

(19)
(12)(KR)
(A)(51) 。 Int. Cl. ⁷
G02F 1/13(11)
(43)2003 - 0022431
2003 03 17(21) 10 - 2001 - 0050408
(22) 2001 08 21(71) .
20

(72) 2 998 - 1

2 1506

(74)

:

(54) 가

(epoxy group) 가

(discotic)

가

1

2
가 , 1 2 .

2

, , ,

1

2

*

111 : 1 112 : 2

113 : 114 :

115 : 116 :

117 : 117a :

117b : 118 :

119 : 131 :

132 : 133 :

140 : 141 :

150 :

(LCD ; Liquid Crystal Display Device) , 가

, , TV, ,

(TN : Twisted Nematic) 가

, , 가 90 °

(contrast)

TN

1

(50) , 1 , 2 (11,12) , 1 , 2 (11,12) , (42) , (42)

1, 2 (11,12) (51,52)
 , 1 (11) ((17) , (17) 가 (19)
 , 2 (12) (31) R,G,B (32) , (32)
 (31) , (19) 가 (33) .
 , (19) 가 (33) 가 1, 2 (13a,13b)
 .
 (polyimide) 가 ,
 .
 (polyimide) ,
 .
 ,
 가 .
 , (42) TN ,
 .
 (uni - axial film), (bi - axial film) (wide view film)
 , (discotic) .
 , (positive uniaxial) (extraordinary refractive index)
 (ordinary refractive index) , (negative uniaxial)
 ,
 (42) (51,52) .
 ,
 , TN , 가 ,
 .
 , 가 .
 , 가
 , 가

(discotic) 가 (epoxy group) 가

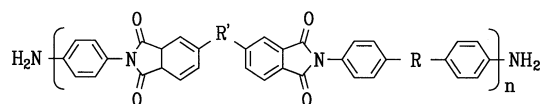
, 가 1 2 가 2

가

2

1 (polyimide)

1



, 2,5 - (diaminobenzonitrile), 2 - () - 1,4 - (2
- (trifluoromethyl) - 1,4 - benzenediamine), p - (p - phenylenediamine), 2 - - 1,4 -
(2 - chloro - 1,4 - benzenediamine), 2 - - 1,4 - (2 - fluoro - 1,4 - benzenediamine), m -
(m - phenylenediamine), 2,5 - (2,5 - diaminotoluene), 2,6 - (2,6 - diami
notoluene), 4,4' - (4,4' - diaminobiphenyl), 3,3' - - 4,4' - (3,3' - dimethyl -
4,4' - diaminobiphenyl), 3,3' - - 4,4' - (3,3' - dimethoxy - 4,4' - diaminobiphenyl),
(diaminodiphenylmethane), (diaminodiphenyl ether), 2,2 -
(2,2 - diaminodiphenylpropane), (3,5 - - 4 -) (bis(3,5 - diethyl - 4 - aminophenyl)
methane), (diaminodiphenylsulfone), (diaminonaphthalene), 1,4 - (4 -
) (1,4 - bis(4 - aminophenoxy)benzene), 4,4' - (4,4' - diaminobenzophenone),
3,4' - (3,4' - diaminobenzophenone), 1,4 - (4 -) (1,4 - bis(4 - aminophenyl)
benzene), 9,10 - (4 -) (9,10 - bis(4 - aminophenyl)anthracene), 4,4' - (4 -
) (4,4' - bis(4 - aminophenoxy)diphenylsulfone), 2,2 - [4 - (4 -)] (2,2
- bis[4 - (4 - aminophenoxy)phenyl]propane), 2,2 - (4 -) (2,2 - bis(4 - amino
phenyl)hexafluoropropane), 2,2 - [4 - (4 -)] (2,2 - bis[4 - (4 - aminoph
enoxy)phenyl]hexafluoropropane), (4 -) (bis(4 - aminocyclohexyl)methane)
(alicyclic diamine), (tetramethylene diamine), (hexam
ethylene diamine) (aliphatic diamine), (3 -) (bis(3 - am
inopropyl)tetramethyldisiloxane) (diaminosiloxane),

(pyromellitic dianhydride), 2,3,6,7 -
(2,3,6,7 - naphthalenetetracarboxylic dianhydride), 1,2,5,6 -

(1,2,5,6 - naphthalenetetracarboxylic dianhydride), 1,4,5,8 -
 (1,4,5,8 - naphthalenetetracarboxylic dianhydride), 3,3',4,4' -
 (3,3',4,4' - biphenyltetracarboxylic dianhydride), 2,3,2',3' -
 (2,3,2',3' - biphenyltetracarboxylic dianhydride), (3,4 -) (bis(3,4 - dicarboxyphenyl)ether dianhydride), (3,4 -) (bis(3,4 - dicarboxyphenyl)diphenylsulfone dianhydride), (3,4 -) (bis(3,4 - dicarboxyphenyl)methane dianhydride), 2,2 - (3,4 -) (2,2 - bis(3,4 - dicarboxyphenyl)propane dianhydride), 1,1,1,3,3,3 - - 2,2 - (3,4 -) (1,1,1,3,3,3 - hexafluoro - 2,2 - bis(3,4 - dicarboxyphenyl)propane dianhydride), (3,4 -) (bis(3,4 - dicarboxyphenyl)dimethylsilane dianhydride), 2,3,4,5 - (2,3,4,5 - pyridinetetracarboxylic dianhydride), 1,2,3,4 - (1,2,3,4 - butanetetracarboxylic dianhydride), 1,2,3,4 - (1,2,3,4 - cyclobutanetetracarboxylic dianhydride), 1,2,3,4 - (1,2,3,4 - cyclopentanetetracarboxylic dianhydride), 1,2,4,5 - (1,2,4,5 - cyclohexanetetracarboxylic dianhydride), 2,3,5 - (2,3,5 - tricarboxycyclopentylacetic acid dianhydride), 3,4 - - 1,2,3,4 - (3,4 - dicarboxy - 1,2,3,4 - tetrahydro - 1 - naphthalenesuccinic dianhydride)
 - 1 -
 e) Cl - , F - .

가

(aliphatic long - chain) 가

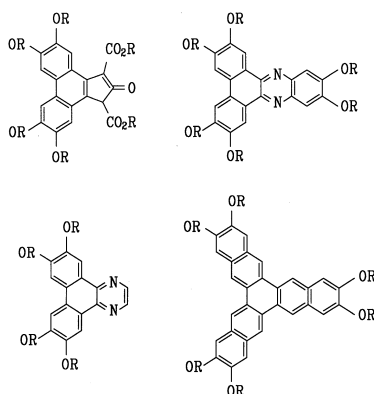
(oligomer)

(epoxy)

가

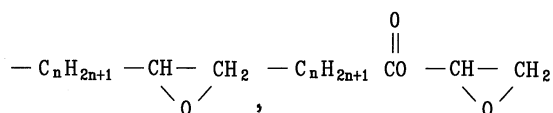
2

2



, R

가



(n) .

, 가 가 가

가 , 가 .

NMP(N - methylpyrrolidinone), - (γ - butyllactone), BC(Butyl Cellosolve)

, 1 30wt% .

가 .

1 1 , 2 2 .

, 1 (111) () (114)

/ (on/off) ,

(119) .

, (114) , (114)

(115) , (114) (116) ,

(117) / (117a,117b) . (116)

n⁺ a - Si .

, 2 (112) (131) , (131)

R,G,B (132) , (119) (150) 가

(133) .

, 1 (111) 2 (112) 가

(discotic) , .

가 N

MP, γ - butyllactone, BC 1 30wt% .

, 가 가

. ,

, 가 ,

가 .

, (113) .

, (113) 1 (111) 가 (1

41) 2 (112) (140) , 1 , 2 (111,112)

. ,

(150)

가

가

가

가 , (chiral dopant) 가 가 .

가 .

, TN(twisted nematic), STN (super twisted nematic), OCB(optically compensated birefringence), VA(vertical alignment), FLC(ferroelectric liquid crystal display), AFLC(Anti - ferroelectric Liquid Crystal), PDLC(polymer dispersed liquid crystal display), a - Si TFT, poly - Si TFT, MIM(metal - insulator - metal)

가

가

가

가 가 .

가

가

가

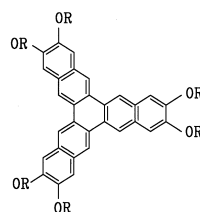
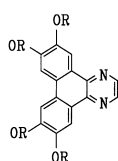
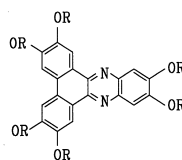
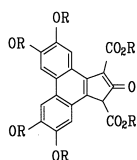
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1.

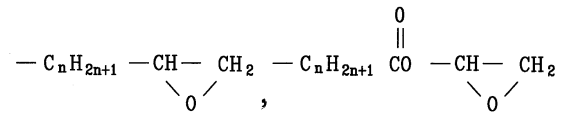
(epoxy group) 가

(discotic)

가



, R



, n

2.

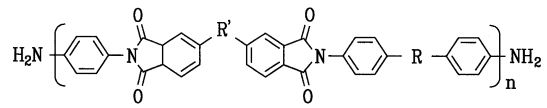
1

가

(discotic)

1

[1]



3.

2

가

4.

1

2

1

2

가

5.

4

1

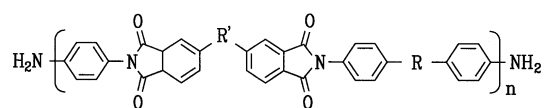
6.

1

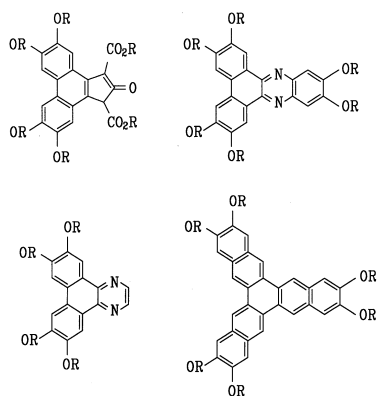
1

2

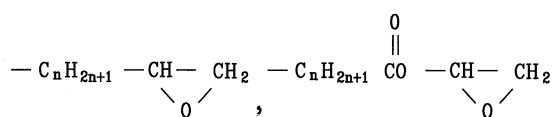
[1]



[2]



, R



, n

7.

6

2

(dianhydride)

(diamine)

8.

6

2

(aliphatic long - chain) 가

9.

4

2

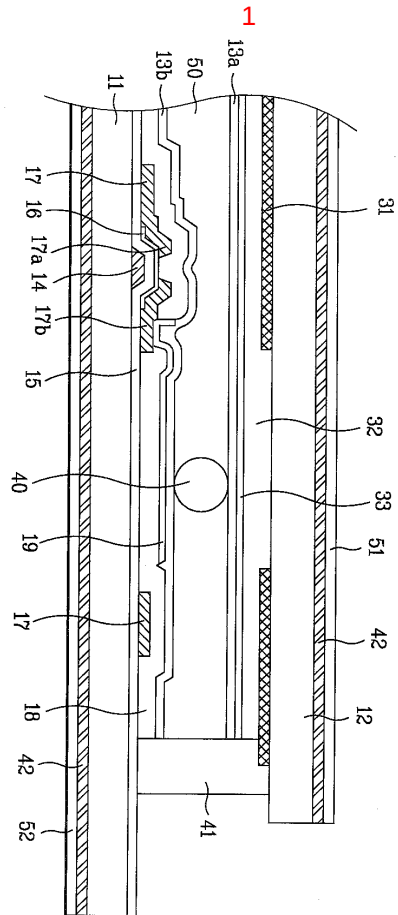
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10.

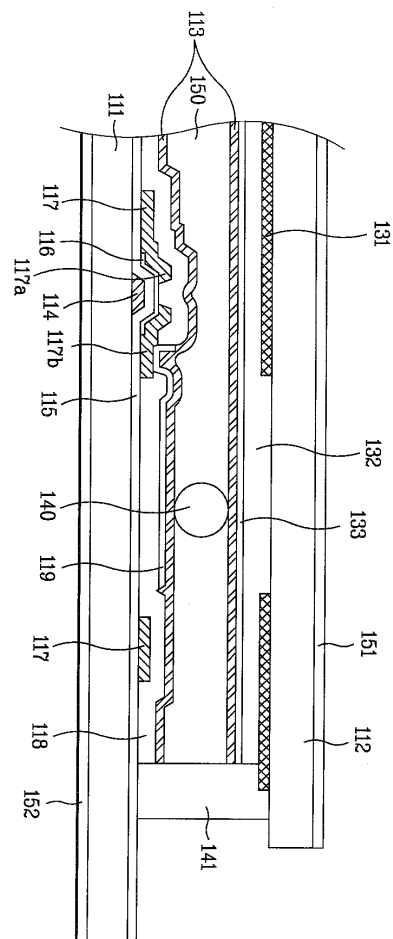
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2



专利名称(译)	可热交联的聚酰亚胺基材料和使用其制造液晶显示装置的方法		
公开(公告)号	KR1020030022431A	公开(公告)日	2003-03-17
申请号	KR1020010050408	申请日	2001-08-21
[标]申请(专利权)人(译)	乐金显示有限公司		
申请(专利权)人(译)	LG显示器有限公司		
当前申请(专利权)人(译)	LG显示器有限公司		
[标]发明人	KIM SUNGJIN 김성진 KIM DOSUNG 김도성		
发明人	김성진 김도성		
IPC分类号	G02F1/13		
代理人(译)	金勇 新昌		
其他公开文献	KR100840669B1		
外部链接	Espacenet		

摘要(译)

本发明涉及一种可热交联的聚酰亚胺基材料，包括具有环氧基的盘状液晶衍生物，以及使用该材料制造液晶显示装置的方法，并且，在根据权利要求1的液晶显示装置中，液晶层设置在第一基板或第二基板的内表面上，其中液晶层包括具有环氧基的盘状液晶衍生物。的。2 指数方面 盘状液晶，聚酰亚胺，取向膜，补偿膜

