

(19) (KR)
(12) (B1)

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(21) 10 - 2000 - 0072661 (65) 2001 - 0062085
(22) 2000 12 02 (43) 2001 07 07

(30) 1999 - 345107 1999 12 03 (JP)

(73) 211 - 8668 가 가 가 1753

(72) 5 7 1 가 가

(74)

:

(54) 가 ,
가

가 , (103) ,
(photo - multiplier)가 (107) ,
, ,

1	가	.		
2			.	
3			.	
4		가	.	
5				.
6				.
7			.	
8			.	
9	가		.	
10		.		
11		.		
12		가	.	
13		.		
14		.		
15	12	가	.	
16		가	.	
17	가		.	
18		가	.	
19				.
20				.
21			.	
22			.	
23		.		
24		.		
25			.	

26

<

101 :

102 :

103 :

104 :

105 :

106 :

107 :

가 ,
(regulatory ability) 가 ,

" (cell gap)" 4 - 307312
.

가 . ,

6 - 265839 6 - 265840 2
/ , 2
, 2 ,
/ 2 가
/ 2
/ 2

2778935

(anchoring)

6 - 265839

6 - 265840

8 - 184415

2778935

2

/

/

가

(Morgan limit)

/

가

가

가

, a)

, b)

, c)

가

, a)

, b)

, c)

가

b)

, e)

, d)

가,
가 , " "

가 ,

(polarization dependancy)" 가,

50nm

1

1 가 (101) (101) He - Ne
(102) 가
1 (101) (103) (104) (103)
(104) 가 (103)
(105) (104) 가 (105) 가
(105) (102), (103) (105)
(photo - detector) (106) (106) (1
06) (photo - multiplier) (104), (105) (106)
(107) (107) (104) (105)
(103) (107) (106)
(103)

2 가 . 2 2
s s p 가 .
(102) s p 1 : 1 (102)
s p 45

2 , 180 .

A , 2 (glass plate) , 30
 oration) 가 40 , 가 1.1 (Nissan Chemical Corp
 , PI - A , 15 80
 , 250 , 60 (rubbing roller)가
 , 3 800rpm
 (push length) 0.3 , 20
 3 , 90
 , 5 , 2 - , 2 -
 633 - , 1.586 , 1.510 , 62
 , 2 90 가 ,

A (104) , (101) A (105)
 , (106) (amplitude ratio) Ep/Es ,
 Ψ Ep/Es Ψ 2 3 A
 , 2 3 , A

λ , 가 , Ne No d , Φ
 , θ , s . 2.2 (Jones)
 , J11, J12, J21 J22 1 .

1

$$J_{11} = \sin(\Phi)\sin(\Phi V) + \cos(\Phi)\cos(\Phi V)/V + iU \cos(\Phi)\sin(\Phi V)/V$$

$$J_{12} = \cos(\Phi)\sin(\Phi V) - \sin(\Phi)\cos(\Phi V)/V - iU \sin(\Phi)\sin(\Phi V)/V$$

$$J_{21} = -\cos(\Phi)\sin(\Phi V) + \sin(\Phi)\cos(\Phi V)/V + iU$$

$$U = \pi d (Ne \{1 + (Ne^2/No^2 - 1)\sin^2 \theta\}^{-1/2} - No) / \lambda \Phi$$

$$V = (1 + U^2)^{1/2}$$

s - A , J11(A), J12(A), J
 21(A) J22(A) 2 .

2

$$J_{11}(A) = J_{11}\cos^2(A) - (J_{12} + J_{21})\sin(A)\cos(A) + J_{22}\sin^2(A)$$

$$J_{12}(A) = J_{12}\cos$$

4
90
4 μm 6 μm 5 μm 1 0 5
(107) 80 100 1
A
3

5.13 μm , 89.8 0 3 가 4

5 ψ 6 ψ 가
(rotational analyzing method) (105) (rotational phase plate method)
105) 1/4 가 가
가

2

1 가 B 1.1 PI
30 , 40 80 15 180
- B가 60 3 , 800 rpm 가 0.3 3 가 20 mm/se
c 50 2 -
8 가 633 nm 1.586/1.510
62 가 가 90 2
(isotropic treatment)

B ψ 7 8
가 4 μm 10 μm 20 90 8.08 μm 44.8

3

3 가 (104) 9 (103) 1 가 (21), (21)
(22/23) (22) (24)
2 (21) (28)

(21) . (23) (25) (23) 가 , (23)
 (21) (23) .
 (22) 가 , (23) .
 (22) (26) (22) .
 (23) (22) (22) (2
 3) (24) (24) (22) , 가 .
 (24) (27)

A (22/23)가 A (24) A 가 . (101)
 A (106) (21) A
 (22/23)가 A
 A , .

, 1 A 0 A
 . A , 0
 2 , A 9 가 .
 10 11

4

12 가 , 3
 가 가 2
 가 4 가 (201), (202), (203)
 (204), (205), (206) (207)

(201) , (202) (203) . (205)
 (206) (202) ,
 (204) 가 (203) 2
 (205) ,

(207) (202) , 2 (204),
 (205) (206) (207) / (202/205)
 (204) , (fetch)
 (207) , (203) ,

A (204) , (204)
 4 0 가 .
 13 14 .

15 (302) (304) 가 1/2 (303) .
 , 가 , (303) (302) ,
 (303) (308) . , 2 ,
 301, 305, 306 307 . (305) .

5

2 , 20 60 9 20 μm , 44.7
 16.35 μm 44.8 8.08 μm . ,
 , 16 5

가 2 (401 402) .

06) , 가 2 (401/402), (403), (404), (405), (4
 (407), (408), (409)
 (410) . (401) He - Ne , (402) .
 (402) 688 nm , (401) . (401)
 (403) , (403) (406) . (401)
 404) (405) , (406) . (402) (4
 06) (404) . (407) , (406)
 . (408) . (407) (40
 8) (410) . (409) ,

10) (409) (410) . (4
 , (406) (406) 가 , (406)
 , 2
 가 , s
 o 가 가 (401/402) 가
 (401/402) 가 , (402/401) . , (401/4
 02) , (shield plate) .

(405) 2 45 s p 1:1 .
 , (406) . (408)가 , (4
 408) 2 가 ,
 (408) 180 , 가 .

688 nm 가 4 10 μm , 20 70 ,
 45.0 8.09 μm 가 . 가 20 60 9 ,
 20 μm , 105.2 15.57 μm 가 , He - Ne

가 . , B 44.8
 45.0 8.08 8.09 μm .

17 가 9 12 .
 17 5 .
 6

18 가 . 가 (501), (502), (503)
 , (505), (506), (507) (508) . (501)
 . (504) 가 , .
 (505) , (501) , (502)
 . (503) , (506) .
 (507) (508) (504) , (507)
 (506) . (508) (507) ,
 . (508) , (503) ,
 (503) (503) 가 .

502) s p , s p . ((2
 45 가 , s p 1:1 . (505)
 , 180 . (506)
 . 18 , (507)
 , (506)
 , (507) . , .

5 (503) , (503)
 , , (503) 가
 . (506) .
 (507) , (503)
 , (503) , 가 .

가 . , , .

19 20 B . 19
 , 20 ψ . 20 nm , 19
 20 .

21 22 2 1
 44.7 16.35 μm , 2 44.8 8.08 μm . B
 0 .

, 2

. , B 44.8 8.08 μm 가 . 23

18 가 3 4 .

7

6 ,

B 0 , 90 . B ,

24

1

2

1 44.8 , 8.08 μm , 2 44.7, 16.35 μm . 10

10nm

, 25

가 24

, 26

가

6

44.8 8.08 μm .

8

B 50 , 2, 5, 6 7

44.8 , 8.08 μm 가 .

A

$$A = 2 K_{22} \Psi_t / (d \times \sin (2 \Psi_0 - 2 \Psi_t))$$

, Ψ_0 , Ψ_t , K_{22}

B

 K_{22}

9.3 pN

A

 $9.97 \times 10^{-6} \text{ J/m}^2$.

가

가

가

가

/ 가

가 ,

2
가 가 .

가 가

(57)

1.

가 ,

a) (103, 203, 304, 406, 503) (polarization)
;

b) (directional dependency) (wavelength dependency) ;

c)

가 .

2.

가 ,

a) (103, 203, 304, 406, 503)
;

b)
;

c) (103, 203, 304, 406, 503)
가 (103, 203, 304, 406, 503) ;

d) (103, 203, 304, 406, 503) b) ;

e) (103, 203, 304, 406, 503) ,

가 .

3.

(103, 203, 304, 406, 503) 가

,

,

a) (103, 203, 304, 406, 503)

;

b)

;

c)

(103, 203, 304, 406, 503)

,

.

4.

(103, 203, 304, 406, 503) 가

,

,

a) (103, 203, 304, 406, 503)

;

b)

;

c)

(103, 203, 304, 406, 503)

가

(103, 203, 304, 406, 503)

;

d)

(103, 203, 304, 406, 503)

b)

;

e)

(103, 203, 304, 406, 503)

,

.

5.

가 ,

(103, 203, 304, 406, 503)

(101, 201, 301, 401/402, 501);

,

,

(101, 201, 301, 401, 501)

(103, 203, 304, 406, 503)

(102, 202, 302, 405, 502);

(103, 203, 304, 406, 503)

(104, 21

/22/23/24, 204, 305, 407, 504);

(105, 205, 306, 408, 505);

(105, 205, 306, 408, 505)

(106, 206, 307, 409, 507);

,

,

,

,

(103, 203, 304, 406, 503)

,

(107, 207, 308, 410, 508)

가 .

6.

5
(107)

,

(104)

(105)

,

(107)

,

가 .

7.

5

,

가

1

가

1

(21),

1

2

(23)

2

1

2

3 (22)

가 .

8.

7

,

2

(23)

,

2

3

1

(21)

,

1

(22)

,

,

가 .

9.

5 , (207) (202)
(205) , (207)
,
가 .

10.

9 , (23) 가 1 2 1
(23) 가 1 2 (22)
,
,
가 .

11.

5 , (302) (304) (303) ,
(308) (303) (306)
,
,
가 .

12.

11 , (305) 가 1 2
1 가 1 2 ,
(308)
,
가 .

13.

5 , (401/402) ,
가 .

14.

13 , (401/402)
(405) (406) (403/404)
가 .

15.

14 , (403)
(404)
가 .

16.

5 , (505) (507) (508)
(506) ,
가 .

17.

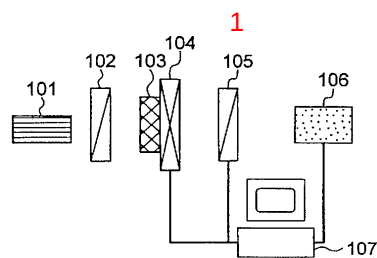
5 , (505) (507) (508)
(506) ,
가 .

18.

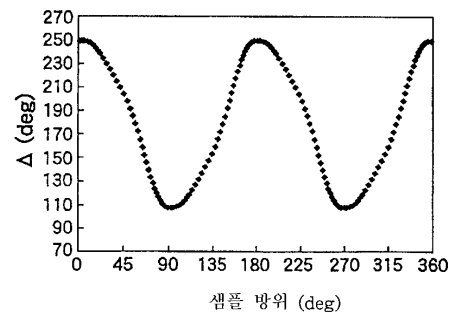
17 , (508) (503) (505)
, , (503)
, ,
, ,
가 .

19.

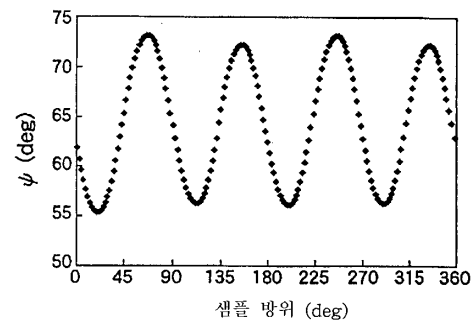
17 , (508) (503) (505)
, , (503)
(505) ,
, ,
가 .



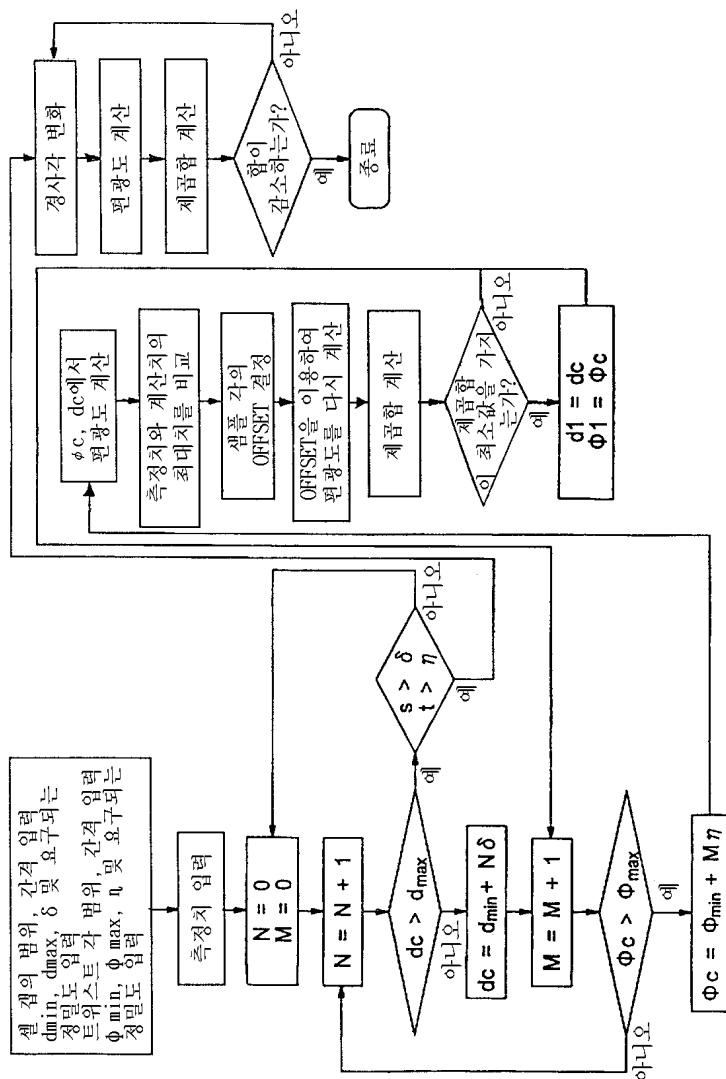
2



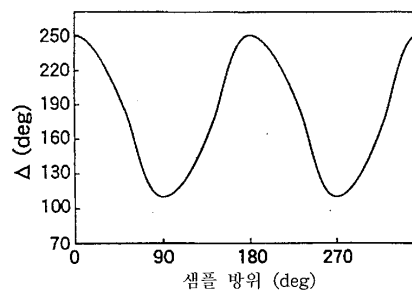
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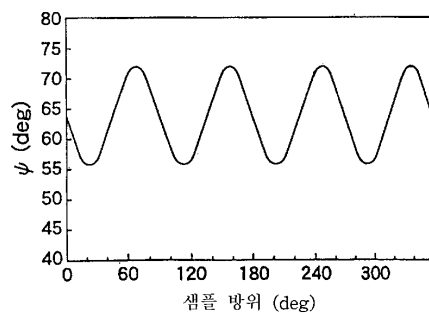
4



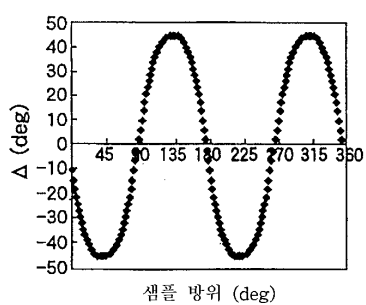
5



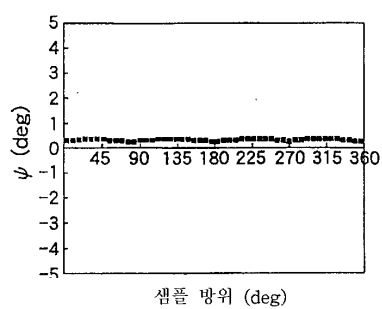
6



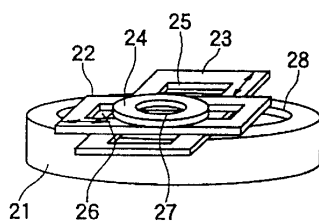
7



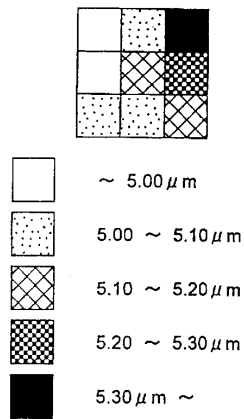
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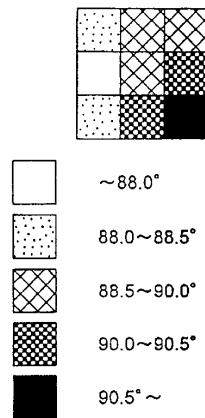
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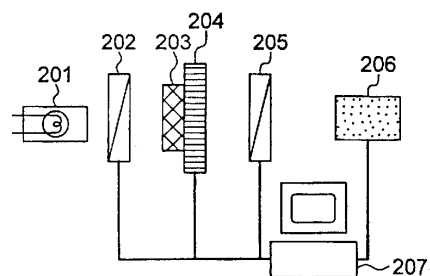
10



11



12



13



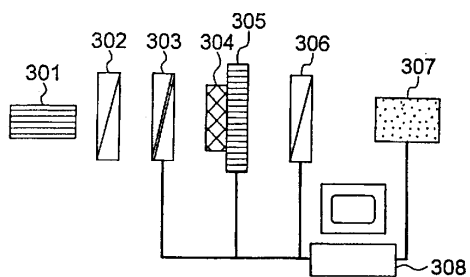
	$\sim 5.00 \mu\text{m}$
	$5.00 \sim 5.10 \mu\text{m}$
	$5.10 \sim 5.20 \mu\text{m}$
	$5.20 \sim 5.30 \mu\text{m}$
	$5.30 \mu\text{m} \sim$

14

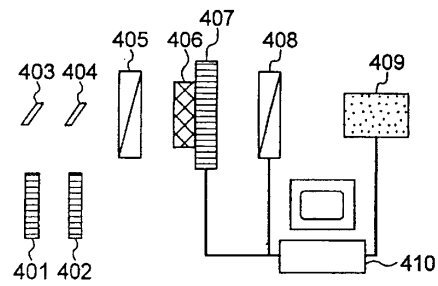


	$\sim 88.0^\circ$
	$88.0 \sim 88.5^\circ$
	$88.5 \sim 90.0^\circ$
	$90.0 \sim 90.5^\circ$
	$90.5^\circ \sim$

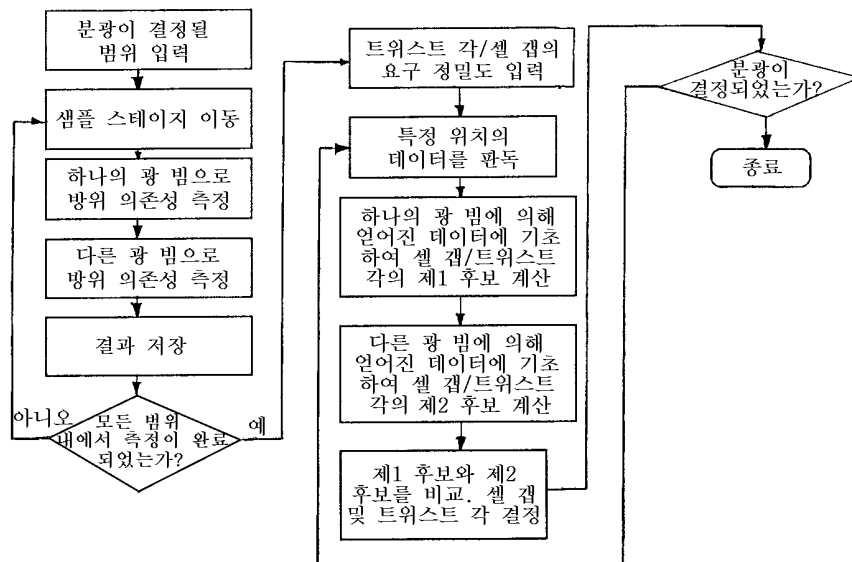
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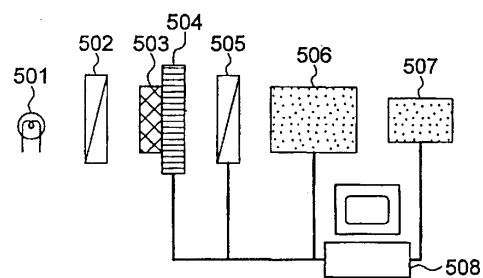
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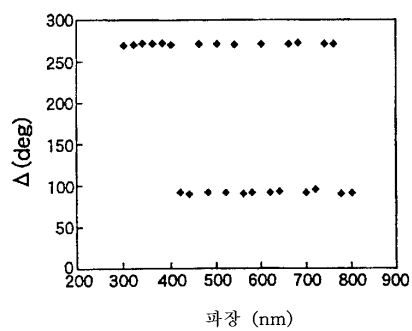
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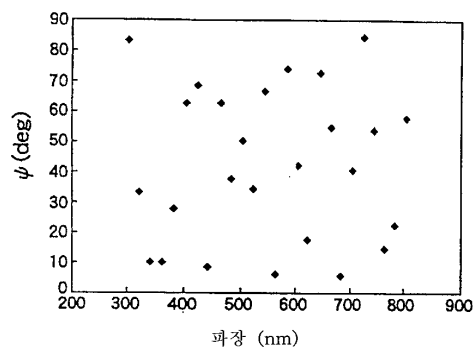
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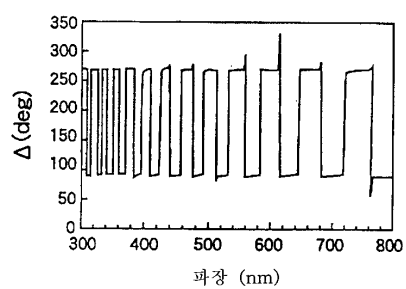
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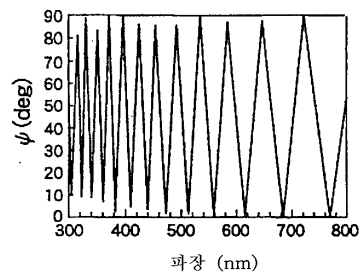
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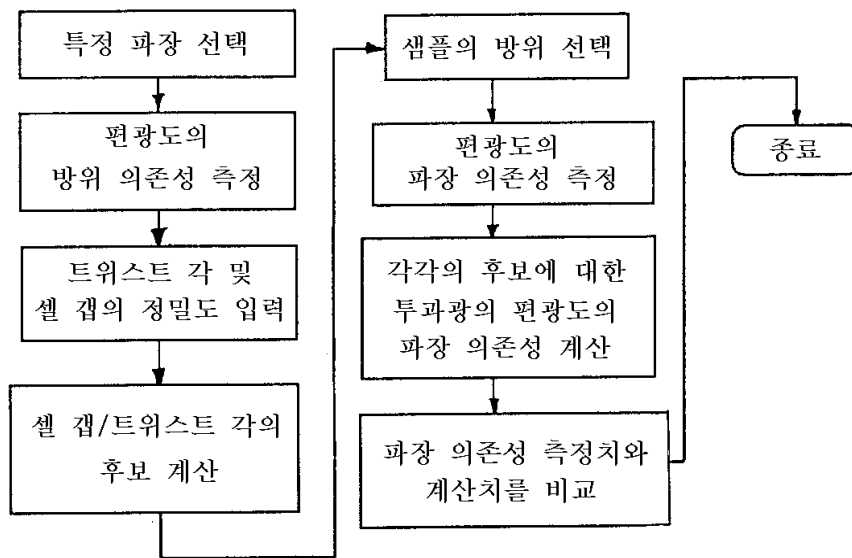
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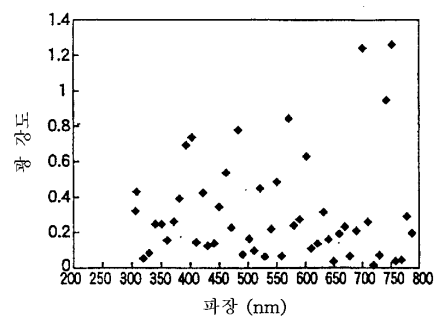
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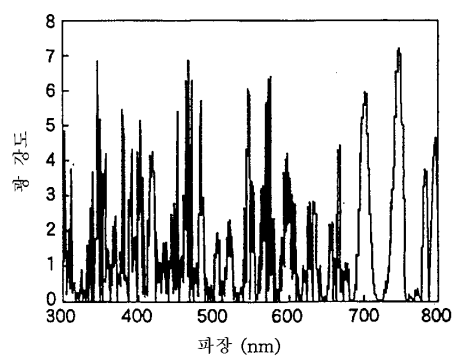
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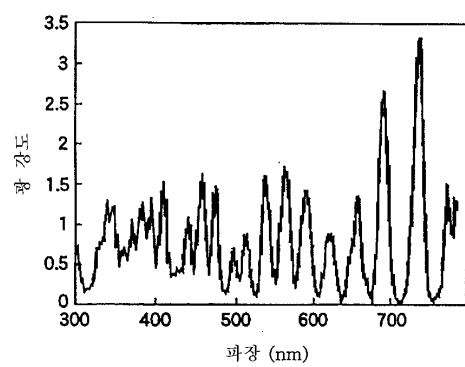
24



25



26



专利名称(译)	一种评估液晶显示元件的方法，一种用于存储实现该方法的计算机程序的信息存储介质		
公开(公告)号	KR100380766B1	公开(公告)日	2003-04-18
申请号	KR1020000072661	申请日	2000-12-02
[标]申请(专利权)人(译)	瑞萨电子株式会社		
申请(专利权)人(译)	瑞萨电子株式会社		
当前申请(专利权)人(译)	瑞萨电子株式会社		
[标]发明人	HIROSAWA ICHIRO		
发明人	HIROSAWA, ICHIRO		
IPC分类号	G02F1/13 G01N21/01 G01M11/00 G01N21/21 G01N21/27 G01N21/95		
CPC分类号	G01N2021/9513 G01N21/21		
代理人(译)	CHU, 晟敏 CHANG, SOO KIL		
优先权	1999345107 1999-12-03 JP		
其他公开文献	KR1020010062085A		
外部链接	Espacenet		

摘要(译)

在本发明的评估装置中，线性偏振光束照射到液晶显示元件的样品103上以产生透射光束，然后光电倍增器改变透射光束的偏振度。方向依赖性和透射光束的偏振度的波长依赖性，并且计算机系统107基于方向或波长依赖性确定扭转角，平均倾斜角和单元间隙，单元间隙和平均倾斜角是唯一确定的。1 指数方面 扭转角度，单元间隙，平均倾斜角度，样本，方向依赖性，波长依赖性

