

(19)  
(12)

(KR)  
(A)

(51) 。 Int. Cl. <sup>7</sup>  
G02F 1/141

(11)  
(43)

2002 - 0056963  
2002 07 11

(21) 10 - 2000 - 0087052  
(22) 2000 12 30

(71) .  
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(72) 224 - 5

616 - 1103

(74)  
:

(54)

가

8

1 V FLC

2 V FLC

3 HV FLC

4 HV FLC

5 가 HV FLC

6 HV FLC 가

7 HV FLC 가

8 HV FLC

9 8 HV FLC

< >

1,7 : 6,12 :

2,5,8,11 : 3,4,9,10 :

13,14 :

(Liquid Crystal Display : " LCD" )

(Ferroelectric Liquid Crystal Display)

가

가

가

가

가

lix) FLC , SS(Surface Stabilized) FLC , AFLC(Antiferroelectric) , V FLC , DH(Deformed He , HV(Half V )  
FLC 가 .

1 V FLC

V FLC

가

가

2 V FLC

V FLC 가 가 " V"

3 HV FLC

HV FLC 가 , V FLC HV FLC ( 4 " Half - V"

HV FLC 가 (isotropic) → (N\*) → C (Sc\*) → (Crystal)

가 , 가 가 , , 가 2가

5 6 가 E(+) 가 6 E(-) 가 4 " Half - V"

7 (2) , HV FLC (2) (3) , (1) (6) , (1) (5) (4) , (3,4) (E - ext) 가 (E - ext) (E - intra)

(Grinding)

가

DC

가 가

가

가

가

가

가

HV FLC

가

가

8

9

8

(12)

(7)

(11)

(10)

(8)

(9,10)

HV FLC

(8)

(9)

(7)

(12)

(14)

(9,10)

(Surface Polarity)

가 가

가

가

(9,10)

(9,10)

가

(14)

(9,10)

(Intrinsic electric field)

가

(9,10)

(Ferroelectrics 1988 vol85 p47)

sive component)

(interfacial energy)  
(polar component)

1

(disper

1

$$\gamma = \gamma^p + \gamma^a$$

$\gamma^p$  가  
 $\gamma^a$  가  
 9 HV FLC  
 HV FLC 가  
 3.3V 가  
 HV FLC 가  
 (aging)  
 HV FLC 가  
 HV FLC 가  
 HV FLC 가

(57)

- 1.
- 2.
- 3.

1 2 ,

4.

1 2 ,

5.

1 2 ,

, 가

6.

1 2 ,

, 가

7.

6 ,

,

8.

6 ,

,

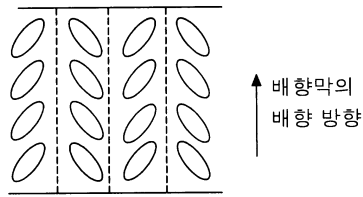
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1 2 ,

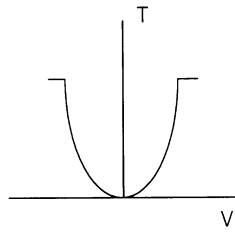
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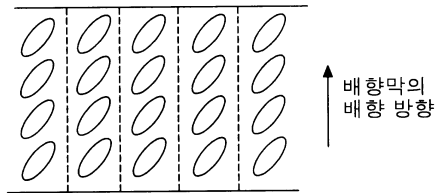
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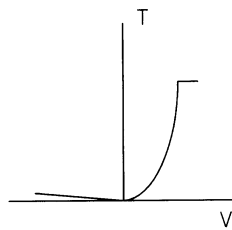
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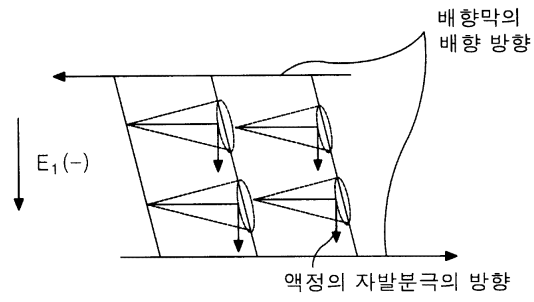
3



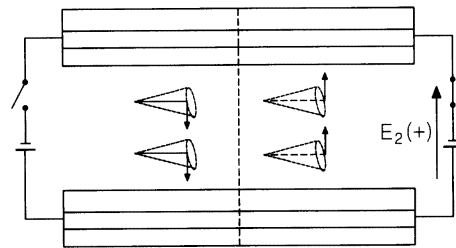
4



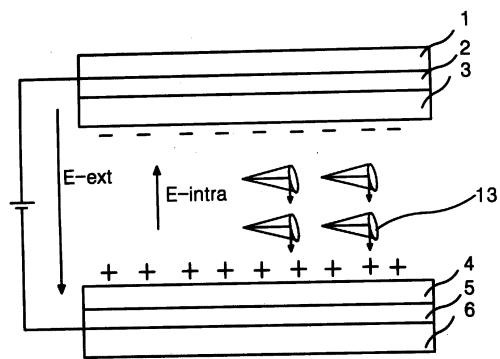
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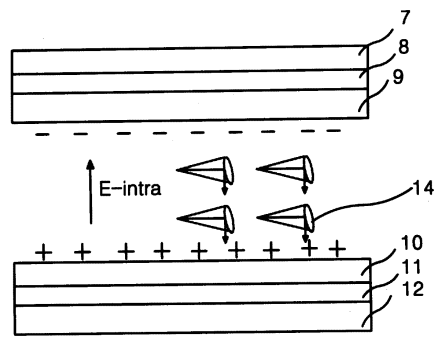


7





8



9

