

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

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(21)	10-2003-0043978	
(22)	2003 06 30	
(71)	20	
(72)	1 1027-31	
	1145	641 603
(74)		
(54) 4		

가 4 ,  
R(Red), G(Green), B(Blue), W(White) ; ,  
; R, G, B, W  
R, G, B, G R, G, B, W  
.  
7  
 , 4 , W(White) , ,  
1(a) 1(b) .  
2(a) .  
2(b) 2(a) II-II' .  
3 .

4 4

5(a) 5(b) 4

6 4

7 4

\* \*

102 : 103 :

105 : 107 :

108 : 109 :

115 : 116 :

117 : 118 :

119 : 151a,152a : R

151b,152b : G 151c,152c : B

151d,152d : W

, R,G,B,W 가  
4

, (Mobile Phone), PDA, 가  
(Flat Panel Display Device) 가  
LCD(Liquid Crystal Display), PDP(Plasma Display Panel), FED(Field Emission Display), VFD(Vacuum  
Fluorescent Display) (LCD)가

가 TN 가 , 가 TN  
가 가 가  
(refractive anisotropy) 가 가

가 , (wide viewing angle characteristic)  
(In Plane Switching Mode) 가  
IPS 가

, 1(a) 1(b)

1(a) , IPS (1) (5) (7)  
(1) (7) 가 (42)  
(5) (7)

(5)가 (7)가 , (5) (42)가 (7) (5) (1) (7)  
 .  
 (42) , 가 (42) ,  
 , IPS (5) (7) 1 ( 가 TFT )  
 , 가 (42a) (5) (7)  
 , 2 ( 가 ) (42b) (5)  
 (7) , 1 가 2 (42a,42b)가 (twist)  
 , (42) , 1(b) X,Y  
 .  
 , 2 IPS 가  
 , IPS (3) (2)  
 (5) (7) (2) (3)  
 (5) (8) (7) (3) (9)  
 (storage capacitance)  
 (2) (3) (16), (17), (18)  
 (19) 가 가 (15)가 가 , (7) 가  
 ,  
 IPS 2(b)  
 2(b) , 1 (20) (16) , 1 (20)  
 (18) (22) (19) (22) (17) (passivation layer;24)  
 , 1 (20) (5) (7) (22) (7)  
 (3) , (5) 가  
 2 (30) (32) (34) (32) 가  
 ( , ) (34) R(Red), B(Blue), G(Gree  
 n)  
 1 (20) 2 (30) (40) (1)  
 IPS (3), (5) (7) (2)  
 (3), (5) (7) (2)  
 , 3  
 , 2(a) 2(b) , 3 IPS  
 R(Red), G(Green), B(Blue)  
 , R, G, B ( ,  
 ) 가 R, G, B R, G, B ( 가 1 (20) 2  
 (30) , R, G, B ( )  
 ) ,

IPS 가 .

3 )가 , R, G, B ( , R, G, B가 (34) R, G, B (34) R, G, B (color resist) R, G, B (34) R, G, B (34) 가 .

R, G, B, W 4

R(Red), G(Green), B(Blue), W(White) ; R, G, B, W ; R, G, B, G R, G, B, W .

가 가 IPS ( , R, G, B 가 가 R, G, B (White) R, G, B W W W 55% 가 40% ( , R, G, B ) 4 R, G, B 4 가 4 , 4 4 4 4 IPS R, G, B, W 4 가 R, G, B, W R, G, B, W IPS 가 2 W 가 5(a) W 가 IPS W 가 5(a)

[illegible]

R, G, B, W                    )(152a 152d)가                    , R, G, B, W                    2  
R, G, B, W                    .  
B                    (151c)                    W                    , 1                    (151a 151d)                    R                    (151a)                    G                    (151b)가  
W                    (152d)가                    (151d)가                    R                    (152a)                    G                    (152b)가                    (152a 152d)                    B                    (152c)  
                  가                    , 2                    ,  
(151a,152a), G                    (151b,152b), B                    (151c,152c)                    W                    (151d,152c))                    2                    ( , R  
(107)                    (105)  
2                    ,  
.

                  ,                    IPS                    R, G, B, W                    4  
                  ,  
.

(57)  
1.  
R(Red), G(Green), B(Blue), W(White)                    ;  
;  
.  
R, G, B, W                    R, G, B, G                    R, G, B, W  
.  
2.  
1                    ,                    .  
3.  
1                    ,                    ,  
;  
4.  
3                    ,  
.  
5.  
1                    ,  
;  
가  
6.  
1                    ,                    .

7.

R(Red), G(Green), B(Blue), W(White)

;

;

,

R, G, B, W

R, G, B, W

,

.

8.

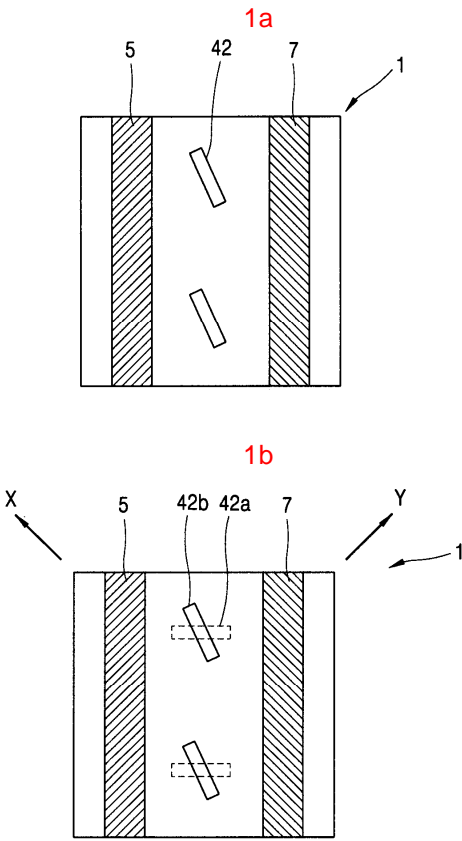
7

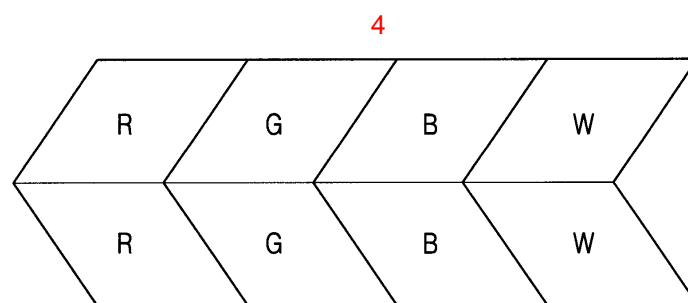
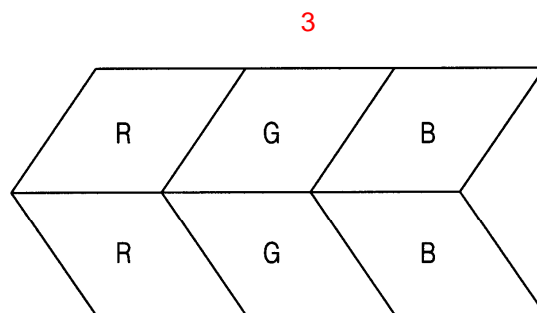
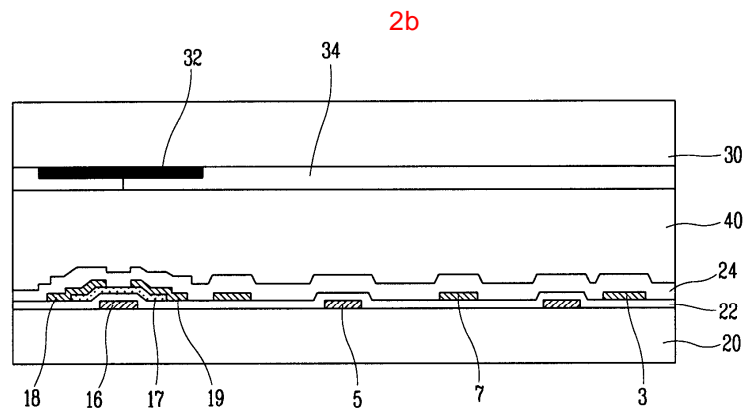
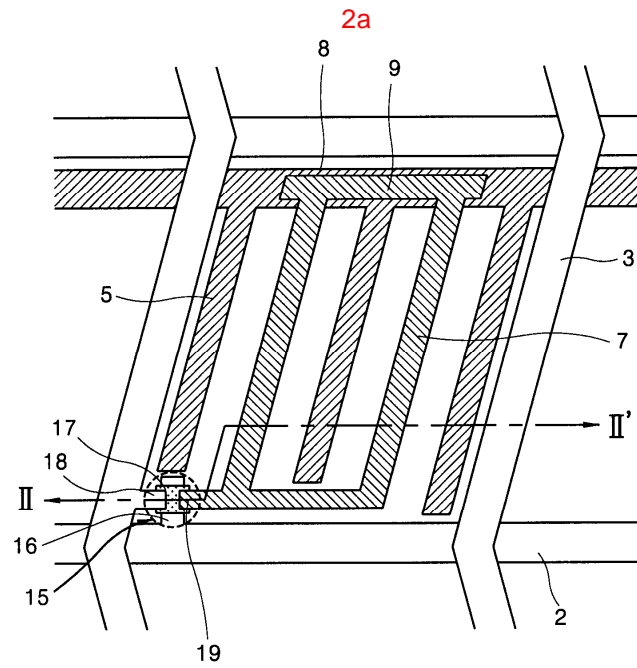
,

R, G, B, W

R, G, B, W

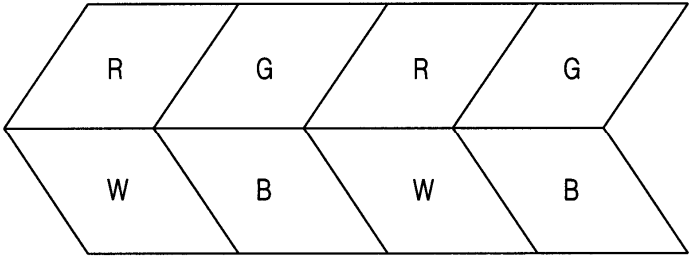
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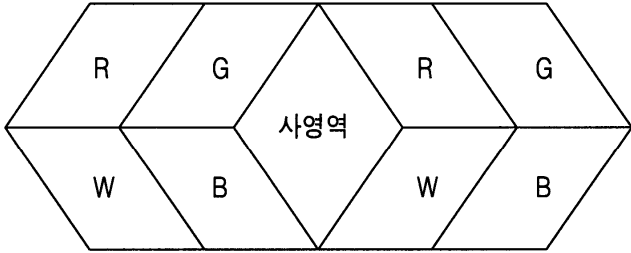




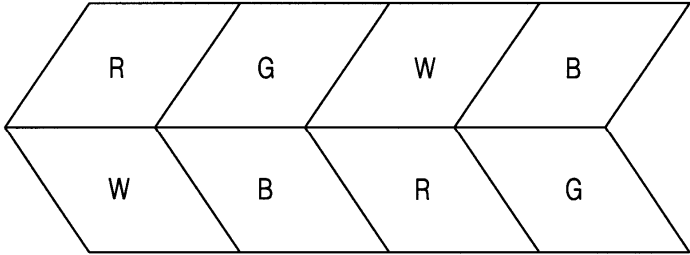
5a

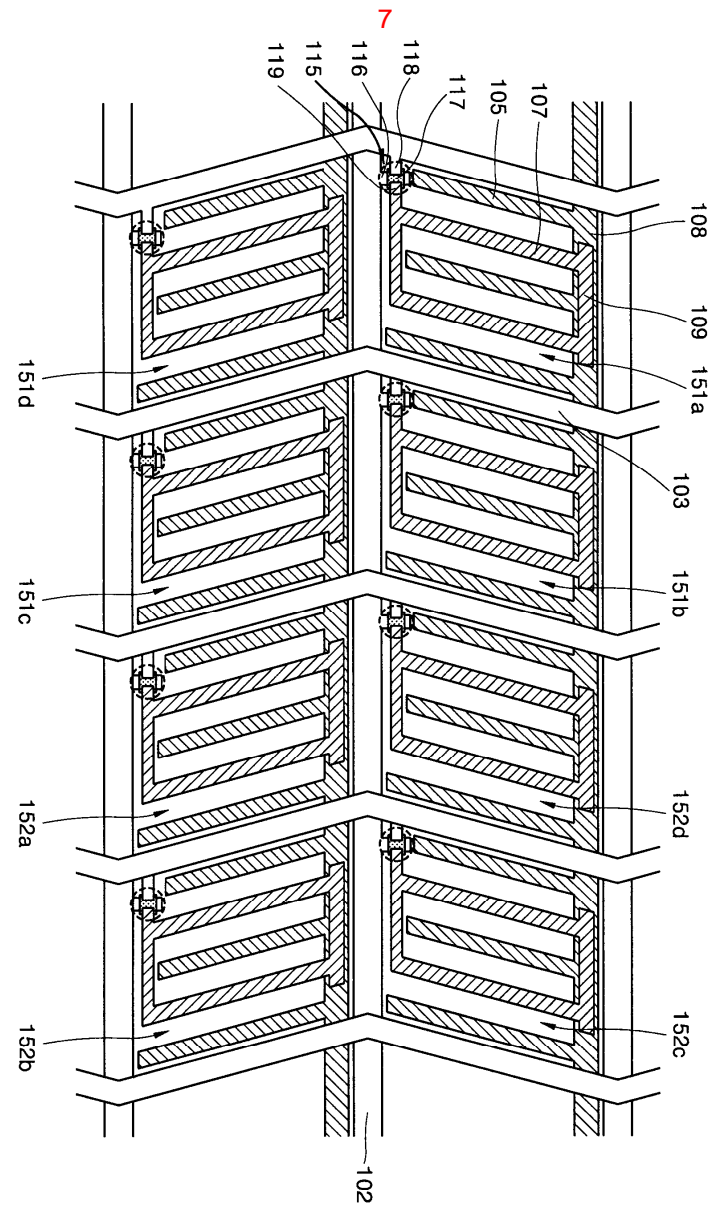


5b



6





专利名称(译)	4像素结构横向电场模式液晶显示元件		
公开(公告)号	<a href="#">KR1020050003262A</a>	公开(公告)日	2005-01-10
申请号	KR1020030043978	申请日	2003-06-30
[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		
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IPC分类号	G02F1/1343		
CPC分类号	G02F2201/52 G02F1/134363		
代理人(译)	PARK , JANG WON		
其他公开文献	KR100978254B1		
外部链接	<a href="#">Espacenet</a>		

#### 摘要(译)

本发明涉及一种4像素结构的平面转换模式液晶显示装置，具有改善的视角特性，提高了亮度。并且由定义的多个R（红色），G（绿色），B（蓝色），W（白色）像素的多条栅极线和数据线，布置在子像素内的驱动器组件以及至少一对电极组成。并且R，G，B，W像素被布置在围绕R，G，B，W像素的数据线方向和布置成Z字形的栅极线中，并且其中每个R，G，B，G像素是相邻的。至少一对电极布置在子像素内并形成平面切换。在平面切换模式下，4像素结构，W（白色）像素，锯齿形，固定角度场，亮度。

