

(19) (KR)
(12) (A)

(51) Int. Cl.⁷
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(43)

10-2004-0010309
2004 01 31

(21) 10-2003-0050132
(22) 2003 07 22

(30) JP-P-2002-00213717 2002 07 23

(JP)

(71) 가 가
3300

(72) 3550

가 가 445-2

1568-3

2-12-7

1236-6

(74)

:

(54)

,
,
 1×10^{-13} • cm

1 ,
2 1 2 - 2' ,
3 1 3 - 3' ,
4 1 4 - 4' ,
5 1 5 - 5' ,
6 (PX), (CT) (CPT) ,
7 (PXM) ,
8 ,
9 ,
10 (diamine) ,
11 ,
12 (a) (phenylene diamine) ,
12 (b) ,
13 , が (imide)
14 (主鎖) ,
15 13 が 2 ,
16 , が ,
17 (DC) が (flicker)
18 ,
19 (殘像) ,
20 ,
21 ,
22 21 ,
23 20 ,
24 ,

25

26 20

27 21

28 가 2

29

30

[]

SUB1, SUB2 , GL ,

DL , CL

PSI , CT ,

PX , PXM

GL 1 , GL 2 ,

PAS 1 , FPAS 2 ,

AL1 () LC

(面)

y x

1

v

가

가

,

，，，，，，，
(短殘像) (DC) (DC)

() , (DC) 1V 2 가 , 가 (%) , 29 .

, (DC) 가 가

), 30 (DC) 가 , 가 , (%)

가 가

10V (DC) 가 .

50%가 가

1V (DC) (2).

1.

1×10^{-13}

• cm

2.

가 , , , 1 .

3.

가 , , 2 .

4.

, , 1 3 가
(dismine) 가

5.

(phenylene diamine) 가 4

6.

4

7.

2

8.

가 120
40%

9

10

120 가 ,
가

11

120 가 ,
 가 5%

12

, , 8 11 가 ,

13.

1×10^{-13} • cm , , 8 11 가 ,

14.

, , 12 , 가

15.

, , 14 ,

16.

, , 15 ,

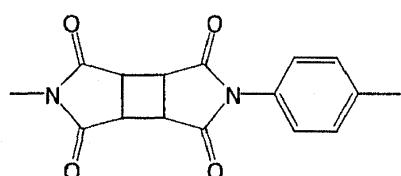
17.

, , 15 ,

18.

, , 2 , 1

(1)

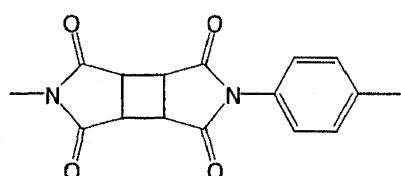


19.

, , 8 13 가 ,

2

(2)



20.

, , 1 19 가 ,
 가 ,
 ,
 ,
 『 』
 1 ,
 , x y , y x ,
 ,
 - 5' 1 2 - 2' 5 2 , 3 - 3' 3 , 4 - 4' 4 , 5
) , (SUB1) (SUB1) SiO₂ SiN (ULS (TFT
) (ULS) (TFT)
 (PSI) , (TFT) (PSI) (GL) 2
 (DL) , 'コ'
 2 SiN (PSI) 1 (GI) (ULS) 1 (GI) (PSI) (TFT) SiO
 1 (GI) (GL) , x (PSI) y 2 (GL) (PSI)
 , (PSI) , (GL) , , 3 (GL)
 , (CL) , (GL) (CL) (GL) (GL)
 , (CL) , (CL) 2 (PX) (PX)(
 , (GL) , (GL) (CTM) 가 (CTM))
 , (CL) , 2 (PX) (CL)
 (CTM) 가
 1 (GI) 2 (GL) (CL) SiO₂ SiN
 2 (ILI) (DL) , , y (PSI) x (DL)
 T1) , , , (CN

(DL) (PSI) (TFT)
 , 2 (ILI) , (PXM) (PSI) (CNT2)
 (PXM) (PSI) (TFT)
 , (PX), (CT) (CPT) 6 ,
 (PAD) 2 (CL) (ILI) (PXM) (CNT) (PAD) (CL)
 (PAD) , (PXM) ,
 (CT) (CL) (CTM) (PX) 1 ,
 (PXM) , (CL) (TFT) (CTM) , (GL)
 '고' (PXM) , (CL) (Cstg) (CL)
 (PXM), (PAD) , 7 , (PX)
 , 2 (ILI) 1 (PAS) (DL) (PXM) 2 (FPAS) SiO₂ 가
 2 (FPAS) (PXM) (CT) (CPT) , ITO(Indium Tin Oxide), ITZO(Indium Tin Zinc Oxide), IZO(Indium Zinc Oxide), SnO₂ (), In₂O₃ ()
 , (PX) (CL) y x 2 ,
 (PX) (PXM) , (PXM) (TFT) 2 (FPAS) 1 (PAS) (PX)
 (CNT5) (PXM) (CL) (PXM) (TFT) 2 (FPAS) 1 (PAS) (PX)
 (CT) (PX) 3 , y
 (CT) 1 , 2 , (DL)
 (DL) (DL) (DL) (DL) (DL) (DL) (D)

(AL1)

1) (LC)

(LC)

2) (基)가

10

10 (nitro) 가 (基) x (alkyl), 11 (a) 11 (g) (halogen), (cyan)

가, 가, 가 (hopping) 가, 가

가, 가 ms,

12 (a) x (phenylene diamine)

NH₂

12 (b) 가

13, 15

13 가

(主鎖)가
14 (b), 14 (c) 14 (a)

《 1 》

(b), 13

A C

16 (a)

(B) 16

A A, B A

C B (AL1) B

, C , C

『 3』

, 19 (b)

, 19 (a)

가

1) 50%

2) 50% , 1V (, 120).

3) 50%

, 120 1V 가 ,

가 , 20 21 ,

$0^{12} \cdot \text{cm}$, $5 \times 10^{10} \cdot \text{cm}$ 20 , (a), (b), (c) , , $1 \times 10^{13} \cdot \text{cm}$, 1×1 (橫軸) (), (縱軸)

C C A

A , B C

B B ,

, A

$1 \times 10^{12} \cdot \text{cm}$, $5 \times 10^{10} \cdot \text{cm}$ 21 , (a), (b), (c) , , $1 \times 10^{13} \cdot \text{cm}$, (),

C C A

A , B C

A

, 4가 가

1) 가

, (DC) 1 가 (fitting) ((DC) 가).

(1)

$$= A + B \exp(-t/C) + D \exp(-t/E)$$

, A~E , t (DC) 1V 가

, , t = 0 (= A + B + D) , 100%

, (DC) 0% t = 120

2) 가

, (DC) 2 가 ((DC) 가).

(2)

$$= A + B \exp(-t/C) + D \exp(-t/E)$$

, A~E , t (DC) 1V 가 , , t = 0 (= A + B + D) , 100%

, (DC) 0% t = 120

3) 가

, 3 ().

(3)

$$= A + B \exp(-t/C) + D \exp(-t/E)$$

, A~E , t (DC) 1V 가 , , t = 0 (= A + B + D) , 100%

, (DC) 0% t = 122

4) 가

, 4 ().

(4)

$$= A + B \exp(-t/C) + D \exp(-t/E)$$

, A~E , t (DC) 1V 가 , , t = 0 (= A + B + D) , 100%

, (DC) 0% t = 122

가 , , 1) (DC) 가 가 가 40% , , (DC) 가 120 , ().

22 (a), (b), (c) , (0~120)

21 (a), (b), (c) , ().

(DC) 가

22 (a), (b), (c)

A (DC) 가 가 40% (DC) 가 120 . ,
, B . , $1 \times 10^{-12} \text{ cm}$,
, C $1 \times 10^{-12} \text{ cm}$,
, A가 , , , ,

2) 가 , (DC) 가 , 40% , 가 120
가 (DC) 가 ,
가 .

23 (a), (b), (c) ,
(0~120). 20 (a), (b), (c) (DC) 가

23 (a), (b), (c)

가 120, ,
(DC) A 40%,
(DC) 가 ,
,
, B 1×10^{-12} • cm ,
, C 1×10^{-12} • cm ,
, 가 ,
A가 ,

24 , A, B, C
(· cm) , (%)

가 , , A
가 , , B, C
가 , , A
가 , , A

, 25 , A, B, C (° cm) . (%)

26 (a), (b), (c) , 20 (a), (b), (c) (DC) 가
(DC 가 0~10).

A 2 5%

2 , , 가

5%

B, C , 1×10^{-12} • cm

B C , 26 (b) (c) , , 가 , , (DC) 가 . 5%

2 5%

27 (a), (b), (c) , 21 (a), (b), (c) (DC) 가
(DC 가 0~10).

A 2 5%

2 , , 가

5%

B, C , 1×10^{-12} • cm

2 5% 27 (b) (c) , , , , , (DC) 가

28 A, B, C , (DC) 가 OFF 2

(cm^3 : cm^3). (%)

A3

B

A7

1 7

(殘像)

(57)

1.

1×10¹³

• cm

2.

1

가

3.

2

가

4.

1

3

(dismine) 가

5.

4

(phenylene diamine) 가

6.

4

(二無水物)

7.

2

8.

가

120

(flicker) 가

가

40%

9.

가

120

가

가

가

가

40%

10.

2

가

120

가

가

5%

가

11.

2

가

120 가 ,
 가 5%

12.

8

11

,

13.

8

11

,

 1×10^{-13} • cm

14.

12

,

가

15.

14

,

16.

15

,

가

17.

15

,

가

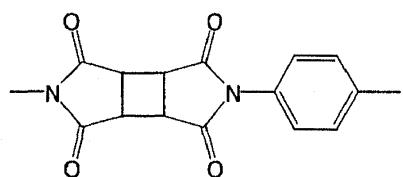
18.

2

,

1

(1)



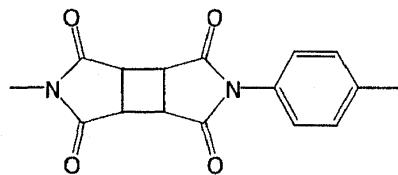
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8

13

,

(2)



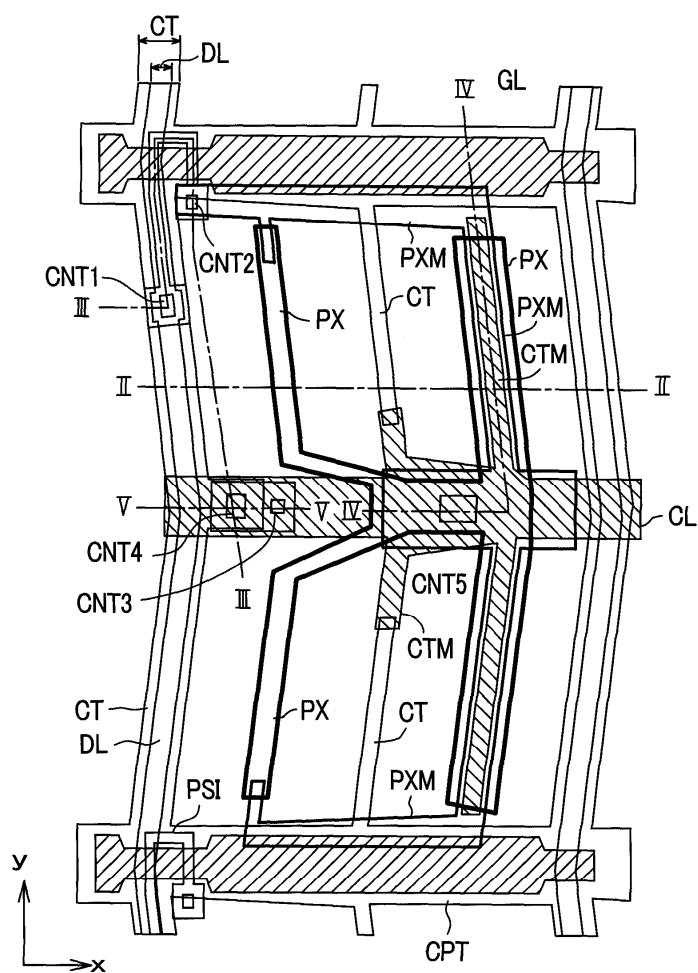
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1

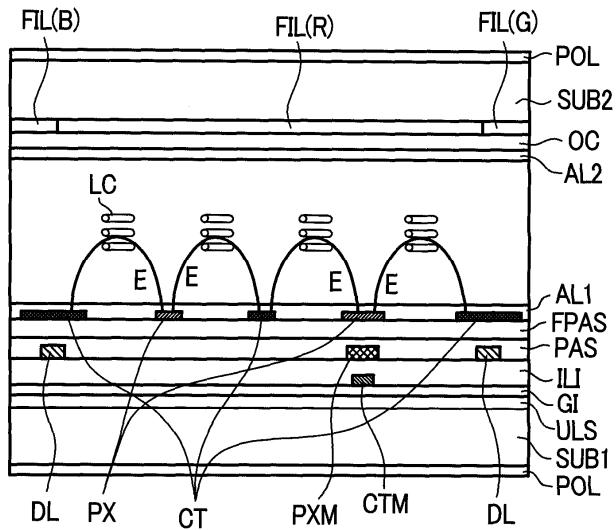
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가

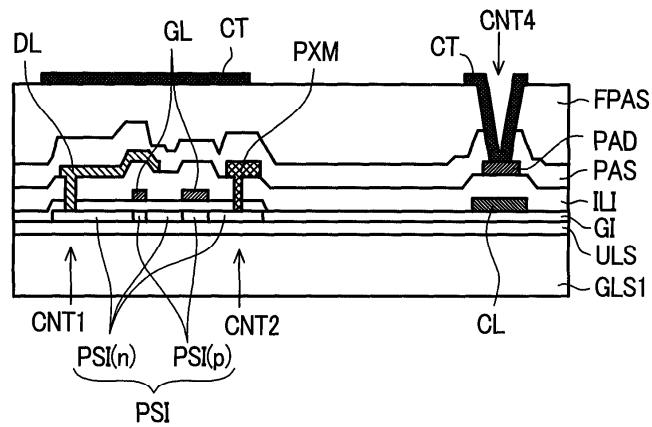
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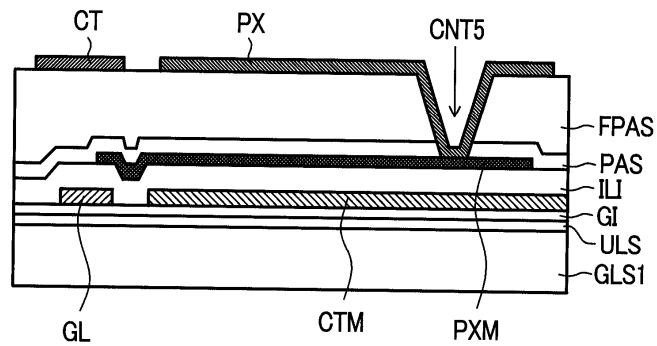
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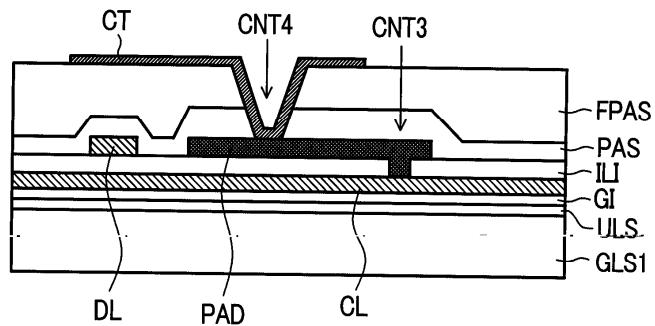
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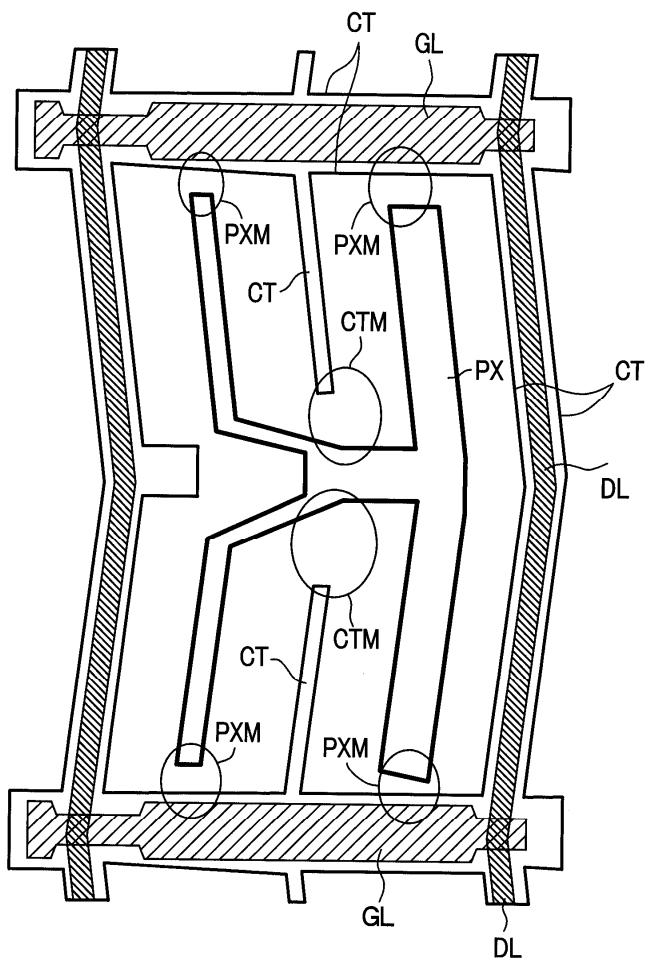
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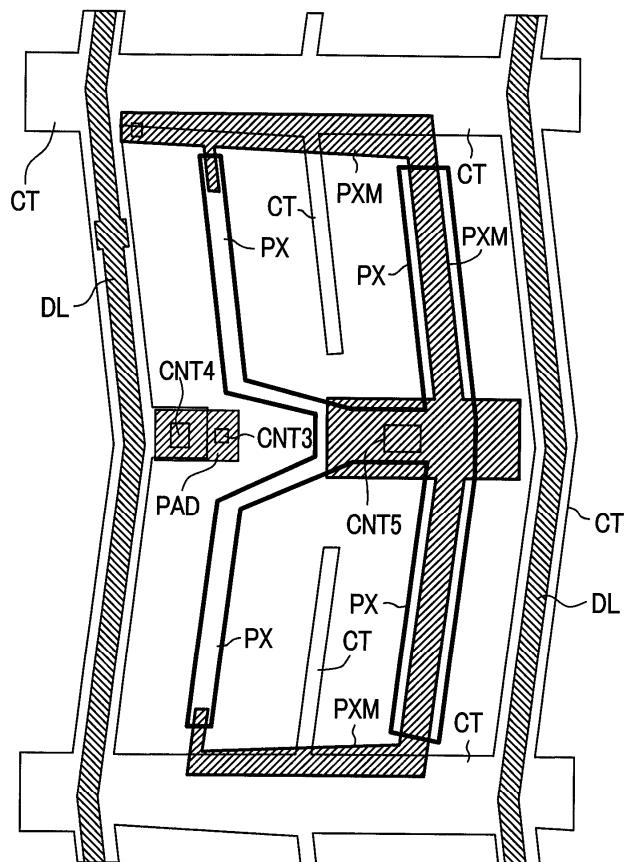
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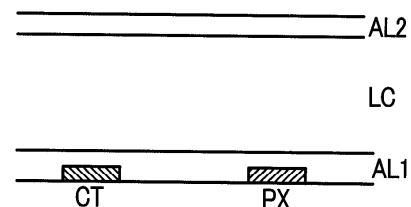
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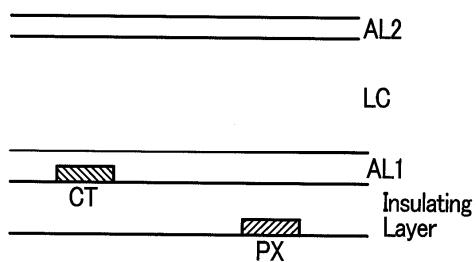
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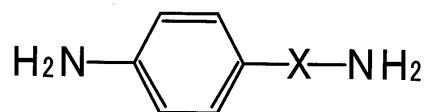
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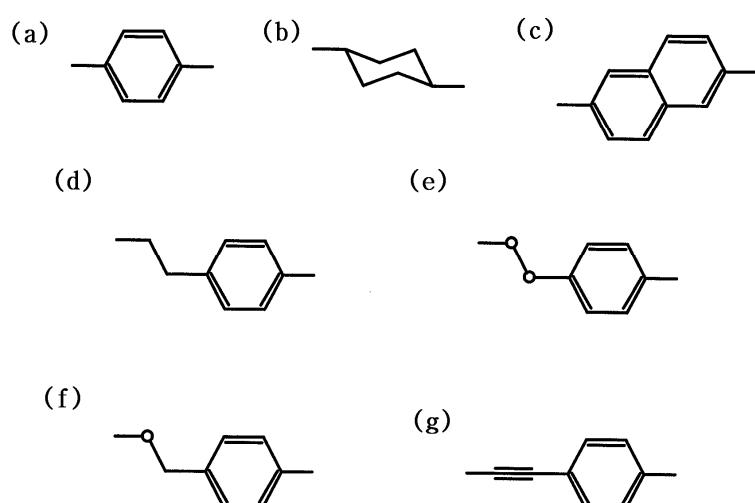
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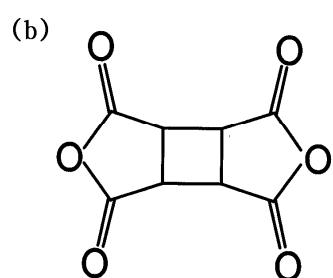
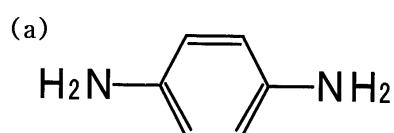
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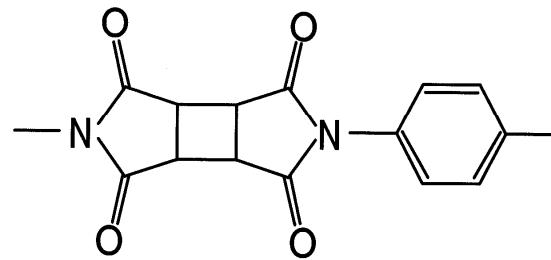
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12



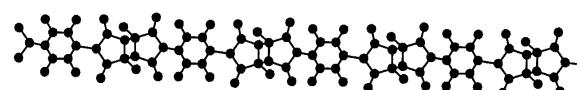
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14

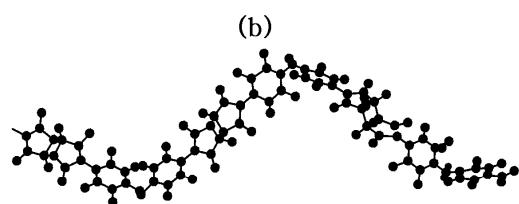
(a)

배향막 A



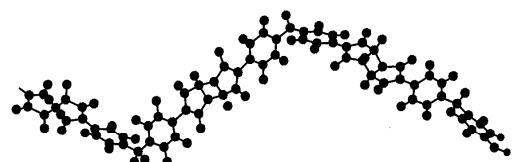
(b)

배향막 B

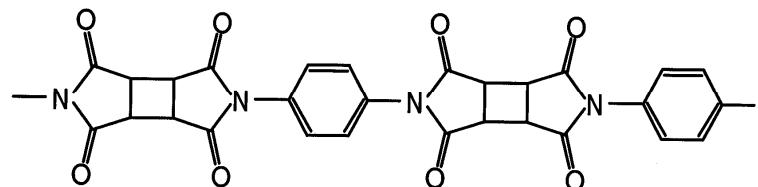


(c)

배향막 C

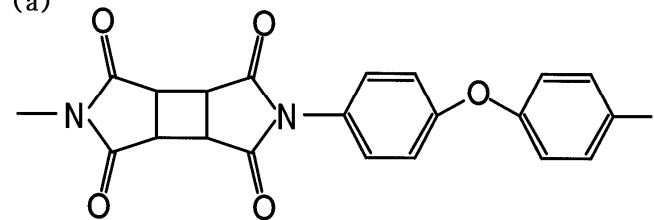


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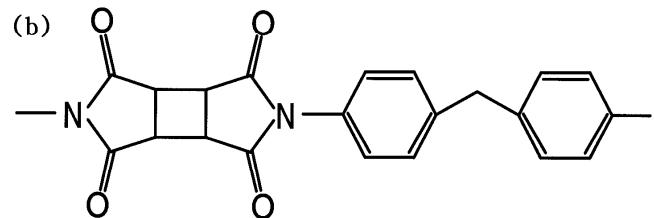


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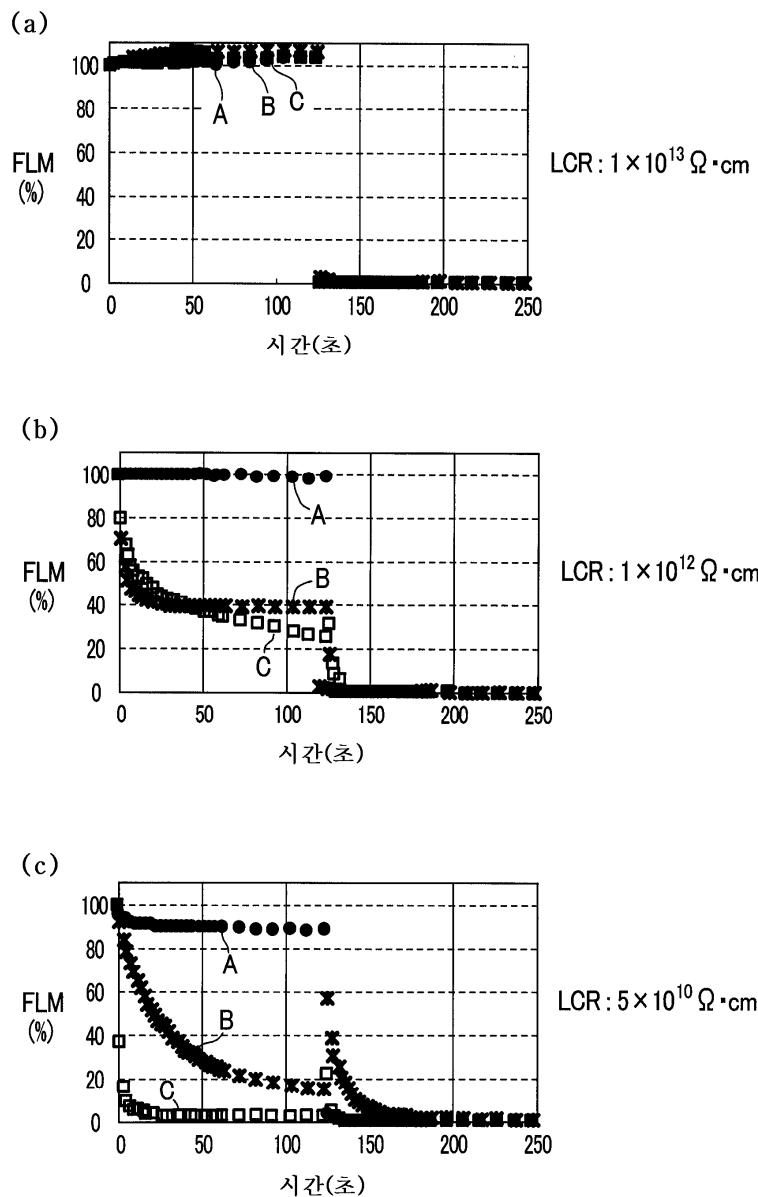
(a)



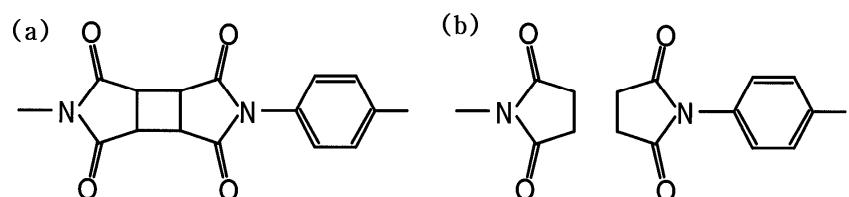
(b)



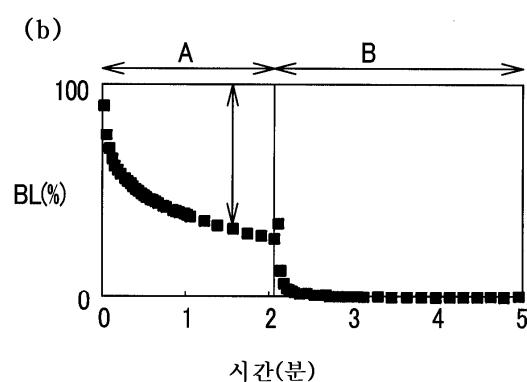
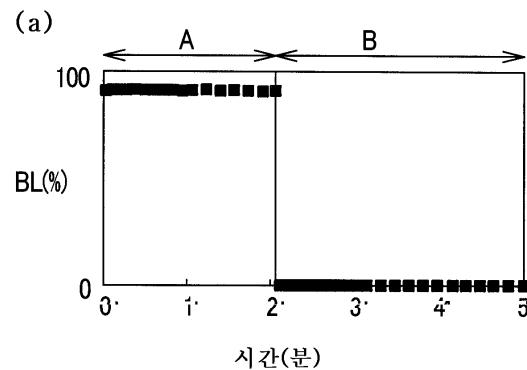
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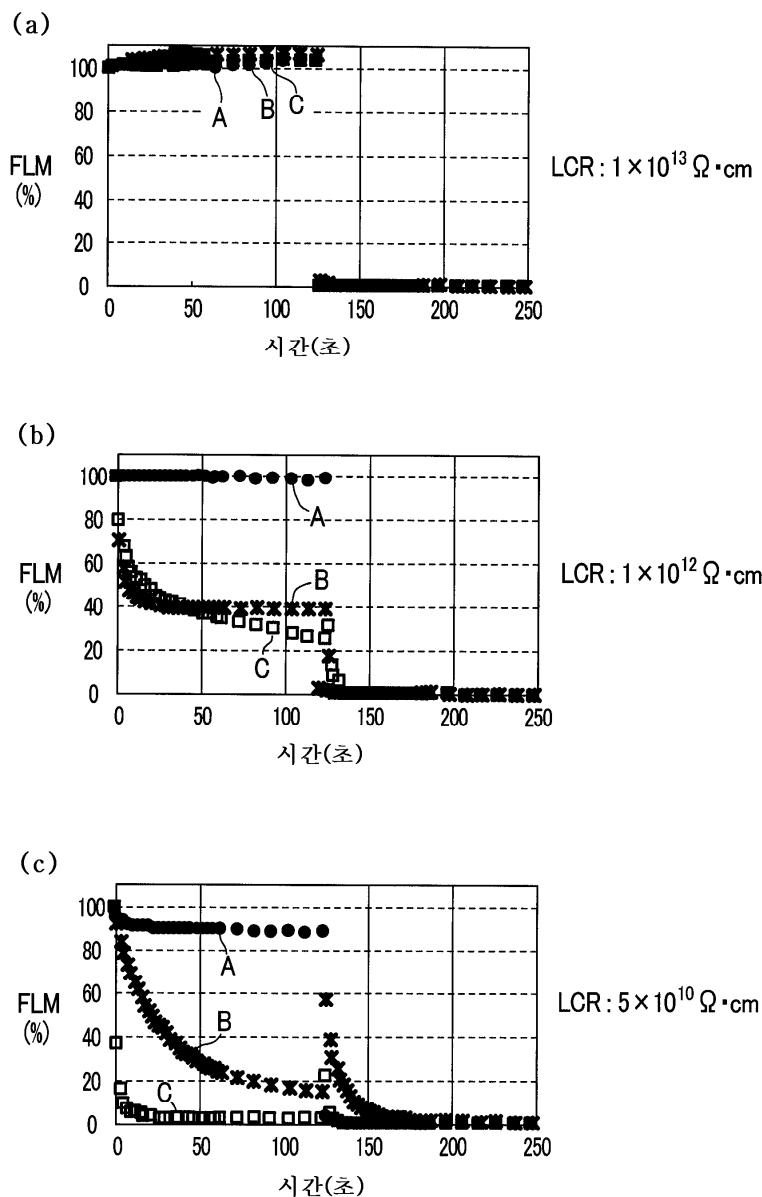
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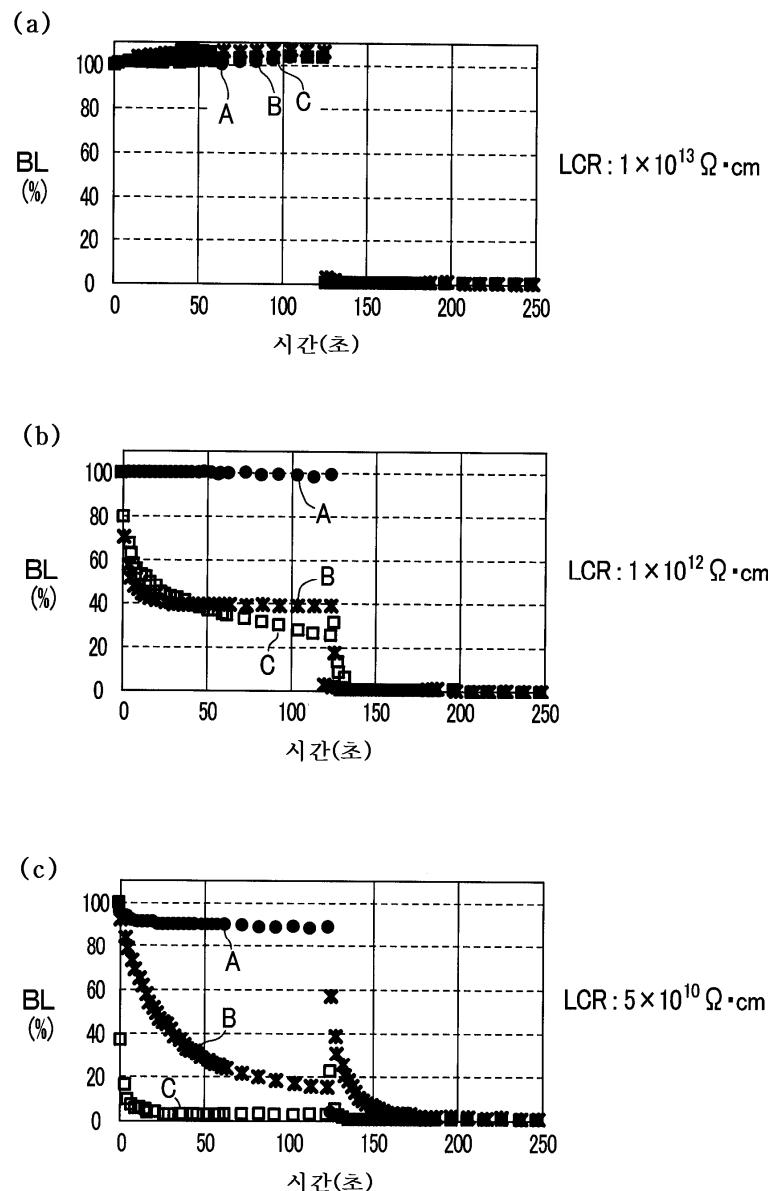


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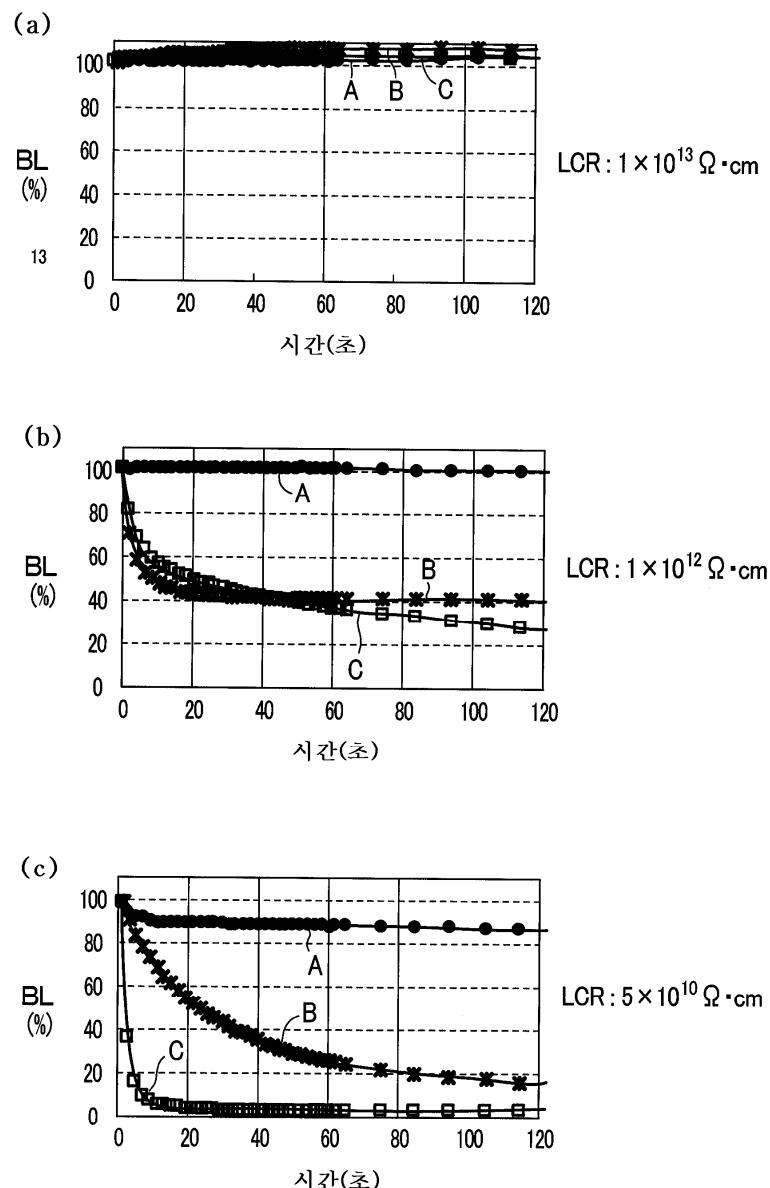


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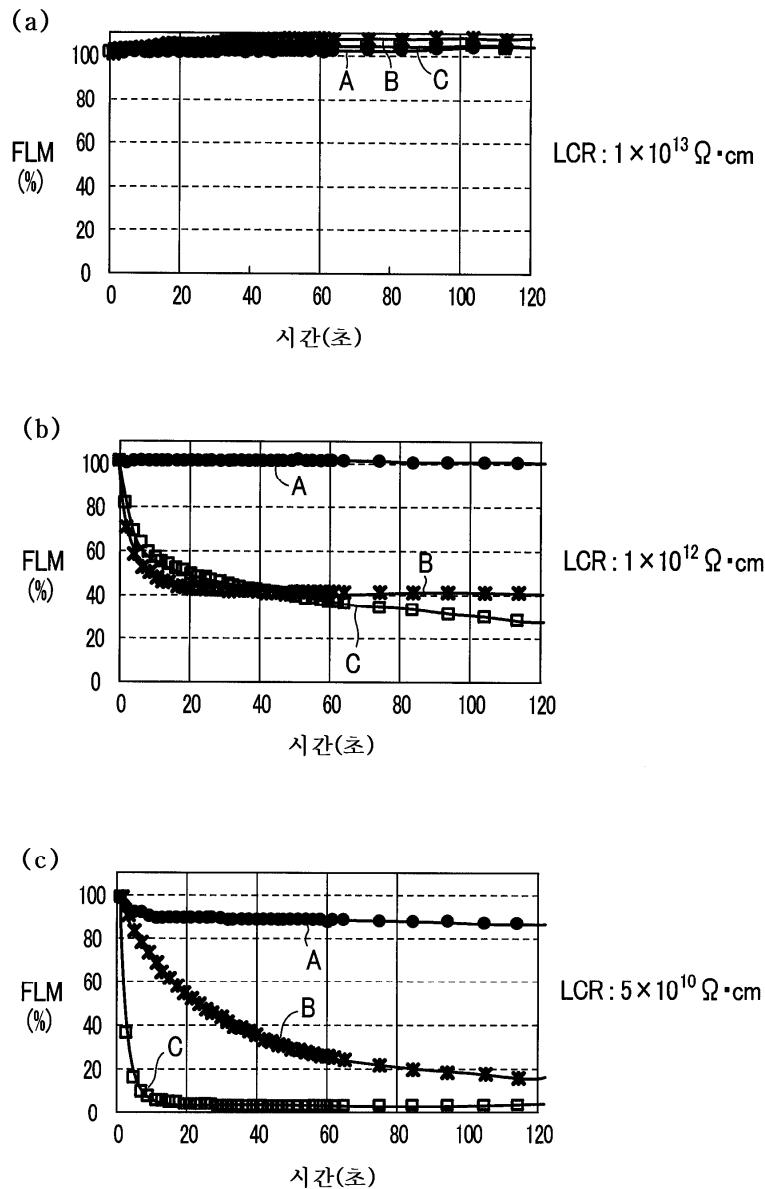




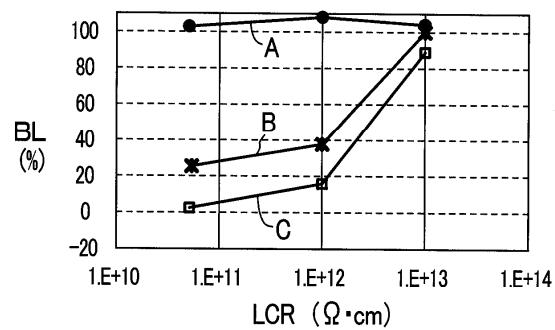
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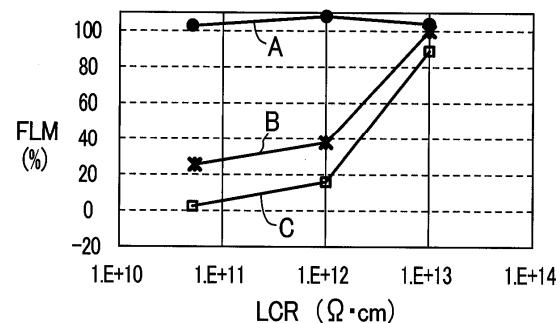
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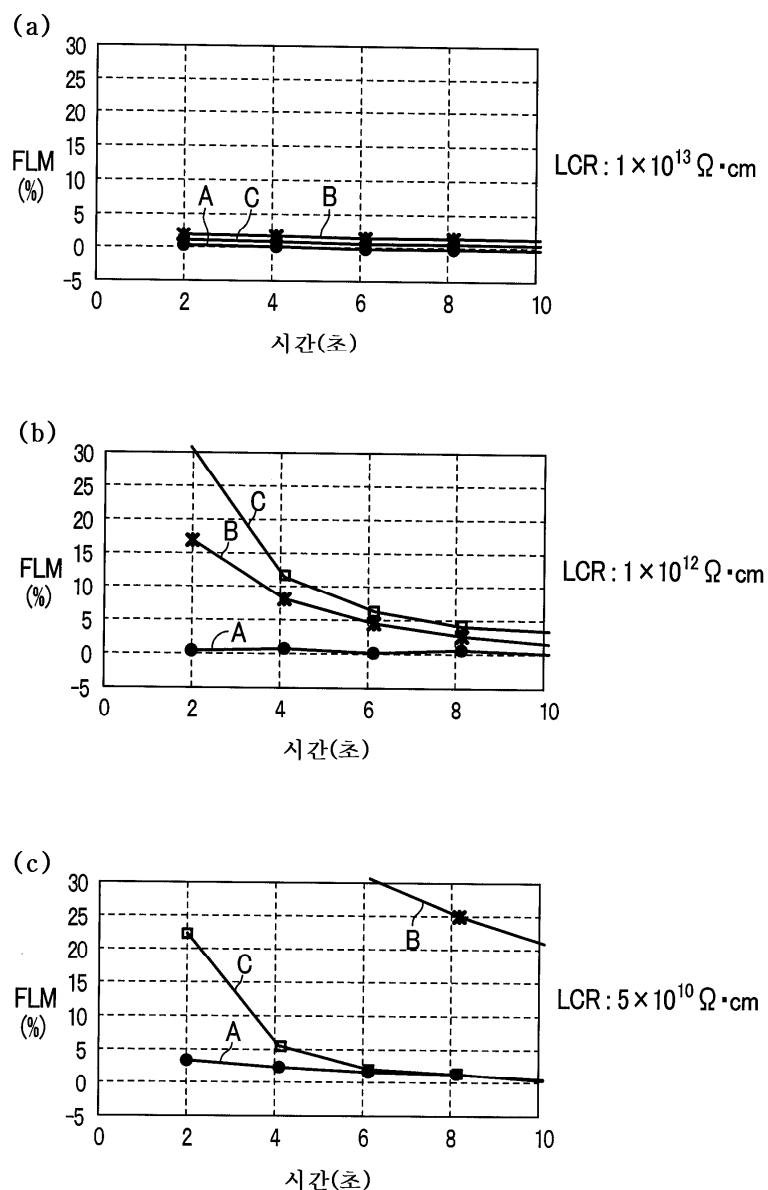
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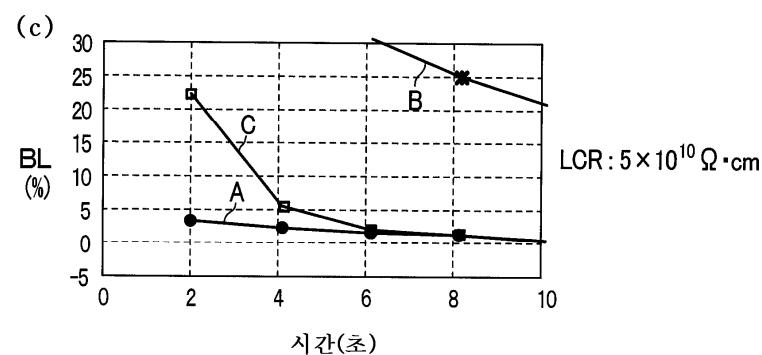
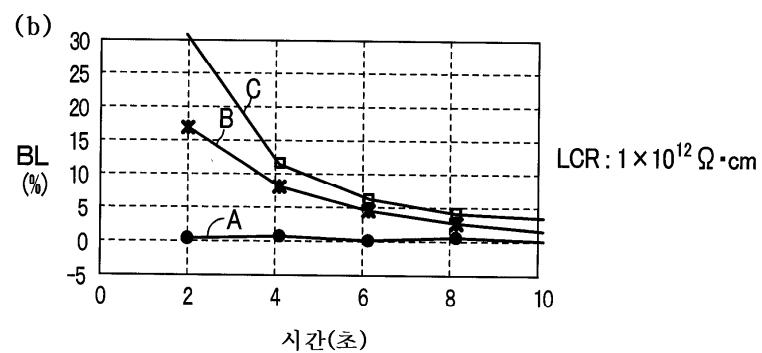
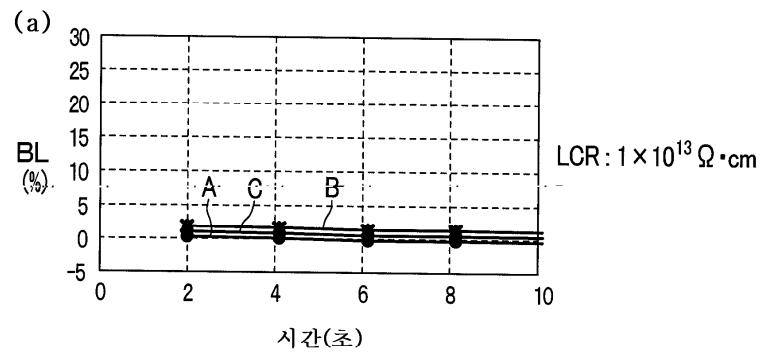
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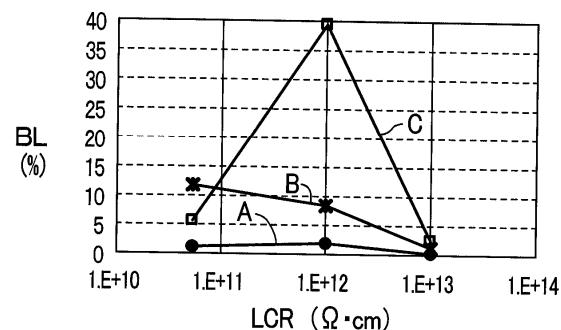
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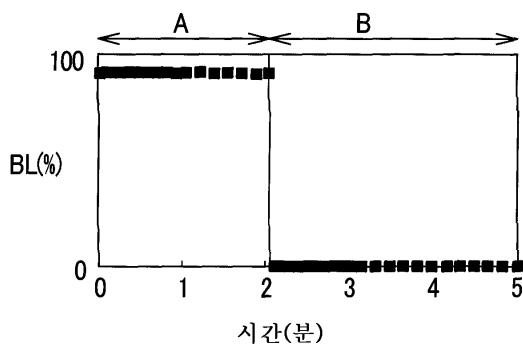
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28



29



30

