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(12) (A)

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(30) JP - P - 1999 - 00321902 1999 11 12 (JP)  
JP - P - 2000 - 00330859 2000 10 30 (JP)

(71)

1

(72)

,	- 5656,	.	6
,	- 5656,	.	6
,	- 5656,	.	6
,	- 5656,	.	6
,	- 5656,	.	6

(74)

10

(54)

가, , RGBW - LCD . 가, RGBW RGB

3

가 가

, 가 가  
(navigation)

RGB      RGB      (W)가      RGBW      ( )가      (Laid - open)      10998/1998      (      RGBW ,

, 가 , , , , ( )

RGBW

1  
-           W  
-           Ymin   Ymax  
max)  
-           ,

2 , ,  $W=f(Y_{\min}, Y_{\max})$   $Y_{\min}$   $Y_{\max}$   
 , , , .

3 ,  $W=f(Y_{\min}, Y_{\max})$   $Y_{\min}$  가 (variable value)  $Y_{\max}$  (constant value)  $Y_{\min}$  , 가 , .

4 , , n  
 $W = f(Y_{min}, Y_{max})$   
 $+ (MAX + )^n$

1 4 , , W  
 $,$

6 , , ,  
 $,$

$W = f(Y_{min}, Y_{max})$

$W = f(Y_{min}, Y_{max})$

7 , , , ,  
 $,$

가 가 , , ,  
 $,$

8 , , , ,  
 $,$   
 $,$   
 $,$   
 $,$   
 $,$   
 $,$   
 $,$   
 $,$

1 (100) .

2 , (gate bus), 1 (1) (source bus)

3 1 (3) (6)

4 2 (chromaticity diaphragm).

5 3 .

6 3 .

7 2 .

8 2 .

9 3 .

1 . . . . .  
 (100) (1) . 2 (1)  
 . (1) 2 (row-like) (G1 Gm)(m:  
 (column-like) (S1 Sn)(n:) (G1 Gm)  
 (2) , (S1 Sn) (3) .

, R( $\dots$ ), G( $\dots$ ), B( $\dots$ ) W{( $\dots$ )} Lij Gi G1+1(i=1  
m) Sj Sj+1(j=1 m)

$$Gi \quad TFT \quad Qi_j \quad Gi \quad Sj \quad TFT \quad Qi_j \quad Sj \quad Lij \quad . \quad , \quad Lij \quad . \quad ,$$

(drain) . 가, Lij ( ).

(12)

, RGBW Lij , , , 2

R:Lij ( $i=1,2,3,\dots,m-1$ ,  $j=1,5,9,\dots,n-3$ )

G:Lij ( $i = 1, 2, 3, \dots, m$ ,  $j = 2, 6, 10, \dots, n - 2$ )

B:Lij ( $i=1,2,3,\dots,m$ ,  $j=3,7,11,\dots,n-1$ )

W:Lij ( $i = 1, 2, 3, \dots, m - 1$ ,  $j = 4, 8, 12, \dots, n$ )

(1) ,

가, TFT, , , , 가, RGB, 가

, (3) 가 (100) (reference potential) (clock frequency) ( ).

1 (100)

(4) TFT Qij (on condition) .  
 2) ( 2 ).

, 8 (Ro, Go, Bo Wo) (3)  
 (latch portion) ( ) , , (3) .

$$, 8 \quad \begin{array}{c} (\text{Ro}, \text{Go Bo}, \quad \text{Wo}) \\ (\text{Ri}, \text{Gi} \quad \text{Bi}) \end{array} , \quad (6) \quad (5)$$

) . 가, ( ) (4) Ro, Go, Bo, Wo , DAC ( )  
 (positive) (negative)  
 (polarity) , DAC . DAC  
 Ro, Go, Bo, Wo  
 W , Ro, Go, Bo, Wo .

가 DAC , DAC (gradation) - (current - am  
ed), (S1 Sn) ( 2 ). (G1 Gm)  
TFT가 (on) , TFT

가 가 (additive color mixing) (1)

(6) (6) 3 , Ri, Gi, Bi 3 (3) RGBW , Ro,  
Go, Bo Wo (5) 8 , ,  
Ri, Gi, Bi .

, W (Wo), 가 .  
(6) (7) (look - up table) (8) 가 . (7) Ri, Gi, Bi  
Ymin Ri, Gi, Bi  
(dimensions)

Ymin W Wo 255 (256 -  
 Ymin , 1 가 Ymin PROM  
 . , (4) (6) 가  
 ,  
 , 가 Ri, Gi, Bi 가 (6)  
 W Wo , , RGB  
 Ro, Go, Bo W Wo (in synchronization with)  
 (6) , (6) (original) Ri, Gi, Bi W  
 , 1  
 1 Wo=f(Ymin, Ymax) (optional) , , W  
 Wo , , Ymin ,  
 Ymax  
 Ymin Ymax 가 1  
 , , Wo=(Ymax\*Ymin)/MAX<sup>2</sup> , MAX Ri, Gi, Bi  
 , , 가  
 가, Wo=MAX\*((MINRGB+ )/(MAX+ ))<sup>n</sup> (2 2 ) 1  
 RGB , W W (6) Wo  
 2 , Wo W , MAX , Ri, Gi, Bi  
 , , , , ,  
 , n (100) (target)  
 , =0 Wo 가 MAX , , Ri, Gi, Bi  
 MINRGB(Ymin) 가 MAX , , (100) (1) 가  
 ,  
 가, =0 =0 Ri, Gi, Bi MINRGB(Ymin) 가  
 가 , Wo 가 , Ri, Gi, Bi MINRGB(Ymin) 가 MAX  
 가 , Wo=MAX 가 , , (100) ,  
 d) ,  
 , (100) 256 , MAX MAX=255  
 2 , (6) 가 (LUT)  
 , , ASIC , RGBW 가 PROM EEPROM  
 , 256 ( )

, 2

4

(chromaticity diaphragm)

, 4 R, G, B W Ri, Gi, Bi , Ri=MAX G=B=0  
 , (R) , G=MAX R=B=0 , (G) , B=MAX R=G=0 , (B)  
 , , 가, (W) Ri=MAX R=G=B , ,  
 . " R, G B 가 4 RGB  
 . " , (W) , ( ) - 가 .

가, W

(1) " R=G=B , W 가 , 가

(2) " RGB가 , R, G, B 가 , W=0 , ,

(3) " R, G, B R, G B . " , W가 R, G B  
 , R, G B 가 R, G B  
 가 .

, R, G B (MINRGB) W 2 (1), (2) (3)

, (6)가 2 Wo ( 1 3)가 5 2

5 MINRGB X 가 256 - , MINRGB 2 , (6) Wo Y  
 , 2  
 1 , Ri, Gi Bi 가 , 가 , MINRGB=0 ,  
 Wo=0 2 ( ) . , Wo=0  
 ,  
 2 , = =0 n=1 2 가 , , 2 Wo=MINRGB  
 , 5 ( ) (characteristic) 가 , (5)  
 ,  
 3 , " n" 2 " 1" 가 , 3 , n=2  
 = =0 . 가, MAX=255 가 2 Wo=255\*(MINRGB/255) ^n( " 3" ) 3 5 ( 3)  
 ,  
 ,

2 ( 3) , Wo MINRGB 100% 가 , W (glaring)  
 , MINRGB , (Wo) 가



( )

가

, RGBW

(merit)

, RGBW

, RGB

RGBW

가 RGBW

,

가

,

RGBW

가,

(scope)

가

(1) 1:

,

RGBW가 2

,

,

(2) 2:

1 ,

7

(wired)

,

8

RGB

, TFT

가

가

가,

(3)

(sort)

(3) 3:

(6)

(3)

9

(integrated)

(wiring)

W

, 3

(entrance portion)

(amount)

가

가

(57)

1.

(main)

tensifying)

, , ,

, -

, 가 가

- (luminance - in

,

,

,

,

,

,

,

,

,

가  $\rightarrow$  W

$Y_{min}$      $Y_{max}$

$W=f(Y_{min}, Y_{max})$

2.

1                                  ,                           $W=f(Y_{min}, Y_{max})$                            $Y_{min}$                            $Y_{max}$

가                                  ,

3.

1                                  ,                           $W=f(Y_{min}, Y_{max})$                            $Y_{min}$     가                          ,                           $Y_{max}$                           ,                           $Y_{min}$

4.

1                          3                                  ,                          ,                          n                                  (real number  
s)  
MAX                                  ,                           $W=f(Y_{min}, Y_{max})$   
 $W=Max^* \{ (Y_{min}+ ) + (MAX+ ) \} ^n$

5.

1                          4                                  ,                                  ,                          W

6.

1                          5                                  ,

$W=f(Y_{min}, Y_{max})$

$W=f(Y_{min}, Y_{max})$

7.

1 6

가

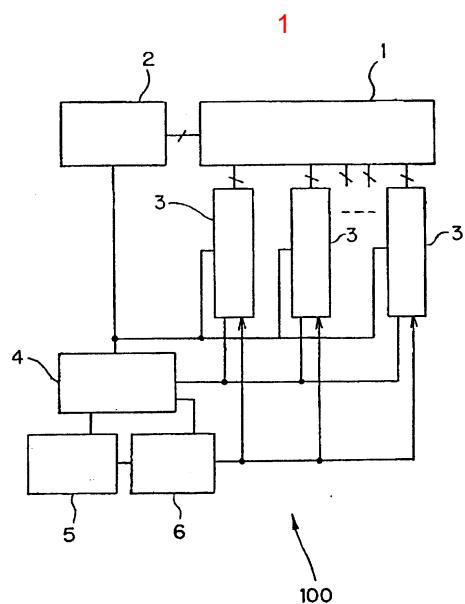
가

가

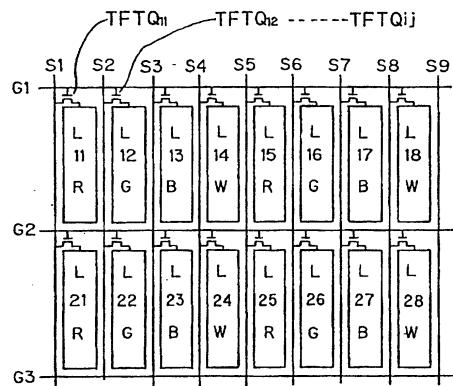
8.

1 6

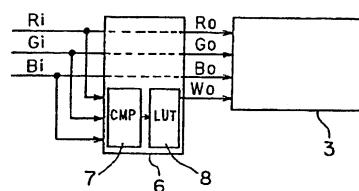
가



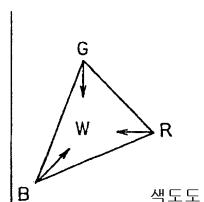
2



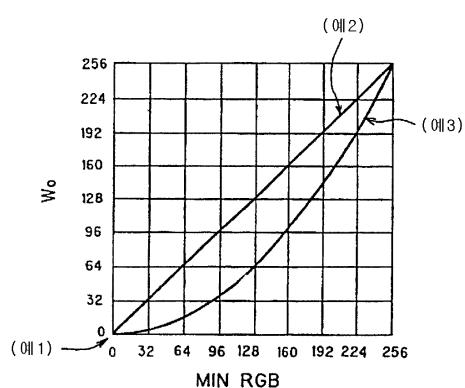
3



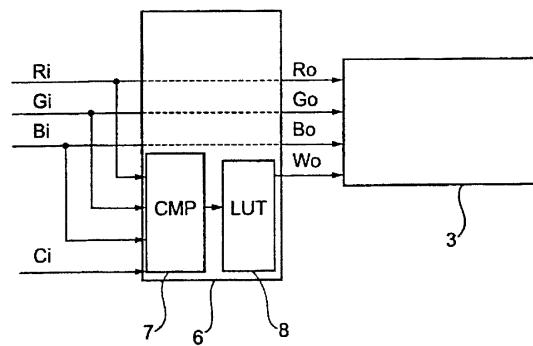
4



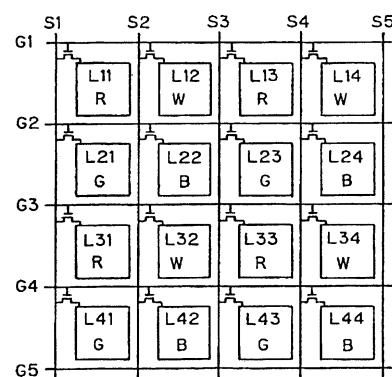
5



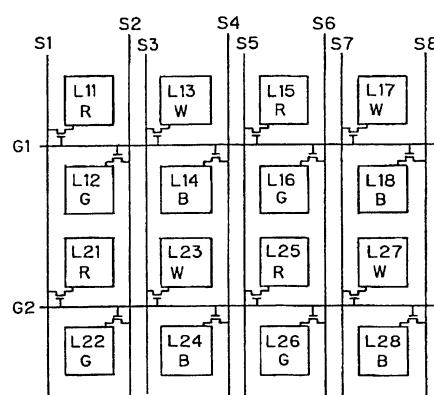
6

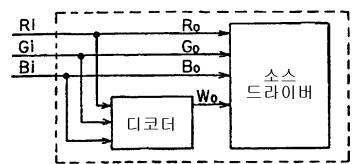


7



8





专利名称(译)	具有高亮度的液晶显示装置		
公开(公告)号	<a href="#">KR1020020013831A</a>	公开(公告)日	2002-02-21
申请号	KR1020017008790	申请日	2000-11-10
[标]申请(专利权)人(译)	统宝香港控股有限公司		
申请(专利权)人(译)	血来香港控股的品牌		
[标]发明人	HIRANO SATOSHI 히라노사토시 YASUI MASARU 야수이마사루 KAMIYA TAKEO 카미야타케오 SHUJI HAGINO 슈지하기노		
发明人	히라노,사토시 야수이,마사루 카미야,타케오 슈지,하기노		
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其他公开文献	KR100777791B1		
外部链接	<a href="#">Espacenet</a>		

## 摘要(译)

RGBW型LCD本发明涉及一种RGBW型LCD，其中可以利用解码器根据预定的计算显示适当的发光图像，其中嵌入了一些预定的计算公式。此外，不仅RGBW图像显示而且RGB图像显示可以由预定的控制信号使用。©KIPO和WIPO 2007

