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2003 02 15

(21) 10 - 2001 - 0048256
(22) 2001 08 10

(71) . 20

(72) 104 - 1002

930 - 43

(74)

:

(54)

			1	2		(spacer)
1	(pixel)	(domain)			(data)	
	(patterning)	, 2	가	가		(Black Matrix) 가

4a

1a

1b 1a I I' .

2a 1a ' .

2b 1a ' .

3 1a ' .

4a 1 .

4b 4a ' .

4c 2 .

5 4 가 .

* *

1 : (gate line) 2 :

3 : (data line) 4 :

5 : 5a : 1 (domain)

5b : 2 (domain) 6 : (spacer)

7 : 8 :

9 : 1 10 : 2

11 : 12 :

13 : 14 : (black matrix)

15 : 16 :

17 : 17a : 1

17b : 2 18 : (liquid crystal)

19 : (ultraviolet) 20 : (photomask)

21 : (Patterned spacer) 22 :

(Patterned spacer)

(Liquid Crystal Display device)

TN(Twisted Nem

atic) - LCD

가 (pretilt angle) 가
가 (rubbing method)
가

, TN - LCD
가
vertical alignment)

가 (domain) (v
, color shift,

in)
graphy)

가

TDTN(Two Domain TN) - LCD
(rubbing)

(multi - doma
(photolithog

1a

, 1b 1a | |'

1a (1) (3)

(8) 가 (17) (8) (3)

(7) (17) (8) (4) ,
(domain) , 1 (5a) 2 (5b)

(5)가

1 (9)
(1)

1b , 1 (9) 2 (10) ,
(1) (1) (2) ,
(11) , (11)
(12) , (12)
) , (3)
/ (2), (12)
(7)(Thin Film Transistor ; TFT)
1 (13) , (13)
(8) (17)

, 2 (10) (1), (3), (7)
(14) , (14) (15) , 1
(16) , (16)
(17) 1 (9) 2 (10)
(23) , 1 (9) 2 (10)
(6)가

1a , 2a 2b 1 3 1a , .

2 (1b 10) (17) , TFT (polyimide) 1 (1b 9) (rubbing)

2b , 1 (9) 1a 2 (5b)(domain) (19) (20)(photomask) 가 , (19)

(19) 1 (5a) (5a) (17) (20) 가 , 2 (10) 1 (5a) (20) 가 , 2

2 2 (10) (6) , 1 2 1 (9) 1

2 (18) .

가 , 가 , 가 ,

가 .

3 , (4) , (5)가 , 1a (4) ,

(4) (5)가 .

가 (5) , (disclination line) (dislocation) 가 .

(18) , NW(Normally White) (contrast ratio) .

(Black Matrix) 가 . NB(Normally Black) 가 .

가 . 1 3 가 , 가 (spacer)(11)

TFT Color Filter Gap 가 . Cell Gap (Uniformity) 가

(panel) 가 (Cell Gap) (Side) (Seal) (1a)

6) , (6) .

(6) 가 (6) (plastic ball) (silica) (6)

(Flon)

(6) (合着) , 가

가 가 20 30 μm (6)가 (6)

, (6)가 (6) (4) (4) (6) , 가 (6) (5)가 (4) (4) ,

, (17) (4) (5)가 (5)가 가 1a (6) (6) 1 (9) 2 (10) (5)가 (4) (4) (6) (6) 가 (6)가 (random) (6)가 (4) 가 (6)가

가

2 , 2 1 1 2 1 1 2 1 1 2 1

가

, 가 4a 1 , 4b 1 , 4c 1 , 4b 1

4a
 1) (3) , 1 (1b 9) ((2) 가 / (7) 가 (8) (8) 1 (9) 2 (1b 10) 1 (3 17a) 2 (3 17b) , (17a, 17b) (4) (3) (21)가 (3 4) 1 (9) (3) 1 2 (5a) 2 (5b) .

TFT (Photolithography), (Etching) . 1 (9) 2 (10) (Thin Film Deposition),

, 1 (9) , (1) (2) (2) (14) (12) , (2) (12) (Ohmic contact layer)() / (7) (3) 1 (8)(ITO) (13) ,

1 (Polyimide)가 . 1 (17a) , 1 (17a) (2 20) 1 (2 19) (19) .

, 2 (10) 1 (1), (3), (7) (5) R. G. B (1b 14) , (1) (1b 15) . , (15) (15) 1 (9) (7) (1b 16) .

(16) PR(Photoresistor), BCB(Benzocyclobutene) SiN_x
 1 (9) (4) (3) (14) (21)(Patterned spacer) , 2 (21) 1 (9) 1 (9) 2 (10) 2 (10) (21) (21) (14) , (16) (21)

(10) 2 (17b) , (16) (21)가 2
 , 1 (17a) (18) , 2 (17b)
 , 45 135 가 .

1 (9) 2 (10)
 (20)
 1 (17a) 1 (5a) (19) (17)
 , 2 (17b) 2 (5b) (19)
 (17) 2 (10) 1 (13)
 가 (20) .

, (17) (4) . ,

4b 4a , (4) 1 2
 (21)가 , (21) 가 . 1 (9) 2 (1
 0) 가 (cell gap) (4) (2
 1) 1 (9) 2 (10) (5)
 , (21) , 가 (4)
 , (4) (5)가

, (5) (18) 가 . ,
 NW (14) , (14)
 (4) 2 (14)
 5 20μm , (4) (4) (14)
 , (4) (5)가 가 (4) (21)
 (14)

, (21) (21)
 (22) , 4c 2 . 45
 , 가 (3) , (3) 2 (10) (14)
 (46) 가 (21)

, 45 135 (17) (4) 5
 , 가 (17) (5) 가 가 ,
 가 2 (14)

가 .
 가 가 , (a
 lignment direction)
 가 .
 , 가
 가
 가 .
 가

(57)

1.

1 , 2
 2 1 2 1 2 , 1
 1 2

2.

1 , 가 1
 2

3.

1 , 가 1
 2

4.

1 , PR(Photoresist), BCB(Benzocyclobutene) SiN_x

5.

1 , 1 2 , 2

6.

1, 1, 2, 2, 4
5

7.

1, 1, 2

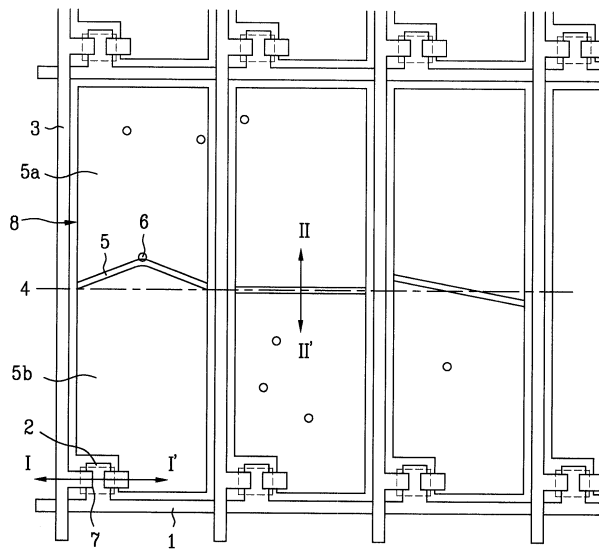
8.

1, 가

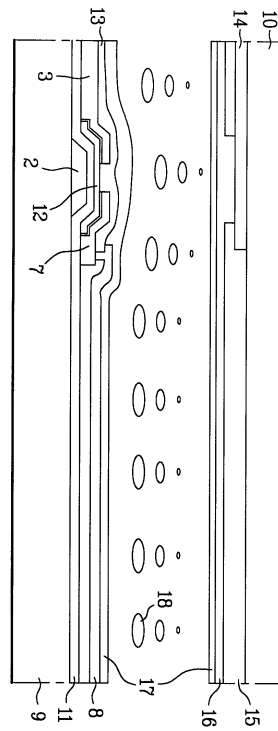
9.

1, 가

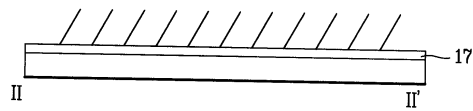
1a



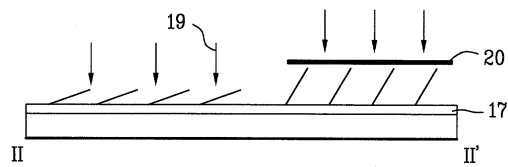
1b



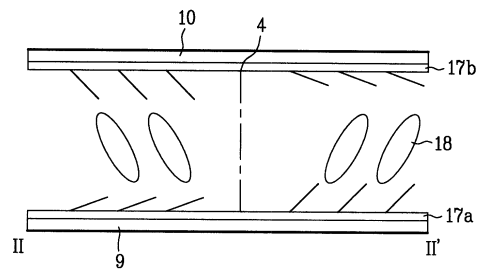
2a



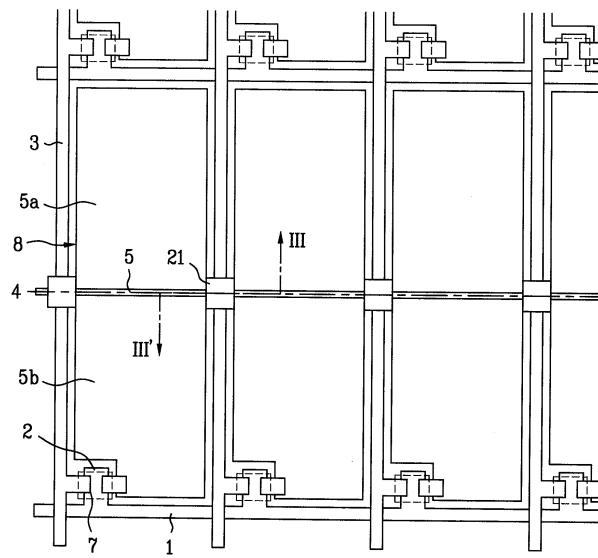
2b



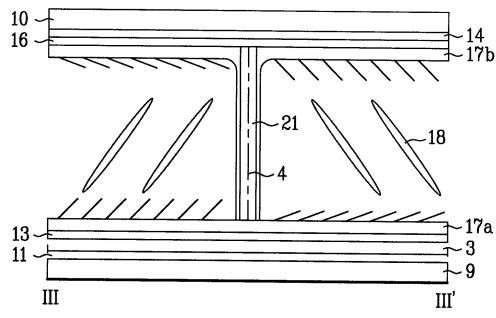
3



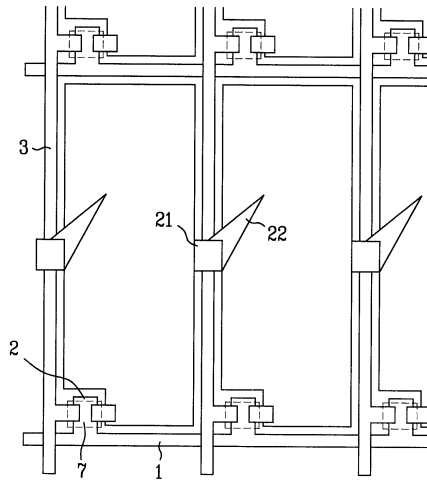
4a



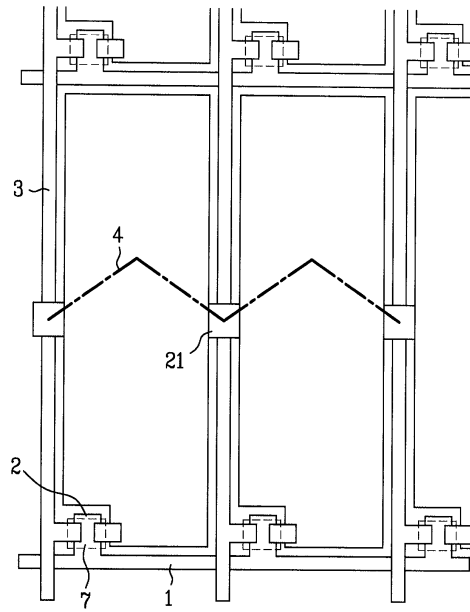
4b



4c



5



专利名称(译)	多域液晶显示器		
公开(公告)号	KR1020030013955A	公开(公告)日	2003-02-15
申请号	KR1020010048256	申请日	2001-08-10
[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	HONG HYUNGKI 홍형기 KIM KIHONG 김기홍		
发明人	홍형기 김기홍		
IPC分类号	G02F1/1339 G02F1/1337 G02F1/1335		
CPC分类号	G02F1/13394 G02F1/133753 G02F1/133512		
代理人(译)	金勇 新昌		
其他公开文献	KR100831278B1		
外部链接	Espacenet		

摘要(译)

在根据本发明的多畴液晶显示装置中，具有2个或更多个畴的结构是在相对的第一基板和第二基板中形成的固定间隔物，它被黑色矩阵（黑色矩阵层）覆盖。域的多样性和图案化的间隔物。

