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2002 06 25

(71)

416

(72)

1 101 24

103 106

973-3 824 706

(74)

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(54)

가 . , ,
, 가 . , 가 ,
, , ,
, . ,

4

1

2

3 2

4 1 ,

5a 1 ,

5b 1 ,

6 ,

7 1 ,

8 2 ,

9 8 (b) ,

10 가 .

< >

40 ; 50 ;

60 ; 401 ;

402 ; 403 ;

404 ; 405 ;

406 ; 407 ;

407a ; 1 407b ; 2

407c ; 3 409 ;

410 ; 411 ;

412 ; 413 ;

414 ; 809 ;

1

1

(102) ,
(105) , (105)

(100) , (100)

(107, 110) , 가 (112) ,
 (118) (115) .
 (100) (105)
 2/3가 가 .
 2 , 3 2
 05) , (206) , (207) , (208) , (209) (204R)(204G)(204B) , (2
 .
 2) (202) , (202) (201) , (20
 (203) .
 3 (204R)(204G)(204B) (R), (G), (B)
 (204R) (R)
 (204G) (G)
 (B) (204B) (B) .
 3 (204R)(204G)(204B) θ (204G
) (204R) - θ , (204B) + θ . , +
 , -
 , (G) (chief ray) (R) - θ , (B) + θ
 (10) .
 (206) , (206a, 206b) 가
 (206) (R), (G), (B)
 (211) (207R, 207G, 207B) (stripe) .
 (211) 2 (212)(213) (207) , (207
) (214) (207R)(207G)(207B) .
 07R)(207G)(207B) (211) (207R, 207G, 207B) (2
 (207R, 207G, 207B) (R), (G), (B)
 , R, G, B (207R, 207G, 207B) (subpixel) , R, G, B (207R,
 207G, 207B) (image pixel) .
 (208) (10a) R, G, B 3 , 3
 (209) (210) 가 , 3 가 .
 , , 3
 가 1/3 , , 5,633,755 5,159,485
 (20) 3 .
 , , (20) 가 3 가 ,
 , , 가 (20) 가 3
 , (3) , (5) (20) 가 (6) ,
 , 가 (20) 가

가

가

가

가 a

θ

가

d

1

$$d=\frac{a}{2\sin\theta}$$

d

θ

가

b

2

$$b=\frac{d}{\cos\theta}$$

가

;

;

;

,

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,

.

.

가 a

θ

가

d

1

.

d

θ

가

b

2

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가

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4

1

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4

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1

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(40) ,
(50) ,

(40)
(50)

가

(414)

(60)

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(40) , (401) (401) (402) , 가
(407) (R), (G) (B) , (407
a, 407b, 407c) 가 가 가 가
(407) 1 1 3 (407a, 407
b, 407c) (407a, 407b, 407c)
(40) (403) (404) , (403)
가 , (405) , (405) (404)
7) (406)가 (40)
(50) (407) (R, G, B)
(410) (410) (411)
(407) (410) (409)가
(410) 7
, 1 2 (410a, 410b) 1 (410a)
(60) (411) 가 (413)
(411) (412) (413)
(411) (412) (413)
(414) 5a 5b (407) 7 (411)
5a 1 1 3 (407a)(407b)(4
07c) , 5b
5a , 1 (407a) (R, G, B) 1 3
(407a_1)(407a_2)(407a_3) , 2 (407b) (G, B, R) 1
3 (407b_1)(407b_2)(407b_3) , 3 (407c) (B, R, G)
1 3 (407c_1)(407c_2)(407c_3)
5b , 1 (407a) 2 3 (407b, 407c) 1 (407a)
(R) 1 (407a_1) 1 (407b_1)
1 (407c_1)가 (G) (B)
1 (407a) 1 (407a_1) (R) (G) (B)
2 (407b) 1 (407b_1) (G) (B) 3
(407c) 1 (407c_1) 1 3 (407a)(407b)(407c)
2 3 (407b_1, 407b_2)(407c_1, 407c_2)
, 1 (407a) 2 (407a_2) 1 (407a_1) (R)
(G) (R) (B) 2 (407b) (R)
(407a) 2 (407b_2) (R) (B) (B) 1
(R) 3 (407c) 2 (407c_2) 2 (407b) 2 (407b_2)
1 (407a) 3 (407c_3) (b) (R) (G)
, 1 (407a) 3 (407c_3) 2 (407b) 3 (407b_3)
_3) (R) (G) , 2 (407b) 3 (407b_3)
3 (407c) 3 (407c_3) 2 (407b) 3 (407b_3) (G)
)
(407)
(407) 1 (407a) 1 (407a_1)

2 (407a_2) 2 (407a_2) 3 (407a_3) 가
 1 (407a_1) 1/3 (R) 1/3 (407a_1)
 3 (407a_3)가 1 (407a_1)
 B) 1/3 (G) 2 (407a_3)가 1 (407a_1)

1 (407a) 2 (407a_2)가 1/3 2 (407a_2) (407a_2)
) (G) (R) (B) , 1 (407a_1)가 (407b)
 2 (407a_2) (R) (G) (B) 2 (407a_2)
 1/3 3 (407a_3)가 2 (407a_2)

2 (407b) 1 (407a) 1 (407a_1) 1 (407b_1) 1
 (407a) 1 (407a_1) (G) (B) (G) 1
 (407a) 1/3 (407a)가 1
 2 (407b) 1 (407b_1) 3 (407b_3)가
 1 (407a) 1 (407a_1) 3 (407a_3)가
 1 2 (407a)(407b)

2 (407b) 1 (407b_1) 3 (407b_3)가 1 (407b) 3
 (407b_3) (R) (B) (R) (B) 3 (407c)
 3 (407c) 2 (407b) 1 (407b_1) 1 (407b_1)
 1 (407c_1)가 1 2 (407a)(407b)
 3 (407c_3)가 3 (407c) 1/3 2 (407b)
 1 (407b_1) (B) 가 1 2 (407a)(407b)
 1/3 2 (407b) 3 (407b_3) (G)

10 5a 5b (407) (414)
 가

) , 5a 5b (407) 4 (414)
 , 1 3 (407a)(407b)(407c) 1 (407a_1)(407b_1)(407c_1)
 1/3 414_1 (414) (R), (G) (B)
 /3 5a 5b (407) 1 (407a_1)(407b
 _1)(407c_1) 1 3 (407a)(407b)(407c) 2 (407a_2)(407b_2)(407c_
 2) , (G), (B) (R) 1 3 (407a)(407b)(407c)
 414_2 (407)
 2 (407a_2)(407b_2)(407c_2) 3 (407a_3)(407b_3)(407c_3)
 414_3 (B), (R) (G)

가 60Hz (R), (G) (B)
 , 180Hz
 가
 90Hz

(407) 1 3 (407a)(407b)(407c) 가
 1 3 가
 (407a)(407b)(407c)가 100% ,
 (407)

(407) (407a)(407b)(407c) 가
 , (R), (Y), (G) (B)
 가 (407a)(4
 07b)(407c)가 (R), (G) (B)

(407a)(407b)(407c)

6 (407)

6 (407) (R), (G), (B) 1 3 (407a)
(407b)(407c)가 d 1 3 (407a)(407b)(407c)
(n) (X) (θ) (407a)(407b)(407c)
(a) (X) (X) 가
(b)

7 가 (410) (411)

7 (410a) 6 가 2 (407) (410b) 1

, 1024*768 가 0.9 Inch LCD(Liquid Crystal Display)
(P) 0.018mm (fill factor; F) 80% 가 (Ape
rture size; AS) 3 0.014mm가

3
 $AS=PSF$

7 (411) 0.018mm가 4
(409) 25mm, (Fc)가 30mm (410)
(P) 0.054mm, (Fm) 0.135mm 가 (a) 4 4mm

4
 $\alpha=PS\frac{F_c}{F_m}$

(a) 6 (407) 1 3 (407a)(407b)(407c)
(d) (θ)가 45 가 1 3 (407a)(407b)(407c) (d)
1 2.83mm가
(411) (w) (410)
(φ) ±2 가 5 0.0047mm (411)
(AS), 0.014mm

5
 $w=F_m\text{Stan}\phi$

6 (b)가 5 (407a)(407b)(407c) (d)
(X) (407a)(407b)(407c) (n) (θ) (d)가

2 2.83mm (θ)가 45 (b) 8mm .

(M) 6 0.0045 (409) (Fc)가 30mm 0.00002 (Fm) 0.135mm (b) .

6

$$M=\frac{F_m}{F_c}=0.0045$$

8 (40) (50) 2 (4
0) 809) (40) (50) , 9 (b) (

8 9 (810) (812) (40) (407) (809) (409) 4 1
(b)가 .

9 (B) , (409) 1 3 (407a)(407b)(407c) (R), (B)
(809) (b)가 . (810)

(b) , (407) 1 3 (407a
) (407b)(407c) 2 2 (407b) (δ) (204R, 204G, 204B) (407a
1 3 (b) (407a)(407c) .

(40), (50) , (60)
(407) 4 1

가
가

(57)

1.
;

가 ; .

2.
1 ,

3.
1 ,
 , .

4.
1 ,
 .

5.
1 ,
d 가 a θ 가

$$d = \frac{a}{2 \sin \theta}$$

6.
1 ,
d θ 가 b

$$b = \frac{d}{\cos \theta}$$

7.
6 ,

8.
1 ,

9.
8 ,

10.
9 ,

10 11.
10 ,

12.
가 ;
;
;

12 13.
12 ,

12 14.
12 ,

12 15.
12 ,

12 16.
12 ,
d 가 a θ 가

$$d=\frac{a}{2\sin\theta}$$

12 17.
12 ,
d θ 가 b

$$b=\frac{d}{\cos\theta}$$

17 18.
17 ,

12 **19.** ,

12 20. ,

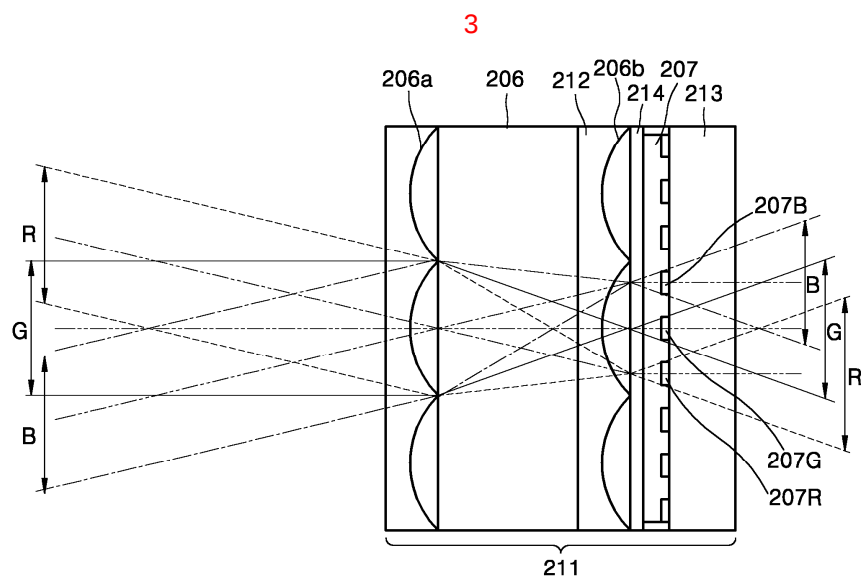
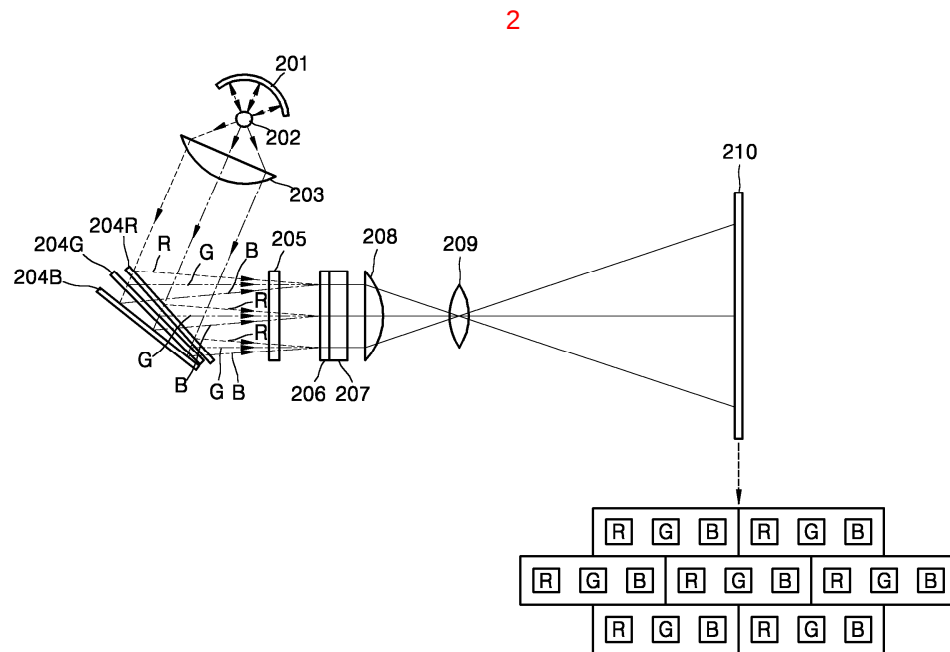
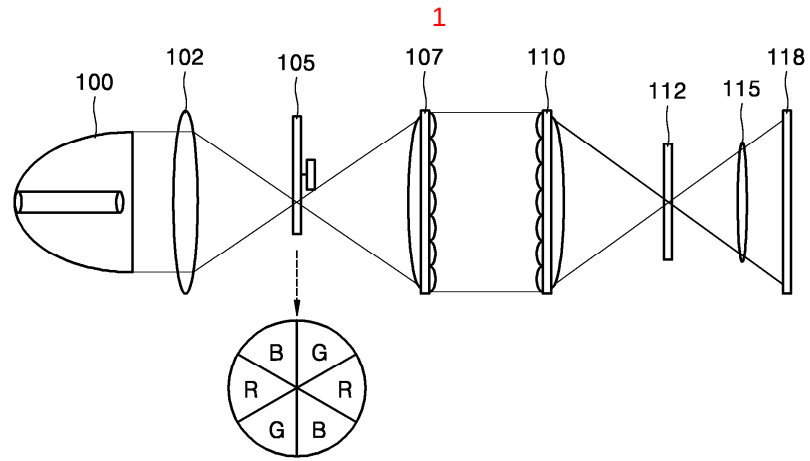
20 21. ,

22.

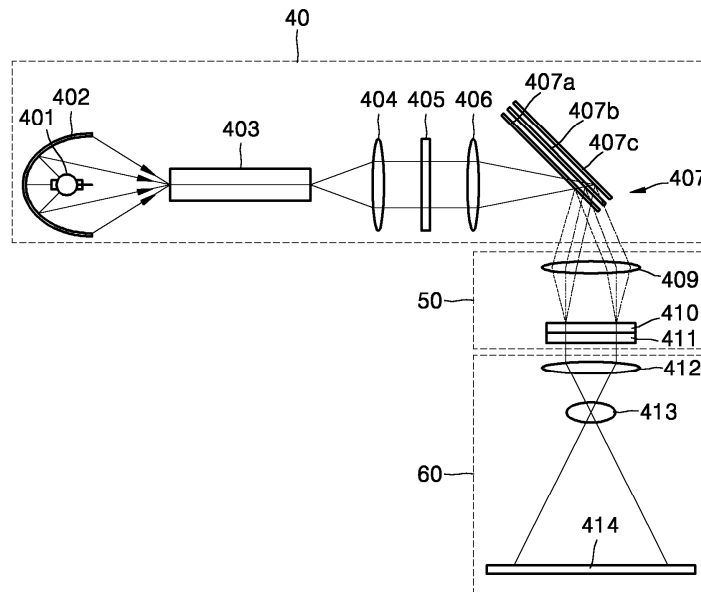
24.

12 , ,

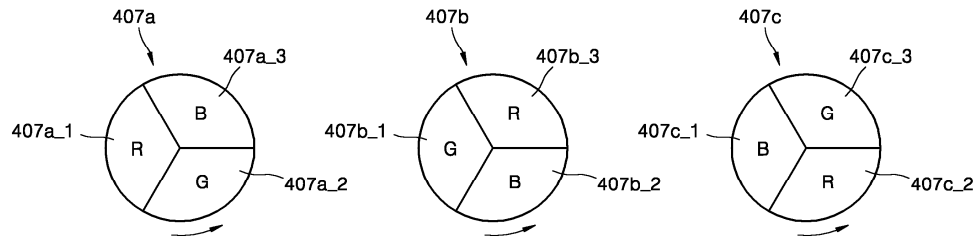
24 25.



4



5a



5b

