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2004 06 30

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2002 12 23

(71)

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20

(72)

102 402

(74)

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(54)

1

2

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2

1

2

5

, ITO,

1a .

1b 1a I-I' .

2 .

3 .

4 .

5 .

*

*

130 : 132 :

134 : 136 :

151 :

(Mobile Phone), PDA, 가
 (Flat Panel Display Device) 가
 LCD(Liquid Crystal Display), PDP(Plasma Display Panel), FED(Field Emission Display), VFD(Vacuum Fluorescent Display)
 (LCD)가

가 TN 가 TN
 가 가 가
 (refractive anisotropy) 가

(wide viewing angle characteristic)
 (In Plane Switching Mode) 가
 IPS

1 IPS 1a 1b (1) 1a 1b 1a I-I' (4)
 (10) 1 (20) (3) (4) (11) 1 (20) (10)가 (4)
 (22) (14) 1 (22) (12) (12) (13)
 (24)
 (4) (5) (7) (5) (7) (16) (22) (18)
 (5) 1 (20) (7) (7)
 2 (30) (32) (34) 1 (20) 2 (30)
 IPS (1)
 IPS (10)가 (7) 가 (5) (7) (7)
 (1) 가
 IPS (1) (1 (20) 2 (30)) 가
 가 (40) (40) (1)

가 (1) , (40) 가

(1) 가 가 , 가 2
(30) () 가

(1)

ITO(Indium Tin Oxide) , IPS 2 (30) , (36)

(36) (ground) 2 (30)

(36) 2 (30)

(36) 2 (30)

(36) 2 (30) (evaporation) (sputtering) ITO
(annealing) (S101). (36) 220 240 130
(amorphous) (S102). 2 (30) ITO
(36) (36) ITO
(36)

(36) 2 (30) (S103).
2 (30) (36) (S104), 2 (30) (S105).

2 (30) 2 (30)

가 2 (30) 240
2 (30) 100 가
2 (30) 가

1

2

1 2

2 1 2

ITO(Indium Tin Oxide)
210 230

1 (Cell), 2 3

1 (Gate Line)

(Date Line) 1 (S201). , 가 가

2 R,G,B (S204).

1 2 (, (Pretilt Angle) 1 2) (R ubbing) (S202,S205). , 1 (Cell Gap) 1 2 가 (Spacer) (S203,S206,S207).

1 2 (Panel) , TFT (S208). , 가 (S209,S210).

3 , 2 (가) ITO

2 , 가

4 5

4a , 2 (130) (S301). , (136) 2 (130) ITO (136) (S302). 10 30 (130) 2 (130) 2 (130) (136) (130) 2 (S303,S304).

S305). (132a) 2 (130) 4b , (black resin;132a)가 (photoresist) , (151) (132)가 (S306).

3(b) , 2 (130) (132a)가 (baking) (S3 07). , 4c , 2 (130) (136) 210 230 ITO (136) (136) (132)가 2 (130) (S308). , 4d R,G,B (136) (136)

가 (10 30) , (136) , 2 (130) (130) 가

가 1 (136) (BM on TFT TFT on BM), (136)

가 Cr CrOx , (136) Cr CrO

x

IPS , 2 IPS TN(Twisted Nematic) VA(Vertical Alignment)

IPS

ITO , 가 2 (2) , 2 가 ,

(57)

1.

- 1 ;
- 2 ;
- 2 ;
- 2 ;
- 2 ;
- 1 2

2.

- 1 , ITO(Indium Tin Oxide)

3.

- 1 ,

4.

- 3 , ,
- 2 ;
- ;

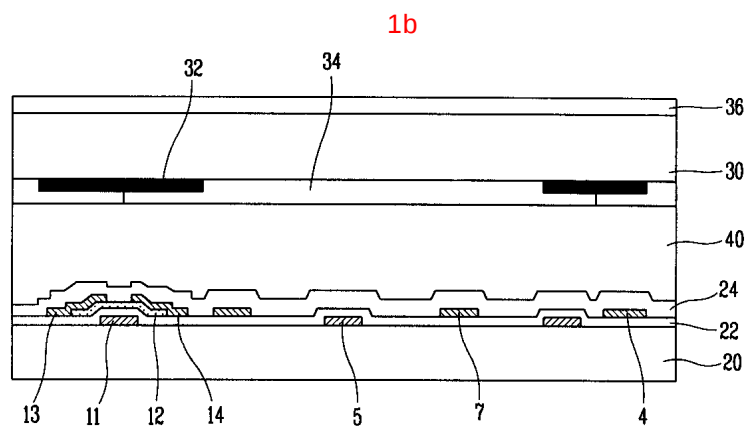
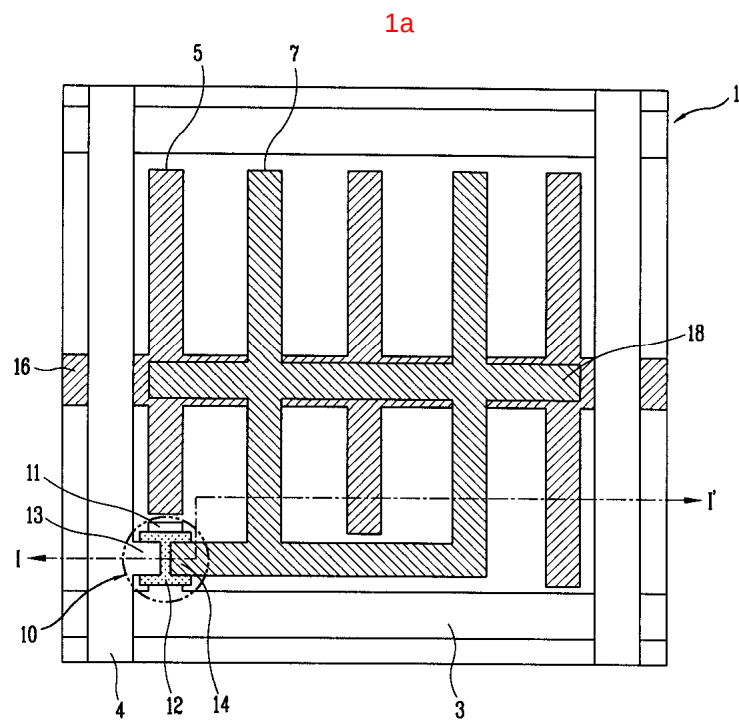
5.
1 , .
6.
5 , Cr CrOx .
7.
5 , ,
2 ;
8.
1 , 210 230 .
9.
1 , 1 ,
1 ;
;
10.
1 ;
2 ;
2 ;
;
- 1 2 .
11.
10 , ITO .
12.
10 , 210 230 .
13.
10 , 1 ,
1 ;
;
14.
1 ;
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2

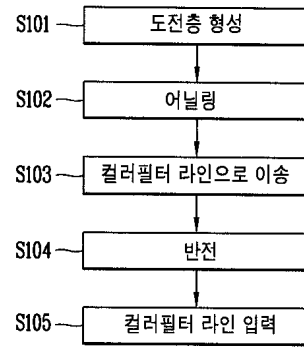
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15.

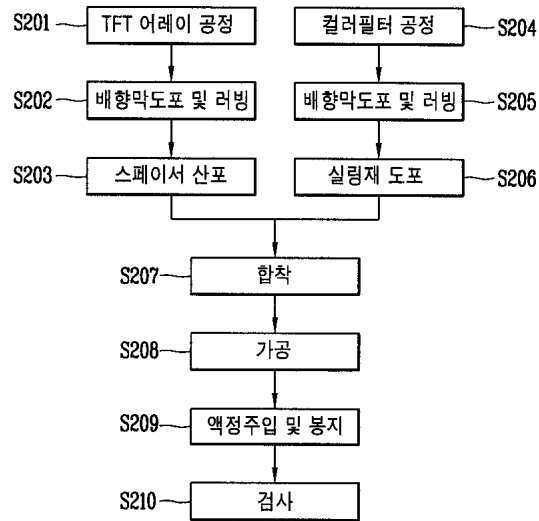
14



2



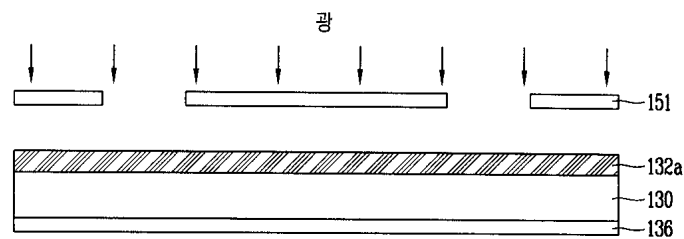
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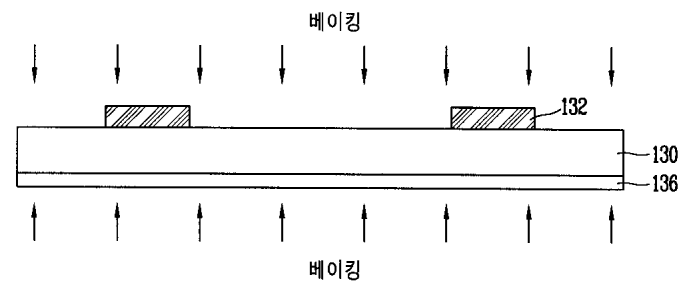
4a



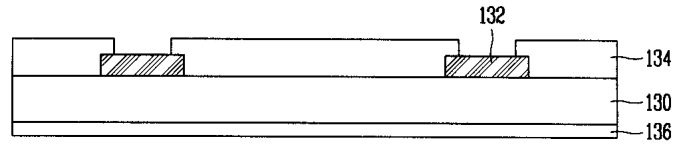
4b



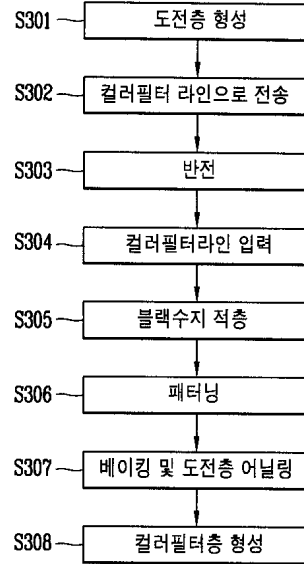
4c



4d



5



专利名称(译)	液晶显示元件的制造方法		
公开(公告)号	KR1020040056158A	公开(公告)日	2004-06-30
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[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		
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IPC分类号	G02F1/1343 G02F1/1335		
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外部链接	Espacenet		

摘要(译)

根据本发明的液晶显示器制造方法包括提供第一基板的步骤，层压用于消除第二基板背面的静电导电层的步骤，在第二基板中形成黑矩阵的步骤和颜色滤光层，对其烧结的导电层进行退火的步骤，附着第一基板和第二基板的步骤。在作为薄膜晶体管基板和像素电极的内部中的平面切换中形成的公共电极形成在第一基板上。静电，导电层，ITO，退火，滤色片，烘烤。

