

(19)
(12)

(KR)
(B1)

(51) 。 Int. Cl. ⁷
G02F 1/1335

(45)
(11)
(24)

2002 02 07
10 - 0322463
2002 01 16

(21) 10 - 2000 - 0023373
(22) 2000 05 01
(62) 1999 - 0039454
: 1999 09 14

(65) 0000 - 0000000
(43) 0000 00 00
1999 09 14

(30) 1995 - 232682 1995 09 11 (JP)

(73) 가 가
가 가 4 - 6

(72) 가 가 460
3550
가 13
가 460

가 256 - 11

(74)

:

(54)

, C.I.E1931

가,

가

1

1

2

C.I.E. 1931 xy

3

, ,

3

4

()

5

()

6

()

7

4 6

(視角)

8

9

8 -

10

8 X - X

11

8 XI - XI

12

13

14

15

14

.

16

14

.

17

18

19

20

21

22

23

<

1A, 1B: 2:

3: 3A:

4: 5:

6: 7:

8: CPU 9:

14: 15:

16: 18:

18A: 19:

20, 25: 21, 26:

22: 23:

24: 100:

101: 102:

102B: () 103:

103A: 10B: (冷)

103C: 200: PC

201: 202:

207: (電界) 208:

300:

1: (半値幅)

2: (同色視角)

1

가

가

가

, CIE 1931

가,

x

가 0.0314,

, y

가 0.0273

, x

가 0.0177

가 14

가 60

가 18

가 8

0

가 26

가 90

, C.I.E1931

, (xr, yr), (xg, yg), (xb, yb), (xw, yw)

CIE 1931

, x 가 xr, y 가 yr, x 가 xg, y 가 yg, x 가 xb, y 가 yb

$$\{(x_r)^2 + (y_r)^2\}^{0.5} < 0.125 \times \{(x_r - x_w)^2 + (y_r - y_w)^2\}^{0.5}$$

$$\{(x_g)^2 + (y_g)^2\}^{0.5} < 0.125 \times \{(x_g - x_w)^2 + (y_g - y_w)^2\}^{0.5}$$

$$\{(x_b)^2 + (y_b)^2\}^{0.5} < 0.125 \times \{(x_b - x_w)^2 + (y_b - y_w)^2\}^{0.5}$$

가 14

가 60

가

()

가

(1)

1

(100)

(100)

1

가

, 3

가

(100) , 가

100)

冷) (103B), (103C), (103A) 가 (103A) (102), (103) (101)가

(103B) (103A) (100) (100)

angle) (color differences)가 (viewing angle) 가 (100) 2 (100)

(isochromatic viewing angle) 2 가 (103) 2 (103)

1 (103) 1 (100) 2

가 (103) 1 (103)

가 가 (3) (3)

2 C.I.E 1931 (100) (3) , , , , R', G', B', W' 가 , R', G', B' 가 3 , , , , R', G', B' 가 W' 가 , R', G', B' 가 3 , R', G', B' 가 2 , R', G', B' 가 3 가

가 , R', G', B' W' 가가,

3 , 2 , 3 R', G', B' xy , R', G', B' x , y , W' x , y , R', G', B' W' $\sqrt{\Delta x^2 + \Delta y^2}$

2 , R', G', B' W' 가 , R', G', B' W' 가 가

가 (100)

가 (in - plan switching type)

13 (100) (100)
(1A) x (row) y (column)
(2) (4)

(2), (2) (1A) (4), (4) (2),...

(3) (2) (4) y x

(2), (4) (3) 가 가

(5) (100) (5) (6)가
(6) (3) ()가

8 (5) (6) (7) CPU(
가 (9)

(4) 가 (7)

(100)

8 (100) Z
, x , y 8 IX - IX
9 , X - X 10 , XI - XI 11

8 (1A)(13) x (4) (4)
(2)

1 (4) , 3 (14) 2 (14) ,
(3) y (3) (-)y
(2) 1

2 (2), (4) (14) (1A) (
(15) (15)(9, 10, 11)
(3) (2) (4) (Cstg)

TFT

(15) , , TFT (16) (3) .
 (16) , Si , (15) (2) TFT (3)
 . , (2) 가 .

, (15) , 8 , y x
 (3) .

, (3) , TFT (16)
 (3A) .

, (15) (18) (18) (18) ((18) TFT ()
 14) , (+)y , (18) (4) x , (-)
 (18A) y

, (18) (4) , (4) TFT가 O
 FF (15) (18) (Cstg) . 가 (Cstg) .

, TFT (3A), (18A) (16)
 (P) , (16) , .

, TFT, (3), (18) (Cstg)가 (15)
 (20) , (19)(9, 10, 11) , (19)
 (21) (100) .

, (1B) , 9 ,
 (22) . (22) , TFT (22) , 8
 , 가 .

, (22) 3 (23)가 , (23)
 . , (22) 가 (24) (24)
 (25) (23)가 . , (26)

, (1A) (20) (21), (1B) (25) (26)
 12 .

(18) (14) 가 (207) , (20) (25)
 (208) (26) ∅ LC ∅ P . , (21) (209) ∅ P .
 . , ∅ LC = ∅ P . , LC ,

가 (正) 7.3(1kHz), n 0.073(589nm, 20)

lack mode) (20), (25) (21), (26) (normally b
LC LC (1A) E LC
LC (normally white mode)
140
18
(101) 가
(vertex angle) 4 100°
(101)
가
4 - 67016
80° (100) 가 70° 가
1 2
가 (100) (103)
(100) 가
(100) 가
(103) 가
(101) 가
(103B) (103) (103A) (103A)
19 (103B) 20 (102)

(100) 가
1 () , 3
1 , 1, 2 2 1 ,

(2)

21 , 1 , 1
(100) (101) (102) 가 가 (102B) 1
80° , 1 70°
, 2 1 , 1 가 (100) 80° 2 가

(3)

22 , 1 , 1
(101) 2 .2 , 가
, 1 ,
, 1 .

(4)

18 가 , 1 4 90°
, 1 60° ,

(5)

3 , 100° ,
, 90° ,

, , 3 가 ,

(6)

C , 1 , PC PC 14 , P
(202)가 , (200) , (201)
14 가
, 30cm ,

15 , (201) , d , 가 .
 , , 3 .

16 , ,
 , 6 , 30° 가 .
 , 2 , 2 (30° × 2)

(7)

1 , 17 , 가
(300) , (300) ,
 , 18 ,
 , 40cm ,

16 (300) , 18 2가 80° 가 ,
 , ,

6 가 , , ,

(8)

1 , 16 ,
 , 26 , ,

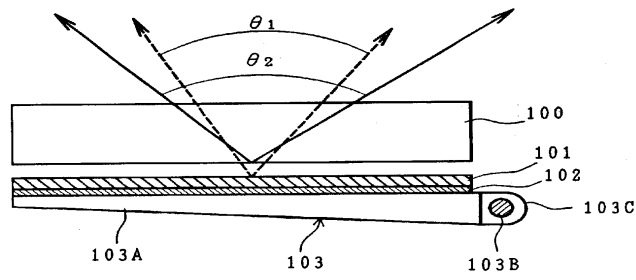
(9)

1 , (6)(13) 6 ,
 , 26 , , 가

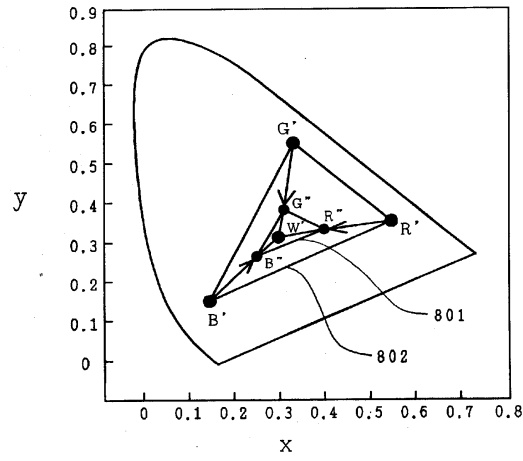
(10)

(101) , 1 18 가 , 23 ,
 가 .

1



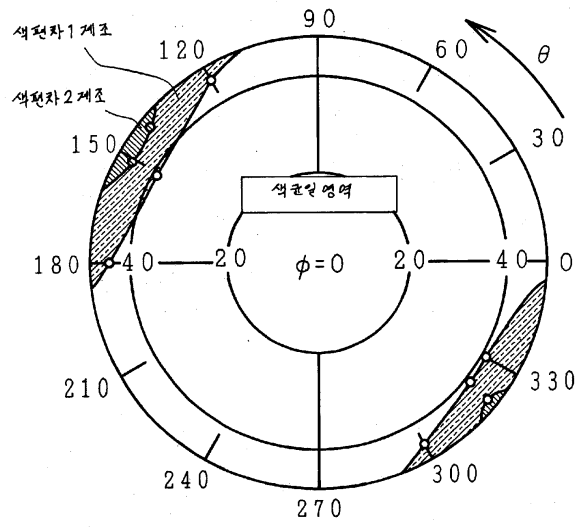
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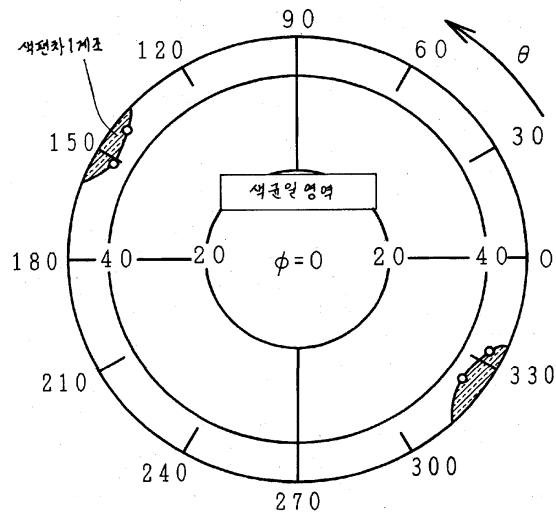
3

표시 색	색도 좌표		x-xw	y-yw	$\sqrt{ x-xw ^2 + y-yw ^2}$	색도 좌우 편차	
	x	y				좌 편차	우 편차
백 w'	0.3014	0.3149	-	-	-	-	-
적 R'	0.5528	0.3475	0.2514	0.0326	0.2535	0.0317	$ x-xw /8=0.0314$
녹 G'	0.3299	0.5335	0.0285	0.2186	0.2205	0.0276	$ y-yw /8=0.0273$
황 B'	0.1597	0.1488	0.1417	0.1661	0.2183	0.0273	$ x-xw /8=0.0177$

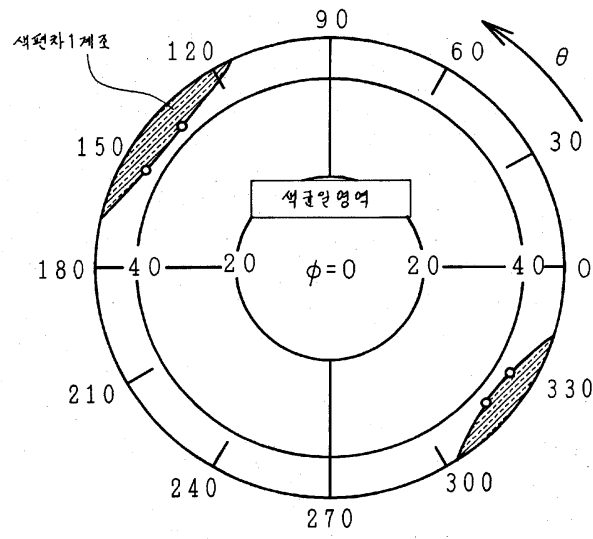
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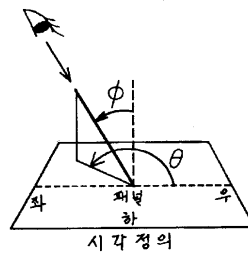
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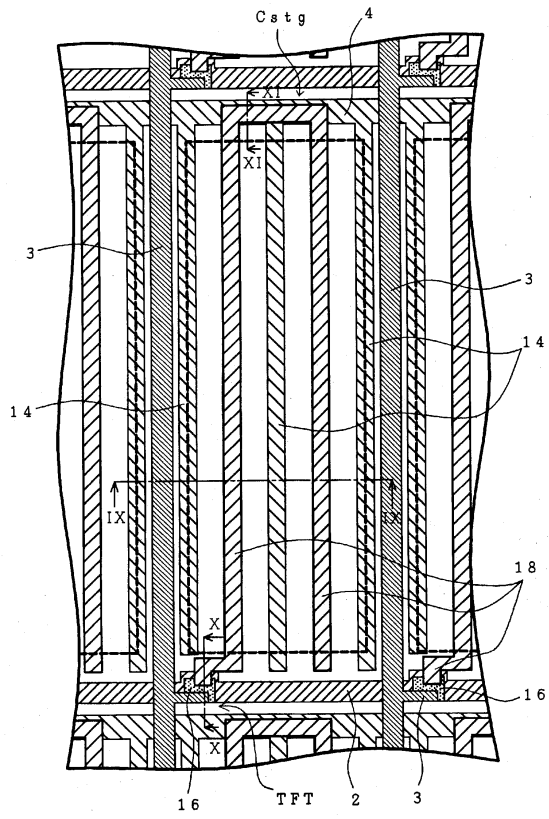
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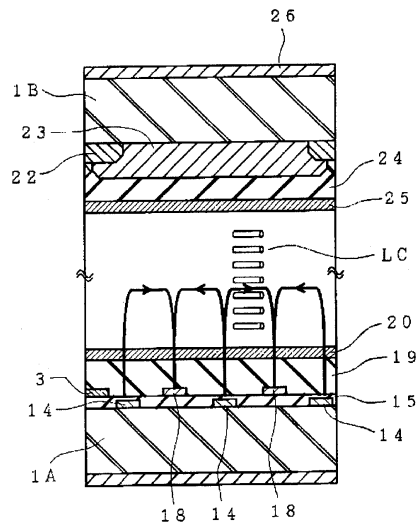
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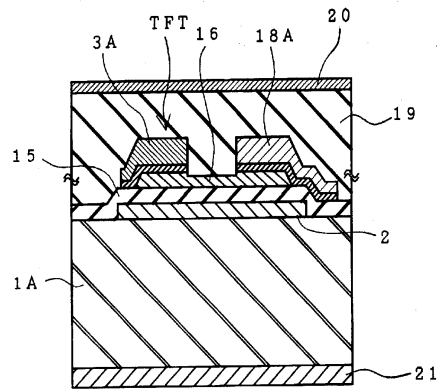
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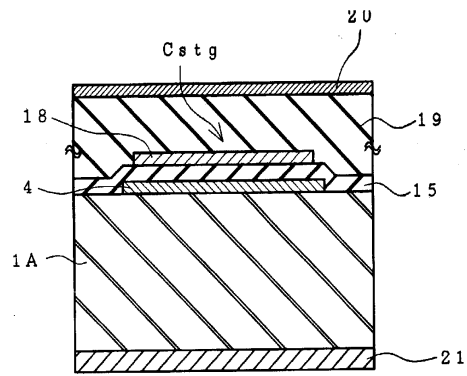
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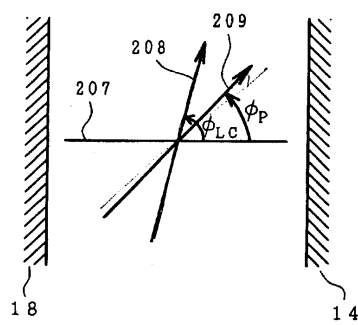
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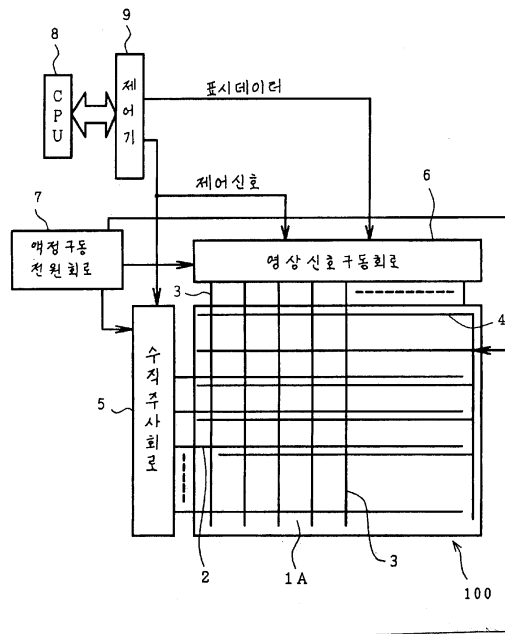
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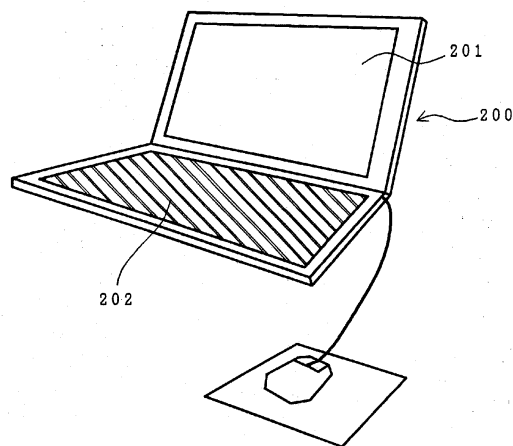
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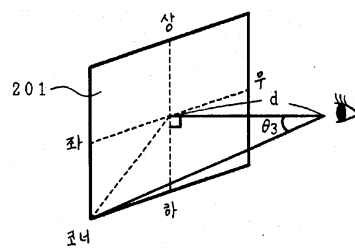
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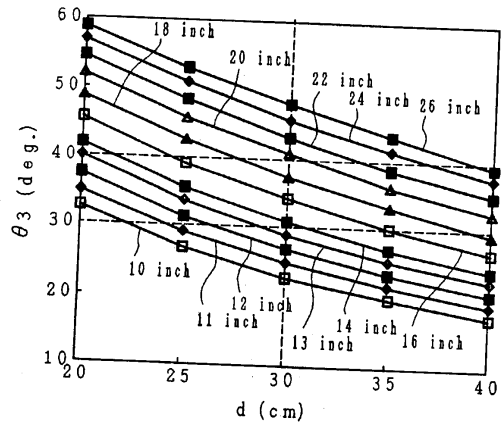
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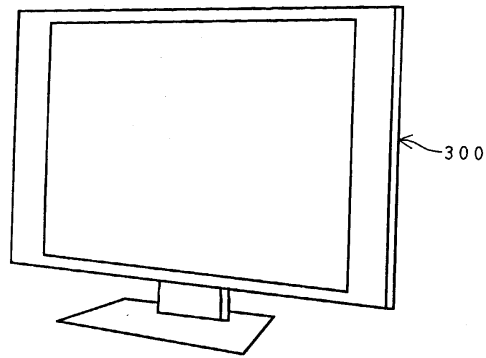
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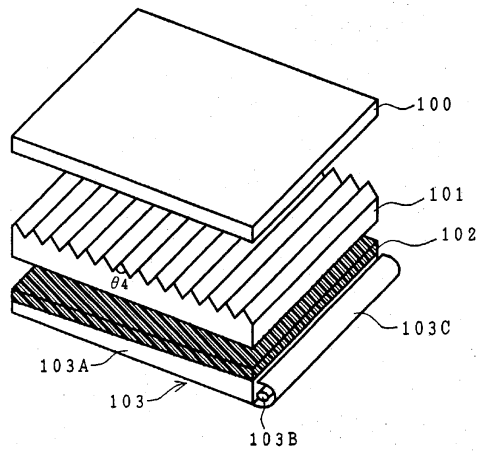
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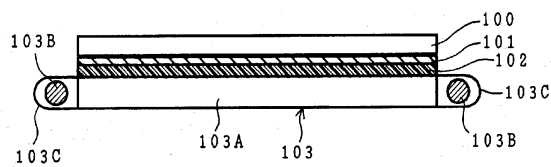
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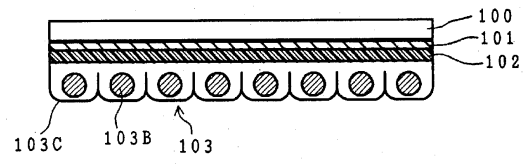
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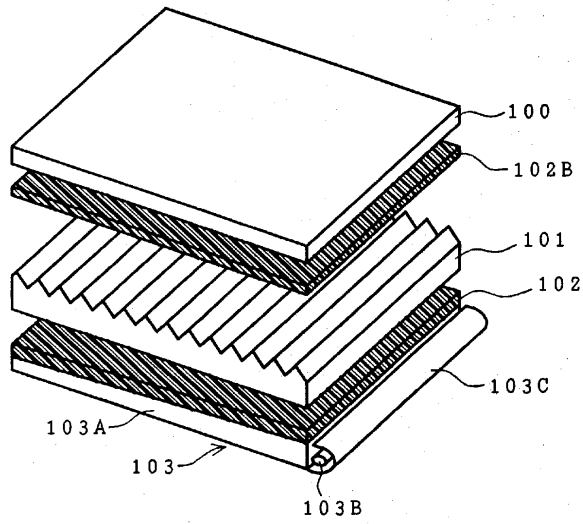
19



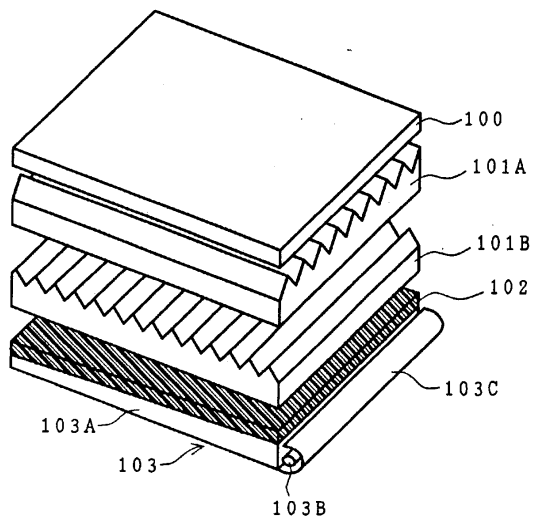
20



21



22



23

