

(19)  
(12)

(KR)  
(A)

(51) 。 Int. Cl.<sup>7</sup>  
G02F 1/133

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(43)

10-2004-0083648  
2004 10 06

(21)  
(22)

10-2003-0018196  
2003 03 24

(71)

416

(72)

607 703

15

102 1301

112 205

1161

5 502 1305

(74)

:

(54)

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;

;

1 , 1 , 2 가 , 2 , M, N

, M N M M M

.

1a

, RGBW

1a 1 ,  
1b 1a ,  
2 4 ,  
3a 3b 2 ,  
4 1 ,  
5 3 - ' ,  
6 2 ,  
7 3 ,  
8 4 ,  
9 5 ,  
10 6 ,  
11 .

< >

50 ; 51 ; 1  
52 ; 2 53 ; 3  
R ; G ;  
B ; W ;

, RGBW .  
가  
가 ,  
가 , , 가 ,  
가 ,  
가 ,  
가 ,  
(R), (G), (B)  
가 ,  
가

(stripe) , (R), (G), (B) (mosaic) , (R), (G), (B) (delta) . (W) 가 (R), (G) (B) 3 RGBW . 1:1:1:1 ( 가 ) R, G, B W 4 30% 25% 가 , 가 (text)가 (rendering) TV 가 (monitor) 가 .

BW , RG ; ; ; , 1 , 1 , 2 가 , 2 M , M, N , N M , , 1 가 , 가 , 2 , , 1 가 , 가 , 2 , , ; ; ; , 1 , 1 , 2 가 , 2 M , M, N , N M , , 1 가 , 가 , 2 , , 1 가 , 가 , 2 , , .

;

;

;

[illegible]

1a 1b 1a 1 (50) 가

1a 1b , 1 .

(R), (G) 2 (B) 1 (51), (R), (G) (G) (B)가

(W) (52) 1 (51) (W), (G) (B)가

1 (1X) 1 (51) 2 (52)가

(R), (G), (B), (R), (G) (W)가

, 1 (1X) 2 (2X) 1 (1X) 1 (1X)

, 1 (1X) 2 (2X) (R), 2 (G), (52) 1 (51)가

(G) (B)가 (R), (G), (W), (R),

, 1 (1X) (R) 2 (2X) (2X) (R)가

1 (1X) (G) 2 (2X) (2X) (G)가

1 (1X) (B) 2 (2X) (2X) (W)가

(1X) (W) 2 (2X) (B)가

, 1b , 1 (1X) 2 (2X) (50)

가

(R) (B) (W)

, 1 (1X) (B)가 2 (2X) (W), 3 (3X)

(1X) (B), 4 (4X) (W)가 2 (2X) , 가 1 (W),

(1X) (W)가 2 (2X) (B), 3 (3X) (W),

4 (4X) (B)가 , 가 .

(R) , (50) (B) (W) )

(R) ( (G) ) 1/2 .

가 ,

가 ,

2 4 가 .

2 (B) , (W) (R) (B) (G) (W) ,

(R) 가 (R) (R) , (R)

(G1, G2, G3, G4), (B1) (W1) (R)

(G1, G2, G3, G4), (B1) (W1) (R)

(G) 가 , (B) (B) (R)

(B) 4 (G) 가 가 .

가 4 가 , (B) (W) 2 (rend

ering)

3a 3b 2 가 .

3a (R) (W) (R) 가

3b (R) (W) (R) 가

3b 가 , 4 (R) (W) (R)

(R) 가 , 1/4 (R) 4 (R)

2 (600, 11 ) 가 .

(B) (B) 가 (R) (G)

(W) , , 가

(B)

가 1

4 5 가 .

4 가 1

5 3 - ' .

4 (1X) 1 (51) 2 (52)가 (R), 1a (G), 1 (B), (R), (W)가 . , (R), (G), 1 (1X) 2 (2X) 1 (1X) 1 (1X) 2 (2X) 1 (52) 1 (51)가 (R), (G), (W), (R), (G) (B) 가 . , 4 , 가 ( , 121) (121) (171) (121) (121) (171) (121) (173) (123) (171) (175) (150) (171) 가 (173) 90) (121) (190) (177) (121) (177) (187) (190) (121) (177) (177) . (175) (190) (180, 4 5 ) (181) (177) (171) (171) (179) 9) (171) (100) (121), (121) (125) (121) 30 ° 90 ° (123) , 가 , (121) (100) (SiNx) (140) . (125) (140) (150) n n+ (150) (171) (160) . (160) (140) (171), (171) (160) 가 (173), (171) (171) (173) (123) (173) (160) (175) . 가 (150) (180) (180) (175) (179) (185, 189) (140) ) (125) (182) (180) SiNX (180) /SiNX . (180) (181) (175) (182, 189) (12 5) (190) (179) (180) (95) (97)가

, (190) 4 5 (121, 125, 123) (121) 가 .

, 1 .

2 가 6 가 .

6 2 (50) 가 .

(R), (G) 2 (B) 1 (51), (R), (G)  
(W) (52) .

1 (51) (R), (B) (G)가 , 2 (52)  
(R), (W) (G)가 .

1 (1X) 1 (51) 2 (52)가 ,  
(R), (B), (G), (R), (W), (G)가 .

, 1 (1X) 2 (2X) 1 (1X) 1 (1X)  
(B) (G)가 , 1 (2X) 2 (52) 1 (51)가  
(R), (W), (G), (R),

, 1 (1X) 2 (2X) (50)  
가 .

R) , ( (G) ) 1/2 (B) ( (W) ) (

, (B) (W) 2 (rendering) (R) , 가 (G) 1/2  
(B) (W) 2 (rendering) .

3 가 7 가 .

7 1 2 3 (B) (R) 1/2 (50) (W) 가 .

(R), (G) 2 (B) 1 (51), (B), (G)  
(W) (52) .

1 (51) (R), (G) (B)가 , 2 (52)  
(W), (G) (B)가 .

1 (1X) 1 (51) 2 (52)가 ,  
(R), (G), (B), (W), (G) (B)가 .

, 1 (1X) 2 (2X) 1 (1X) 1 (1X)  
(G) (B)가 , 1 (2X) 1 (2X) 2 (52) 1 (51)가  
(W), (G), (B), (R),

, 1 (1X) 2 (2X) (50)  
가 .

, (50) (R) (W) (50)  
(G) (B) 1/2 .

, (R) (W) 2 (rendering) (B) (G) 1/2  
(R) (W) 2 (rendering) (B) (G) 1/2

8 4 (50) 가 .

(R), (G) (B) 1 (51), (B), (G)  
(W) 2 (52) .

1 (51) (R), (B) (G)가 , 2 (52)  
(W), (B) (G)가 .

1 (1X) 1 (51) 2 (52)가 ,  
(R), (B), (G), (W), (B), (G)가 .

, 1 (1X) 2 (2X) 1 (1X) 1 2 (1X) 1 2 (1X) 1 (51)가  
(B) (G)가 (W), (B), (G), (R),  
(B) (G)가 .

, 1 (1X) 2 (2X) (50)  
가 .

, (50) (R) (W) (50)  
(G) (B) 1/2 .

, (R) (W) 2 (rendering) (B) (G) 1/2  
(R) (W) 2 (rendering) (B) (G) 1/2

9 5 (50) 가  
4 (R) 1/4, (B) 1/4 (W) .

1 (51) (R), (G) (B)가 , 2 (52)  
(R), (G) (W)가 , 3 (53) (W), (G)  
(B)가 .

1 (1X) 1 (51) 2 (52)가 ,  
(R), (G), (B), (R), (G) (W)가 ,  
(R), (G), (B), (R), (G) (W)가 .

, 1 (1X) 2 (2X) 1 (51) 3 (53)가  
B)가 (R), (G), (B), (W), (G) (G) (G) (G) (G)  
(B)가 .

, 1 (1X) 2 (2X) (50)  
가 .

, (50) (B) (50) (G) 3/  
4 .

, (50) (R) (50) (G) 3  
/4 .



(50) (W) (50) (G) 1  
 /2 .

(R) (W) 2 (rendering) (B) (W)  
 2 (rendering) . 가 .

10 6 (50) 가  
 4 (R) 1/4, (B) 1/4 (W)

1 (51) (R), (B) (G)가 , 2 (52) (B)  
 (R), (W) (G)가 , 3 (53) (W),

1 (1X) 1 (51) 2 (52)가 ,  
 (R), (B), (G), (R), (W) (G)가 ,  
 (R), (B), (G), (R), (W) (G)가

, 1 (1X) 2 (2X) 1 (51) 3 (53)가  
 (R), (B), (G), (W), (B) (B) (G)가  
 (G)가 , (R), (B), (G), (W), (B) (B)

가 , 1 (1X) 2 (2X)

, (B) (G) 3/4  
 .

, (R) (G) 3/4  
 .

, (W) (G) 1/2  
 .

(R) (W) 2 (rendering) (B) (W)  
 2 (rendering) . 가 .

, 5 6 (R) (B) 1:1 1:  
 1 (R) 1/8, (B) 3/8 (W) .

11 가  
 11 (500), (700), (600), (1000), (400),  
 (1000) (TFT , ) ,  
 가  
 TFT , , , ,

(600) LCD ( ) R(red), G(green), B(blue)  
 (Vsync), (500) (Hsync) (CLK)  
 (400)

(500) (600)  
 가 LOAD 가 (1000)

(400) (500) 가 .  
(1000) TFT , TFT ,  
(Von, Voff) 가 (400) (600)  
(CPV OE ) (G1, G2, ..., Gn)  
가 .  
) 2 (600) (R) (W) 2 (R) (W)  
(500) (400) 가 .  
가 가 가 .  
가 가 .  
RGBW .  
(W) RGB 가 50% 70% 가 .  
, RGBW RGB  
가 .  
, RGBW 가 가 .  
, , 가 .

(57)  
1.  
;  
;  
;  
;  
;  
;  
1 , ,  
2 , M, N ,  
M 1 2 가 , M N  
M M N .  
2.  
1 ,  
1 가 , 2 ,  
가 .

3.  
1 ,  
1 , 가 , 2 ,  
가 .

4.  
2 3 ,  
.

5.  
;  
;  
;  
;

2 , M, N , 1 , ,  
M M 1 2 가 , M N  
M ,  
M N .

6.  
5 ,  
1 , 가 , 2 ,  
가 .

7.  
5 ,  
1 , 가 , 2 , 가  
.

8.  
6 7 ,  
.

9.  
;  
;  
;  
;

N

M, 3 가 1, 2 가, M N 1

M N .

10.

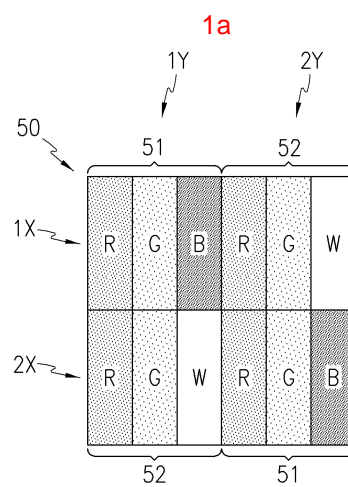
9, 1 가, 2 가, 3 가, .

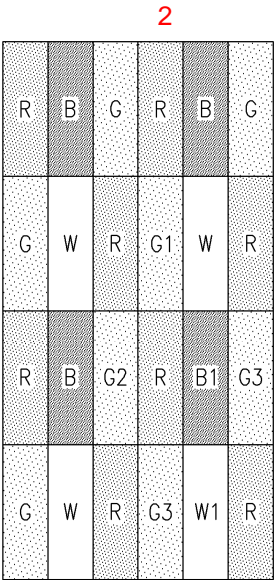
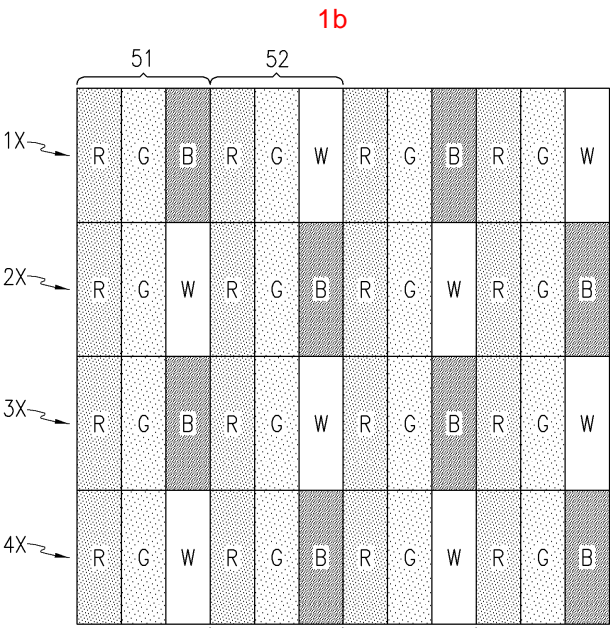
11.

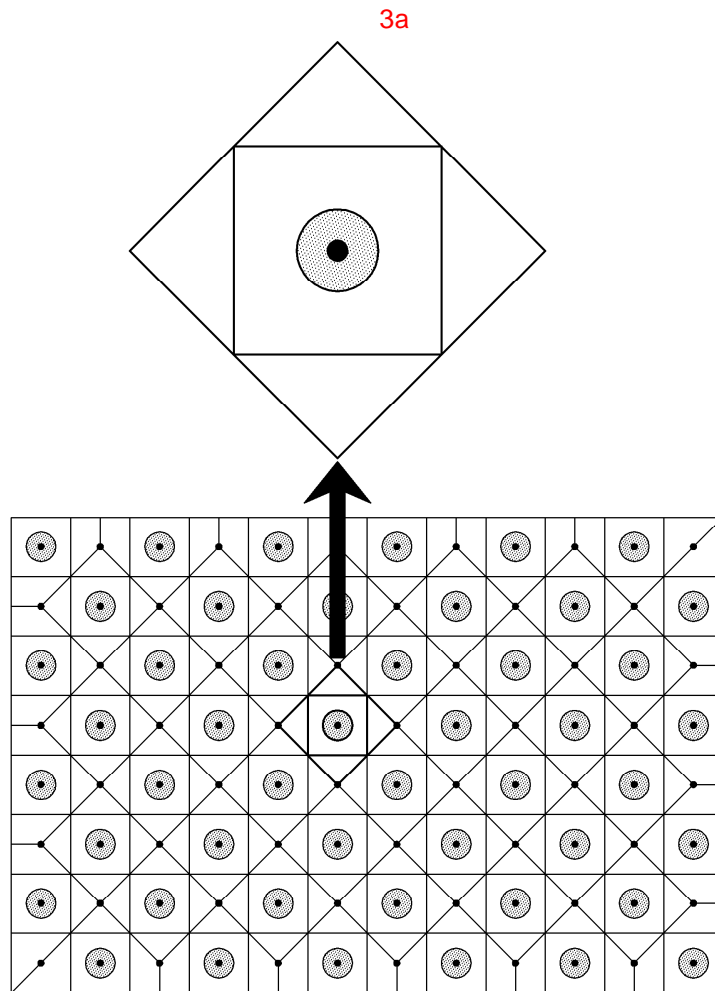
9, 1 가, 2 가, 3 가, .

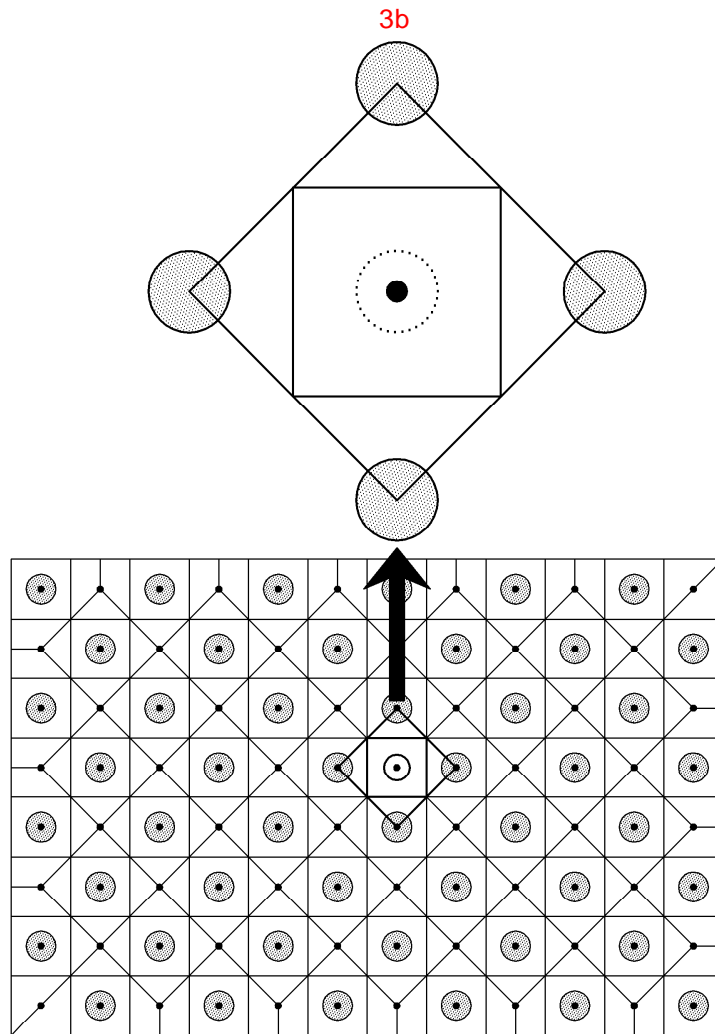
12.

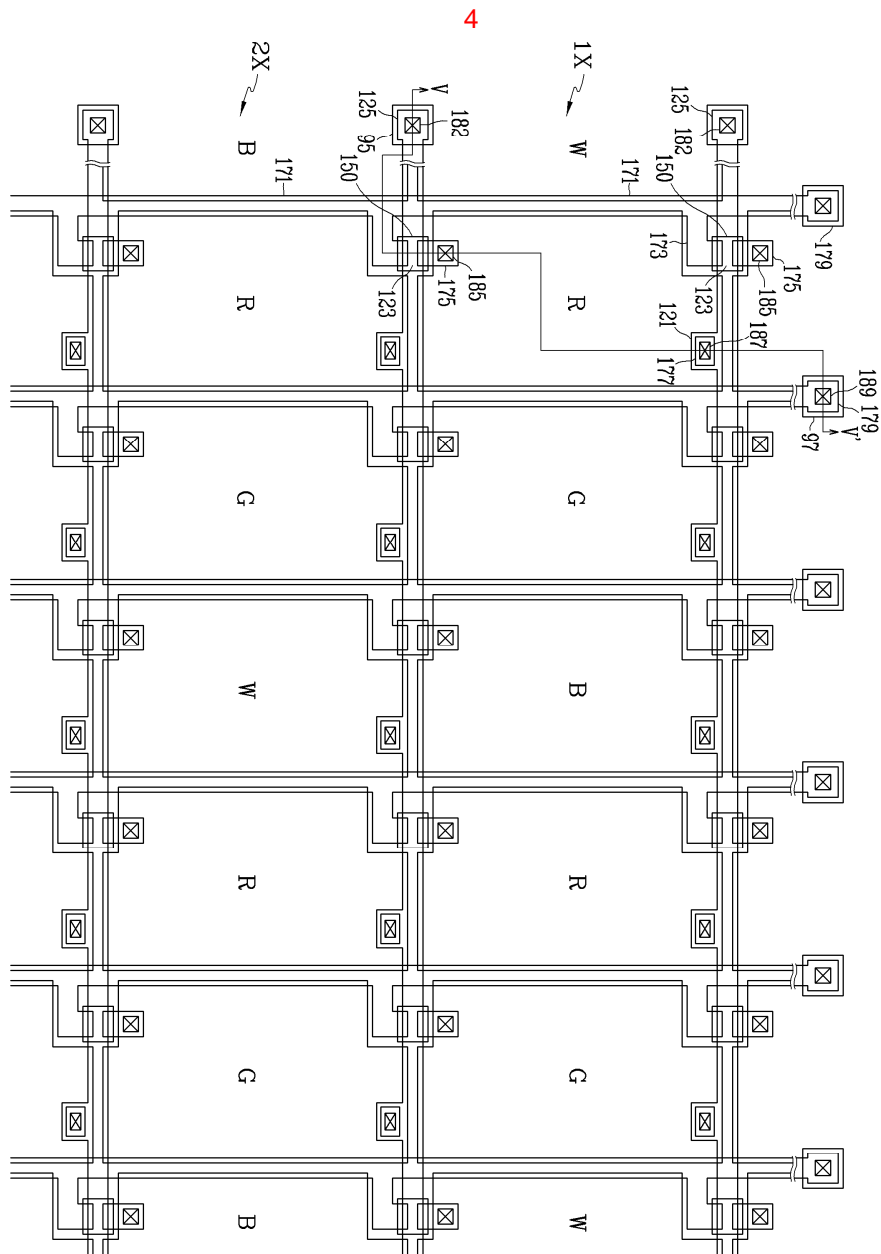
10 11, 가, 가 .



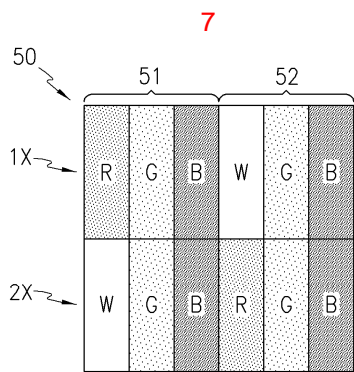
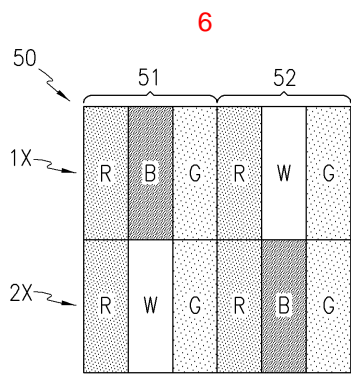
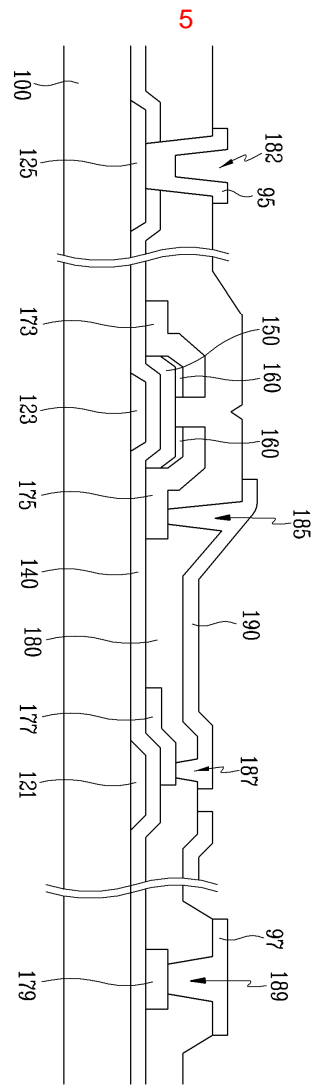


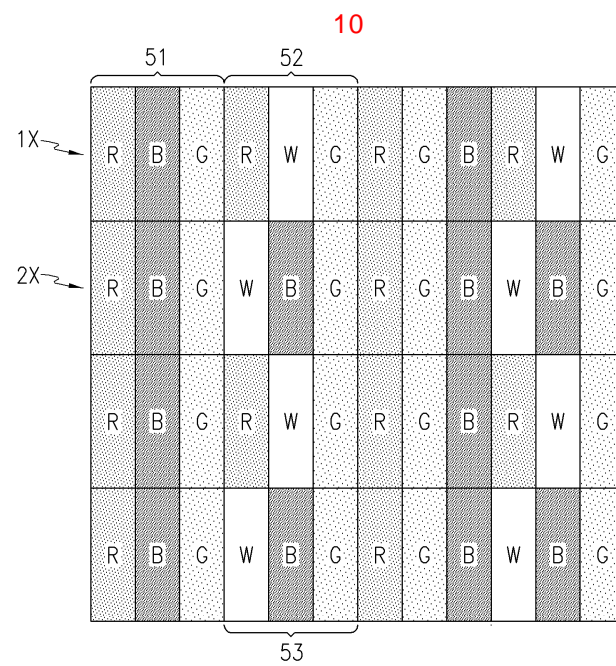
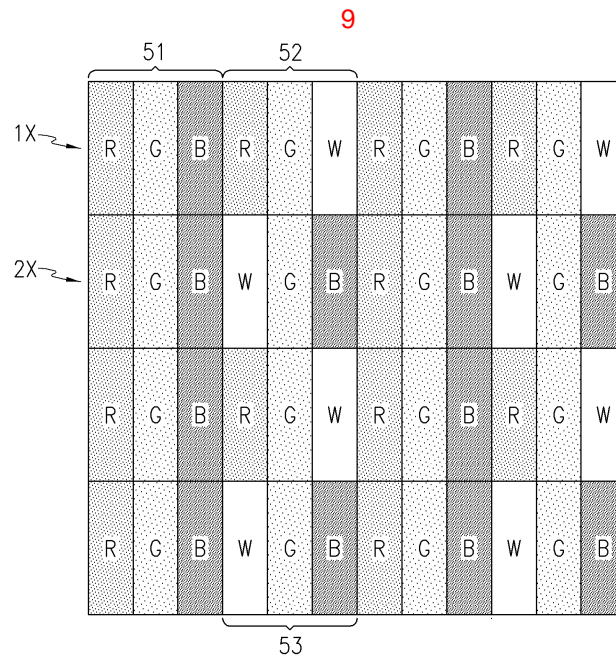
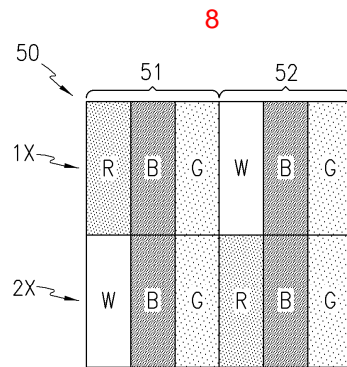


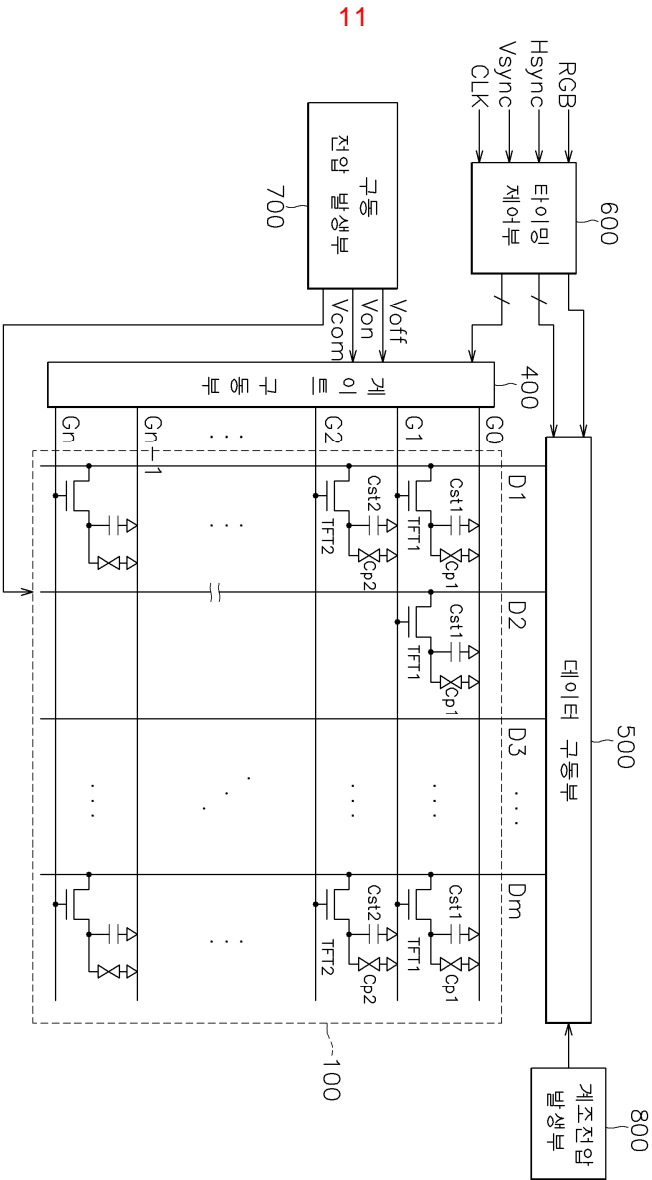












11

专利名称(译)	液晶显示器		
公开(公告)号	<a href="#">KR1020040083648A</a>	公开(公告)日	2004-10-06
申请号	KR1020030018196	申请日	2003-03-24
[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	ROH NAMSEOK 노남석 LEE SEONGDEOK 이성덕 HONG MUNPYO 홍문표 KIM CHANGYEONG 김창용		
发明人	노남석 이성덕 홍문표 김창용		
IPC分类号	G02F1/1335 G02F1/133		
CPC分类号	G02F1/133514 G02F2201/52		
其他公开文献	KR100915238B1		
外部链接	<a href="#">Espacenet</a>		

# 摘要(译)

其中相应的奇数和由M像素行组成的像素组与M像素行相邻的N像素行的液晶显示器被布置为M像素行移动到行写入方向的形式，与之相比较。M像素行作为点，第二点连续排列，N像素行连续第二点，M，N点由第一点，红色像素和绿色像素组成，白色像素点由红色像素组成暗示并对应于像素电极，绿色像素和蓝色像素绝缘基板，在绝缘基板上形成有线写入方向的多条栅极线，多条数据线，连接到栅极线的多个开关元件和数据线，和连接到开关元件的多个像素电极排列。多条数据线与栅极线绝缘，同时在绝缘基板上形成列方向并且相交。渲染和RGBW。

