

(19)
(12)

(KR)
(A)

(51) 。 Int. Cl. 7
G02F 1/1335

(11)
(43)

2003-0040573
2003 05 23

(21) 10-2001-0070902
(22) 2001 11 15

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(72) 2 930-43

104-1002

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8

1

2a, 2b

3 2

, 가

4 2

5a, 5b

6

5a

7a, 7b

5b

8

1

9

8

IV-IV

10

2

11

3

< >

102 : 104 :

105 : 106 :

108 : 110 :

112 : 120 :

가 , 가가 가

가 , (Thin Film Transistor ; TFT)가 ,
(AM-LCD ; Active Matrix Liquid Crystal Display ,)가
가 , 1 / 2

1 , (10, 30) , (10, 30)
) (50)

(32, 34) (30) (32, 34) (T)가 ,
(32, 34) (P) (T) (46)

(10), (12), (16)

(12)

(10, 30) (52, 54)
 (54) (back light)가

(Aperture Ratio)

가 가

2a, 2b

2a (31) (30) (1) (31) (31)
 (36a), (33) (36) (33) (36)
 (36a) (38, 40) (ch ; channel) (31), (36)
 (38, 40), (ch) (T)

P) (46) (44) (T) (44) 가 (42) (1)
 (50) (40) (46) (48) (42)

(10) (1) (14) (13) (13) (16), (14)가
 (18)

(30) (36) 가 가 (a-Si)
 (14) (T) 가

2b (34) (46) (30) (10)
 (46) 가 (14)가 (± 5μm) (46)

(14) (10, 30) (± 5μm)

(34) (46) (46) (34)

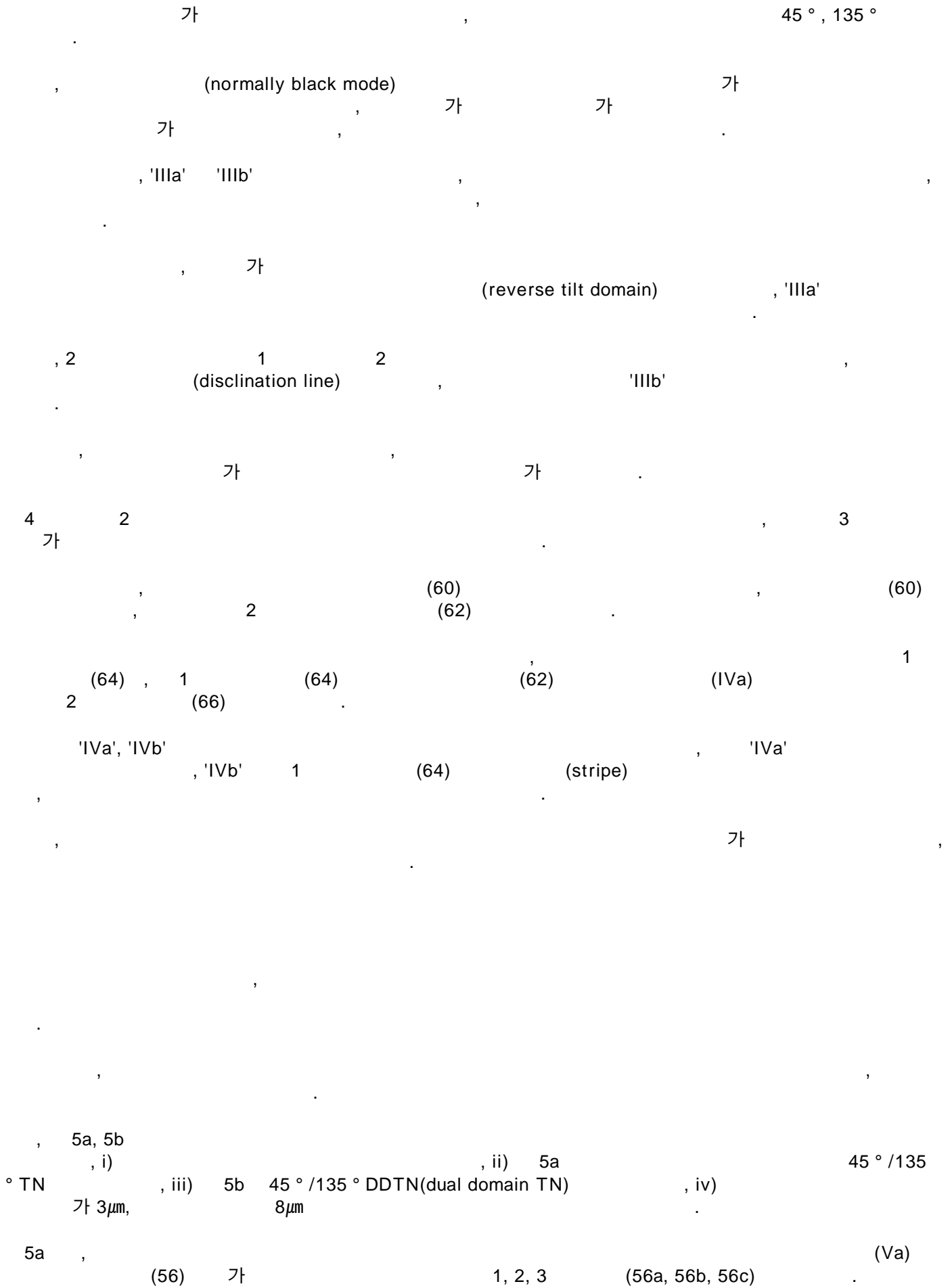
(mono domain)

가

90°

TN(twisted nematic)

3 2 (normally white mode) TN 가



1, 3 (56a, 56c) 45°, 2 (56b) 가 1, 3 (56a, 56c) 1, 3
 (56a, 56c) 45° , 2 (56b) 가 1, 3 (56a, 56c) 1, 3
 (56) (Va)
 5b (Vb) 1, 2 (70a, 70b) 1 (70a)
 (72) 2 (70b) (74)
 1, 2 (70a, 70b) 가 1, 2, 3 (72a, 72b, 72c), (74a,
 74b, 74c) 가 1 (70a) 1 (72a) 2 (70b) 3 (72c)
 4a) 가 1 (70a) 3 (72c) 2 (70b) 1 (7
 0a) (72) , 2 (70b) (74) 가 1 (7
 , 6 5a , 7a, 7b
 5b , 5a, 5b
 34μm
 , 6, 7a, 7b X 0 μm ~ 10 μm , 10 μm ~ 13 μm , 21 μm
 ~ 24 μm , 13 μm ~ 21 μm , 24 μm ~ 34 μm
 6 'VIa' 가 '0.000'
 가 가 '1.000' 가 , 'VIb'
 , 'VIc'
 , 23.75 μm ~ 26.25 μm(2.50 μm) 가 'VIc'
 ,
 , 5a 가
 , 2
 7a, 7b 5b 1, 2 7a 23.75 μm ~
 32.50 μm(8.75 μm) ' a' 7c 6.25 μm ~ 11.25 μm(5 μm) ' b'
 , 5b 1, 2 , 7b
 7a

2 μm ~ 8 μm

2, 1, 1 ; 가 ; 가

1, 2

1, 2 TN(Twisted Nematic), ECB(Electrically Controlled Birefringence) (normally white mode)

2, 1 ; 1 1 ; 가 가 ; 2 ; 2 ; 가 가

1, 2

2 μm ~ 8 μm

< 1 >

1

8

(110) 1 (104) (104) 2 (T)가 (T)
 (112) (104, 110) (104, 110) (104) (T)
 05) (T) (110) (104) (106) (102) (102) (112) (1)
 (T) (108) (106) (106) (106) (112)
 (T) (120) (104, 110) (104, 110)
 (112) (112)

a, VIIb) , 가 (120) (110) 'VIIc' (VII

110) , 6, 7a, 7b (112) (112) (120) (

(120) 가 가 (112) (120) 가 (110)

9 (130, 150) (170) (130, 150) (150) (110) (

(112) (120)가 (112) (110) (110) (130)

가 (120) 'VIIc' (112)

가 1 μ m 가 93 \times 279 μ m 1% 가 가

(170) TN, ECB(Electrically Controlled Birefringe

nce) ECB OCB(Optically Compensated Birefringence)

(120)가

(120)

< 2>

2 , 2

10 2

(202) (202)

(204) 1, 2 가

(pretilt angle)

1 (depolymerization)

2

(isomerization) (decomposition), (dimerization),

1 (206) , 1, 2 가 2 (206) (208)

, 1 (206) (202)

1 (204) (206) 가 , (202)

가 ,

, 2 (208) 가

, 2 (208)

< 3>

3 , 2 2 , ,

11 3 , 2

가 (302) (304) (d)

가 'XIa', 'XIb' (302) (302) 1 (304) (306) 1

(306) 가 2 (308)가

1, 2 (304) (302) (302) (XIc) ,

(306)

3

, 2

, (302) (304)

, ,

, 1 : 1

가

가 .

(57)

1. 1

2

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;

가

;

가

2. 1

1, 2

3. 2

4. 2

1, 2

1, 2

5. 4

TN(Twisted Nematic), ECB(Electrically Controlled Birefringence)

(normally white mode)

6. 1

1

1

2

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가 가

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2 ;

2

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가

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가

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7.

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6

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가

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9.

6

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2

10.

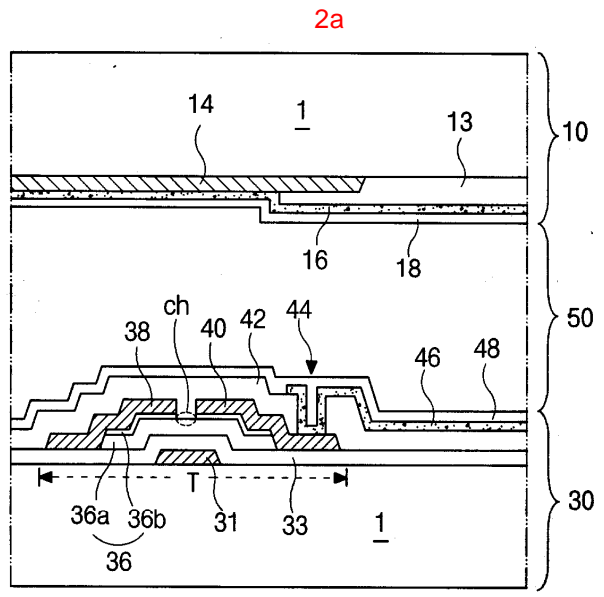
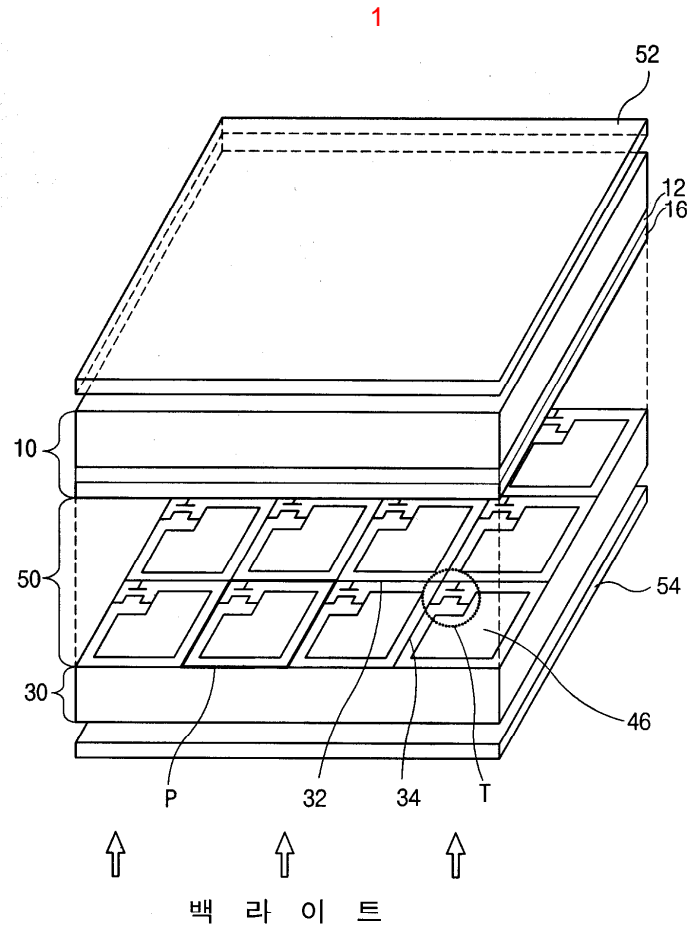
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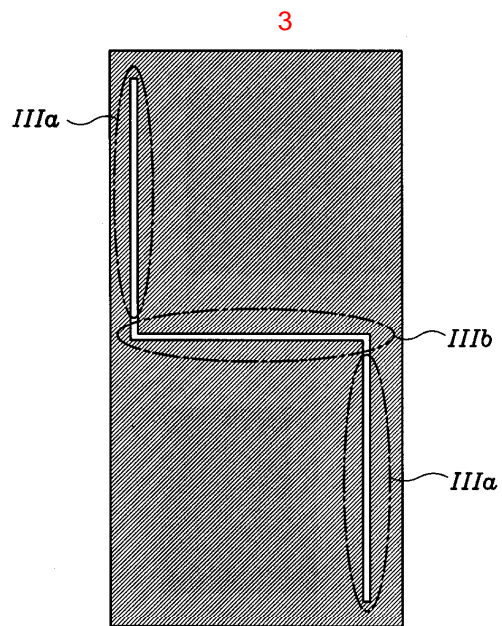
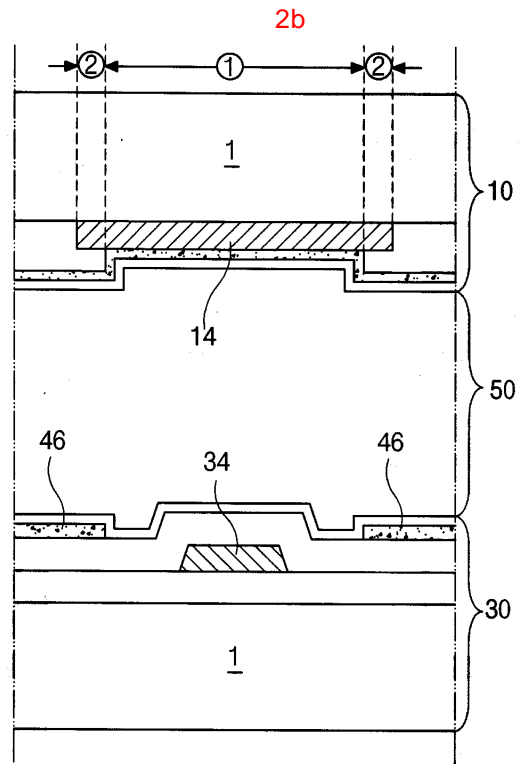
6

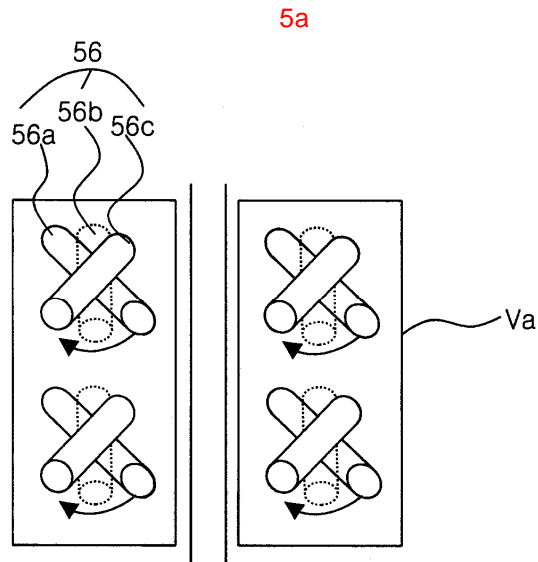
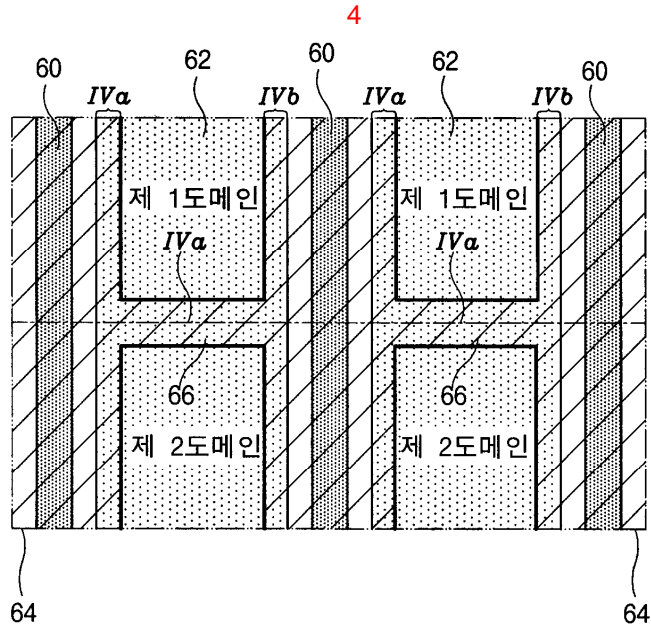
,

2 μm ~ 8 μm

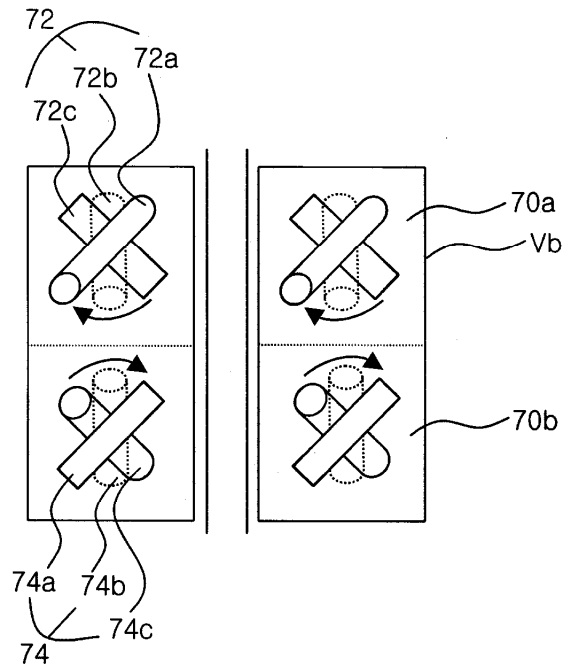
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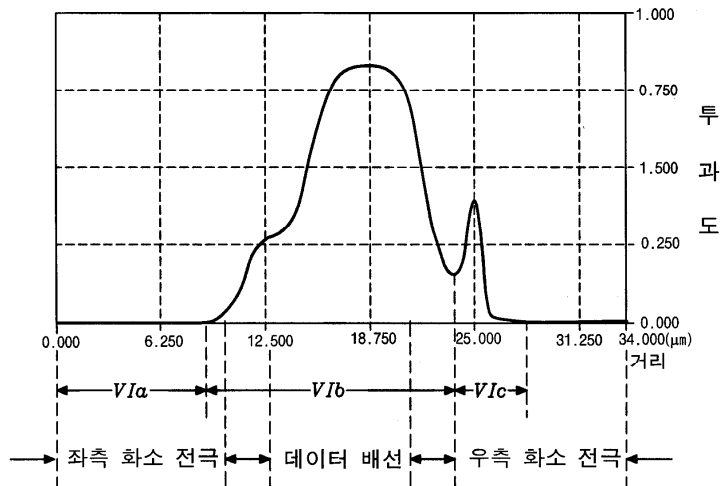




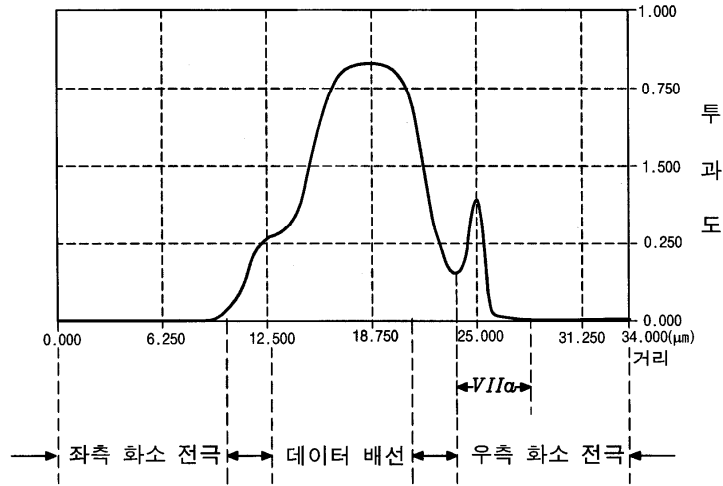
5b



6



7a



7b

