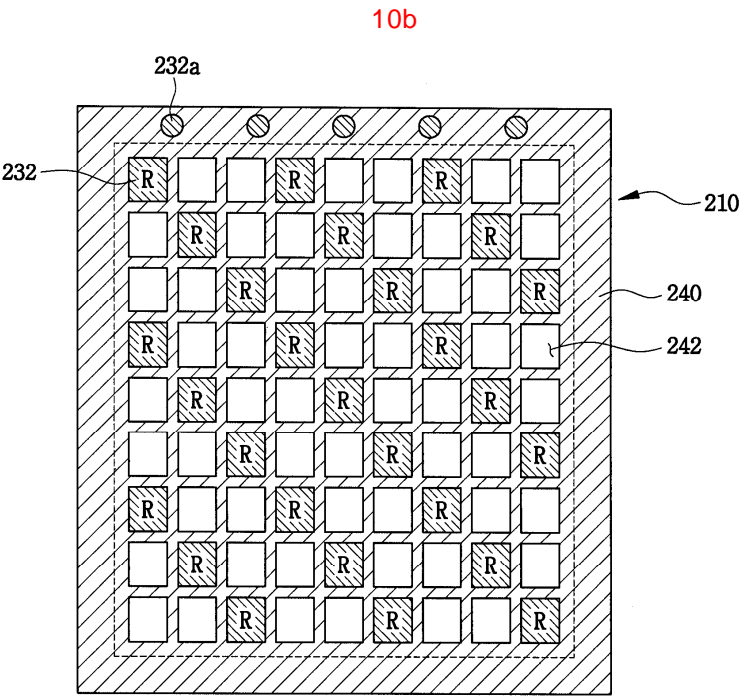


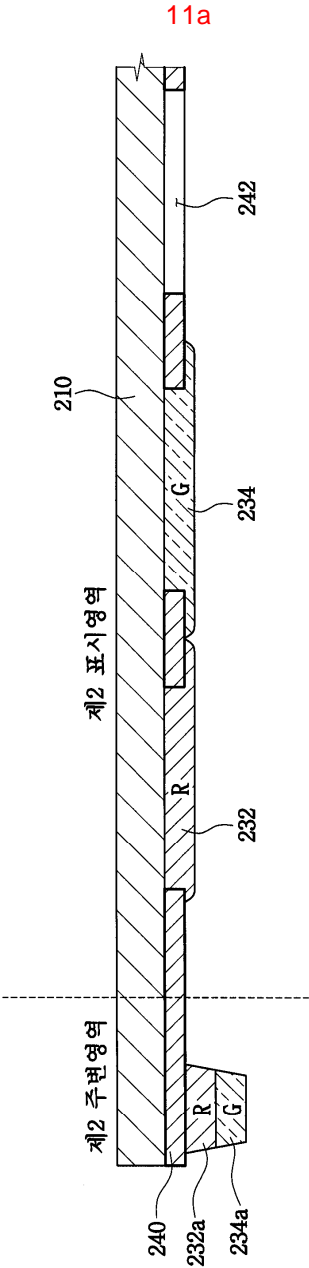


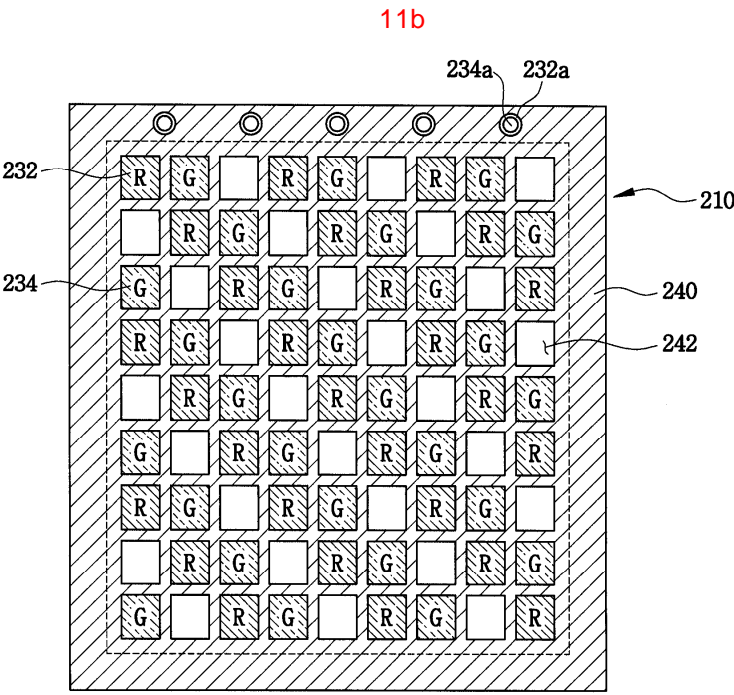
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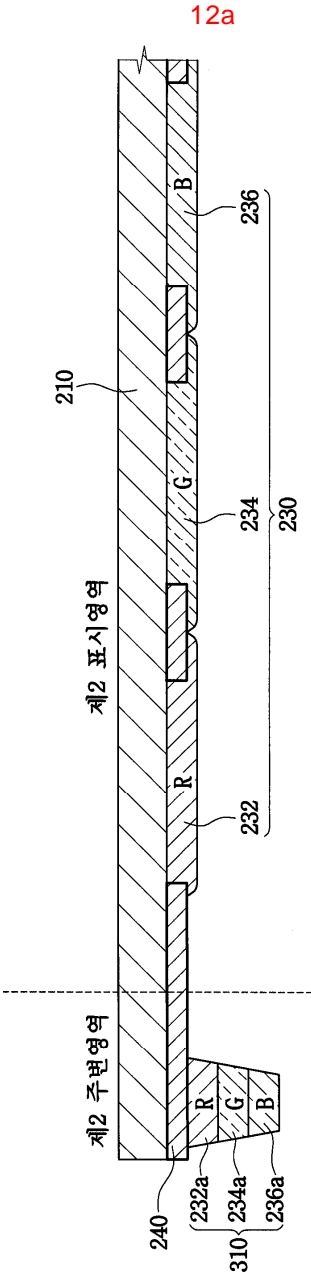


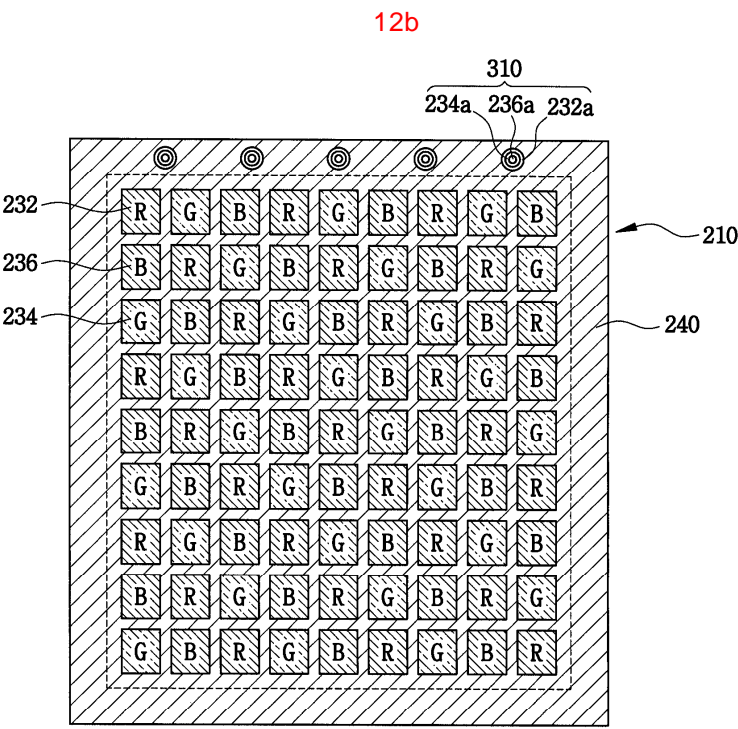


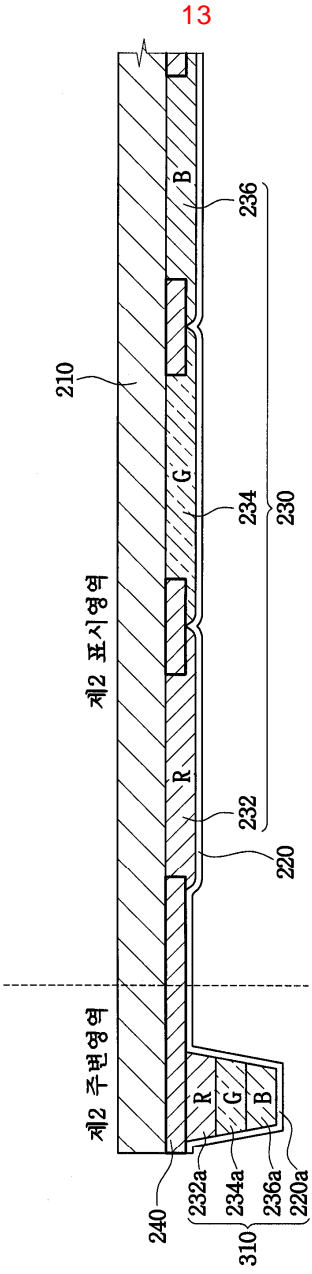


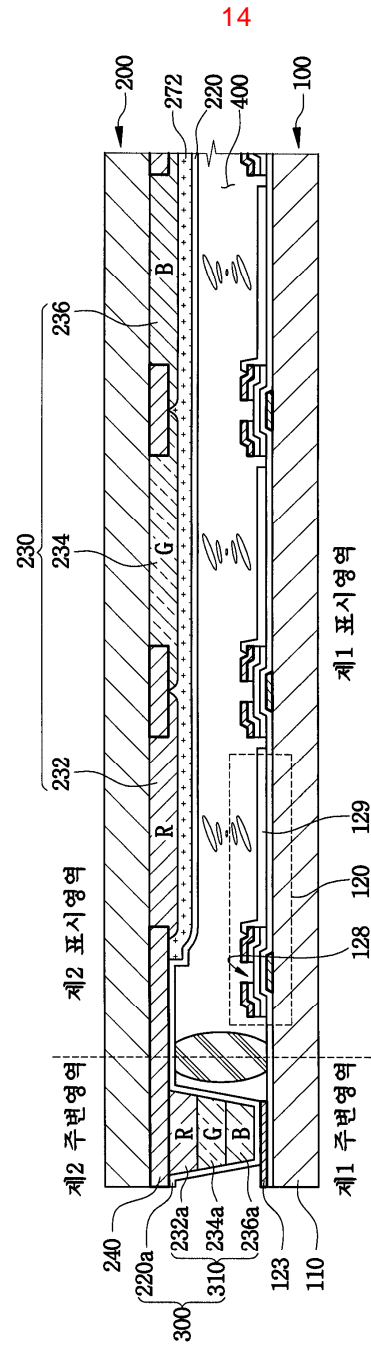


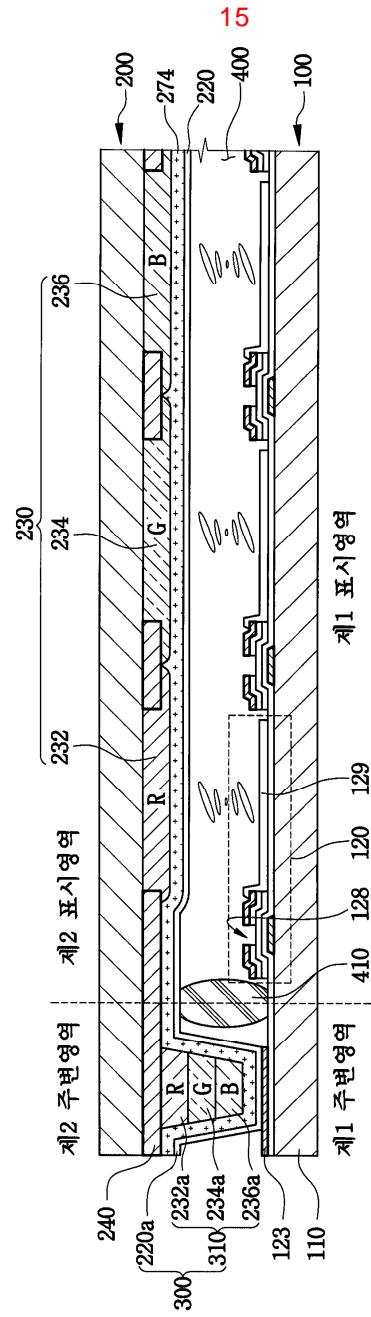


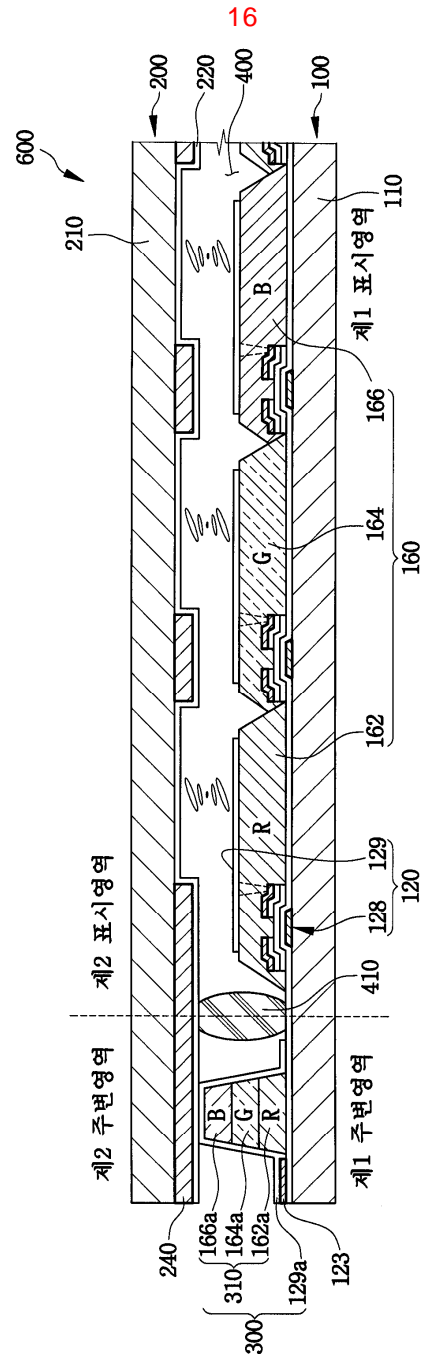


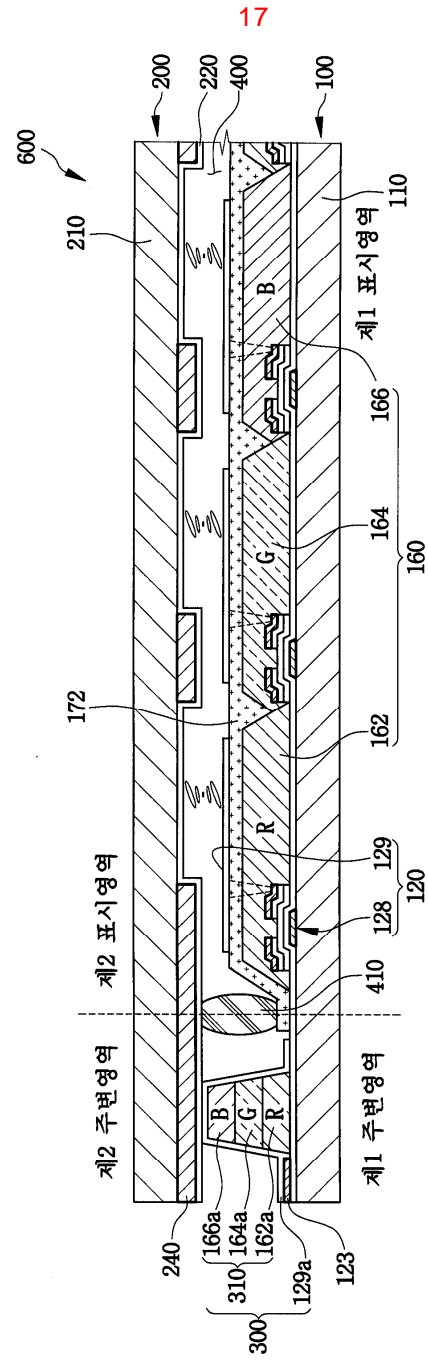


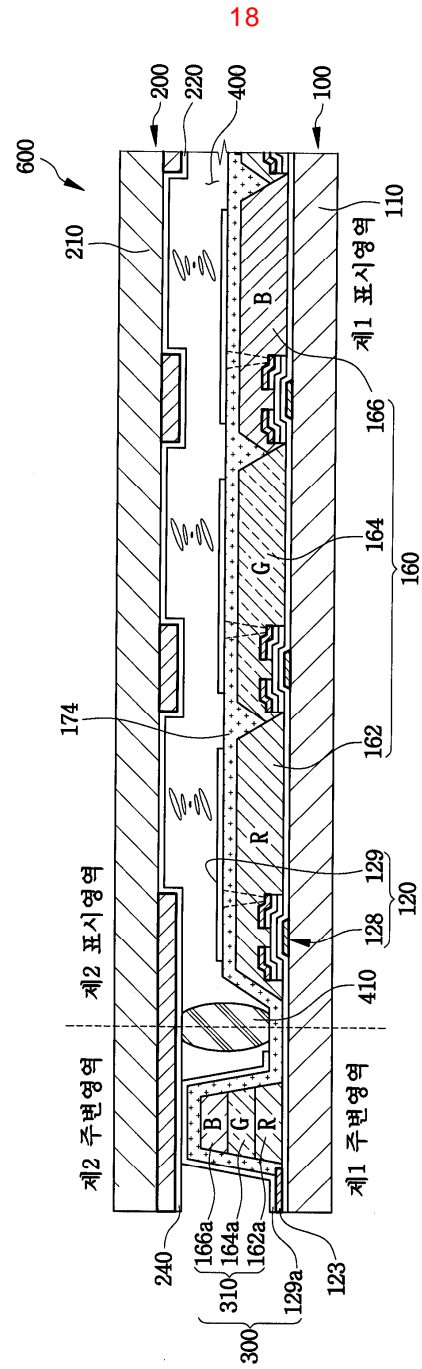


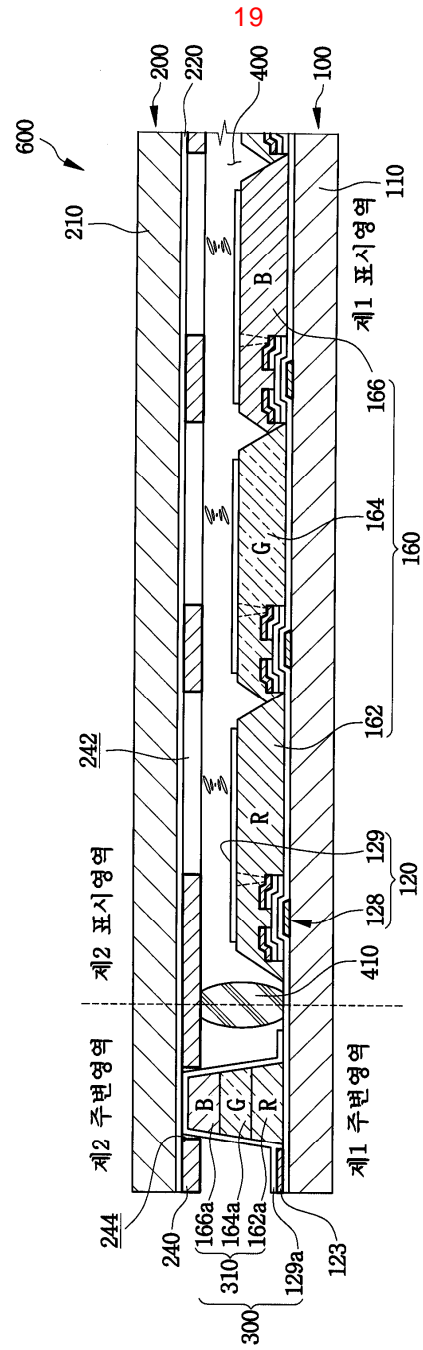


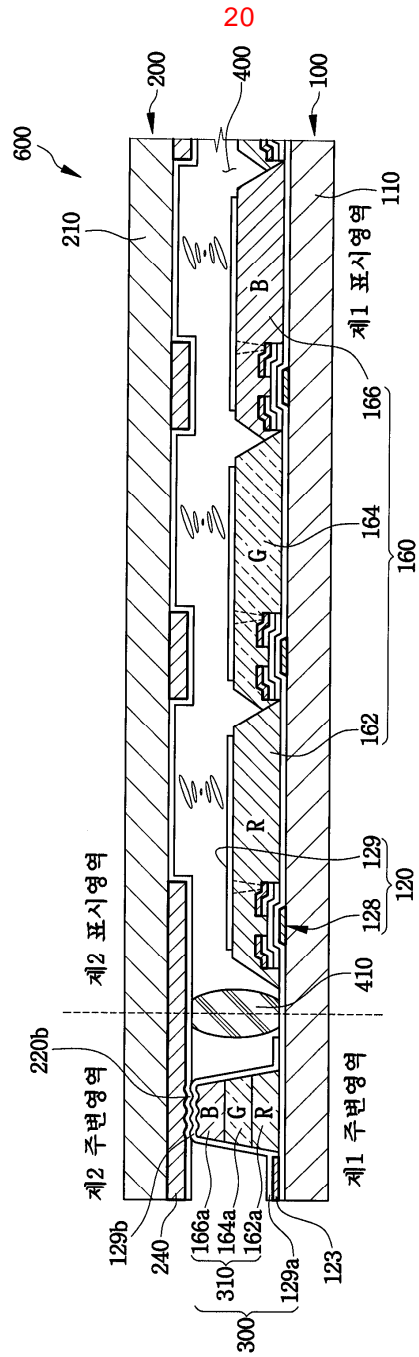


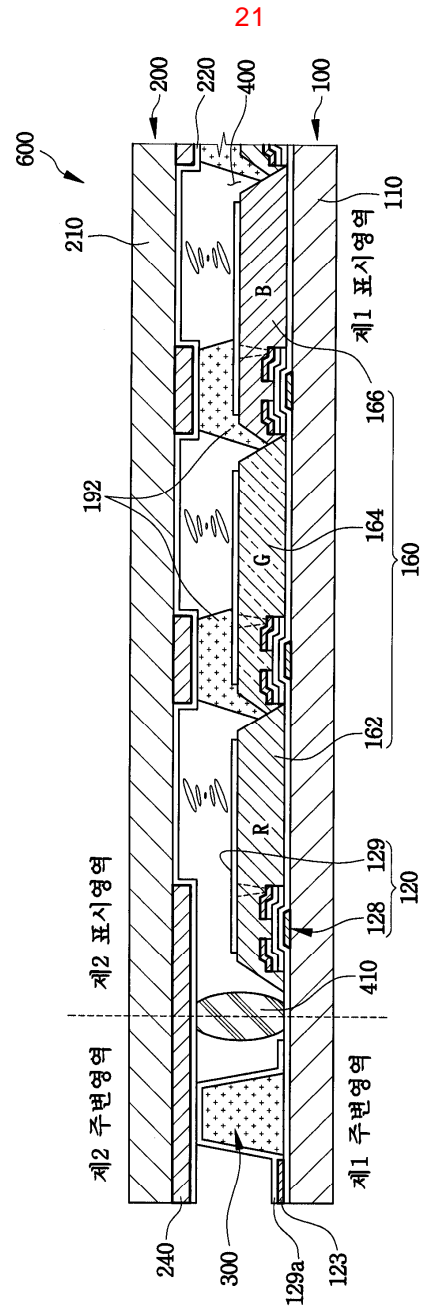












专利名称(译)	液晶显示器		
公开(公告)号	KR1020040098429A	公开(公告)日	2004-11-20
申请号	KR1020030030790	申请日	2003-05-15
[标]申请(专利权)人(译)	三星电子株式会社		
申请(专利权)人(译)	三星电子有限公司		
当前申请(专利权)人(译)	三星电子有限公司		
[标]发明人	YOO YOUNGHOON 유영훈 KIM JANGSOO 김장수 RYU HYEYOUNG 류혜영		
发明人	유영훈 김장수 류혜영		
IPC分类号	G02F1/1339 G02F1/1343 G02F1/1345 G02F1/1335		
CPC分类号	G02F1/133516 G02F1/1339 G02F1/1345		
代理人(译)	PARK , YOUNG WOO		
其他公开文献	KR101001963B1		
外部链接	Espacenet		

摘要(译)

公开了一种液晶显示装置，其中简化了制造工艺并降低了制造成本。在具有像素电极的第一基板和面对第一基板的像素电极的第二基板之间的绝缘体，以及覆盖绝缘体的导体，用于将施加到第一基板的公共电压施加到公共电极它插入。可以在形成在第一基板和第二基板中的任何一个上形成的滤色器的过程中形成绝缘体或者可以用作柱状间隔物，用于维持第一基板和第二基板之间的单元间隙。这使得可以通过使用金间隔物等从第一基板向第二基板施加公共电压来简化制造工艺，并且显著降低从第一基板向第二基板施加公共电压的制造成本。它有一个优势。 1 指数方面 液晶显示装置，像素电极，普通电极

