

2003-0058223
2003 07 07

(74)

(54)

6b

1 .

2a, 2b (off), (on) .

3 .

4a 4c 3 IVa-IVa, IVb-IVb, IVc-IVc .

5 .

6a 6c 5 VIa-VIa, VIb-VIb, VIc-VIc .

< >

100 : 154 :

160 : 178 :

178a : 1 178b : 2

180 : 184 :

mode) (Liquid Crystal Display Device) , (IPS ; In-Plane Switching

가 가

가

(Thin Film Transistor ; TFT)가

(AM-LCD ; Active Matrix Liquid Crystal Display)가

가

()

()

가

()

가

1

(off), (on)

2a, 2b

1

(10)

(20)

(10, 20)

(30)

(20)

(22)

(24)

(22)

(24)

(26)

(30)

2a, 2b

(32)

2a

(32)

가

2b

가

(22)

(24)

(32a)

(22)

(24)

(32b)

(22)

(24)

(26)

가

, / / / 80 ° ~ 85 ° 가 , ,
 .
 3 .
 , (52, 64) , (52, 64)
 (T)가 .
 (T) (52) (50) , (50) (62) ,
 (52) (66) , (66) (68)
 , (58) (52) (56) , (56)
 , (T) (72) (74) (58)
 , (52, 64) (54, 70) (,) (76,
 (54, 70)가 78) , (54, 70) (82, 84) .
 , (58) (64) (74) (64)
 , 가 (74) , .
 4a 4c 3 IVa-IVa, IVb-IVb, IVc-IVc , 4a
 , 4b , 4c .
 4a , (10) (50) (50) (60)
 ntact layer) , (60) (62a ; active layer), (60)
 (ch) (66, 68) , (62) (62) (62b ; ohmic co
 , (66, 68) (62a)
 (50), (62), (66, 68) (T) .
 (T) (80) .
 , ,
 , (66, 68) , (50) , (80)
 , .
 4b , (1) (54)가 (54) (54)
 0) (76) 가 (60), (80) , (8)
 (76) (54) (82) .
 4c , (60) , (70)가 (70)
 (70) (78) 가 (80) , (80)
 (78) (70) (84) .
 (82, 84) ,
 가 ITO(indium tin oxide)가 .

(photolithography) (exposure), (development), (etching),

、 、 、 、 ITO 5

passivation layer or conductive buffer layer) ITO (conductive

'가

가

ITO(indium tin oxide)

(Ti)

(Mo), (Al), (Nd), (Cr), (Cu),

TO (etchant) .

5

(164)

(152)

(152, 164)

2

(T)가

(T) (152) (150) , (150) (1
62) , (164) (166) , (166) (1
68) .

, (152) (156) (156)

(58)

(T) (172) (174) (1

58)

(152, 164) ()

(154, 170)가

(170b) (170) 1 (170a) 2

(170b) 2 (170b)

(154) (178) 1 (178a)

2 (178b) 2 (178b)

1 (178a) 1, 2 (178a 178b)

(tab bonding) 1 (178a)

(180, 182) 2

(178b) 2 (170b)

(164), (170), (172), (174) (166, 168),

가

가

< 1>

1

6a 6c 5 VIa-VIa, VIb-VIb, VIc-VIc 6a

6b 6c

6a (100) (150) (150) (16

ohmic contact layer) (160) (162a ; active layer), (162b ;

(162a) (166, 168) (162) (162) (166, 168)

(CH)

(166, 168) 1 (166a, 168a)

2 (166b, 168b) 1 (166a, 168a)

(Mo), (Al), (Nd), (Cr), (Cu), (Ti)

2 (166b, 168b)

ITO(indium tin oxide), ITZO(indium tin zinc oxide), IZO(indium zinc oxide)

ITO 가

, (ceramic) , ITO
 가
 , (150), (162), (166, 168) (T)
 (T) (180)
 ,
 6b , (100) (154)가 (154) (1
 54) (180) 가 (160) (160)
 (180) (154) (178)
 (178) (178) (180)
 (178) (184)
 , (178) 1 (178a) , 2
 (178b) , 1 (178a) 1 (6
 a 166a, 168a) , 2 (178b) 2
 (6a 166b, 168b)
 6c , (160) (170)가 (170)
 (170) (182) 가 (184)
 (170b) (170) 1 (170a) , 2
 68a) , 1 (170a) 1 (6a 166a, 1
 166b, 168b) , 2 (170b) 2 (6a
 (170b) (180, 182) 2 (178b) 2
 가
 ,
 , 가
 , ITO , (etchant)
 , 가 가
 가
 ,
 ,
 ,
 , 4 , ITO

(57)

1.

가

가

2.

1

3.

1

4.

3

ITO(indium tin oxide)

5.

1

(Ti)

(Mo),

(AI),

(Nd),

(Cr),

(Cu),

6.

1

7.

1

8.

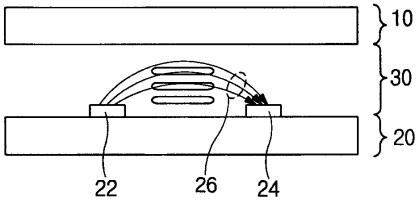
7

TO

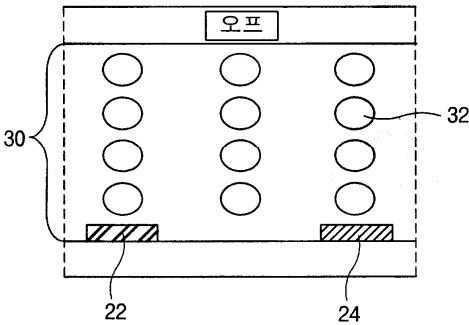
ITO
(etchant)

(Mo) , I

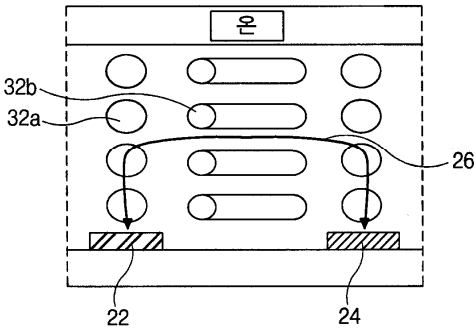
1



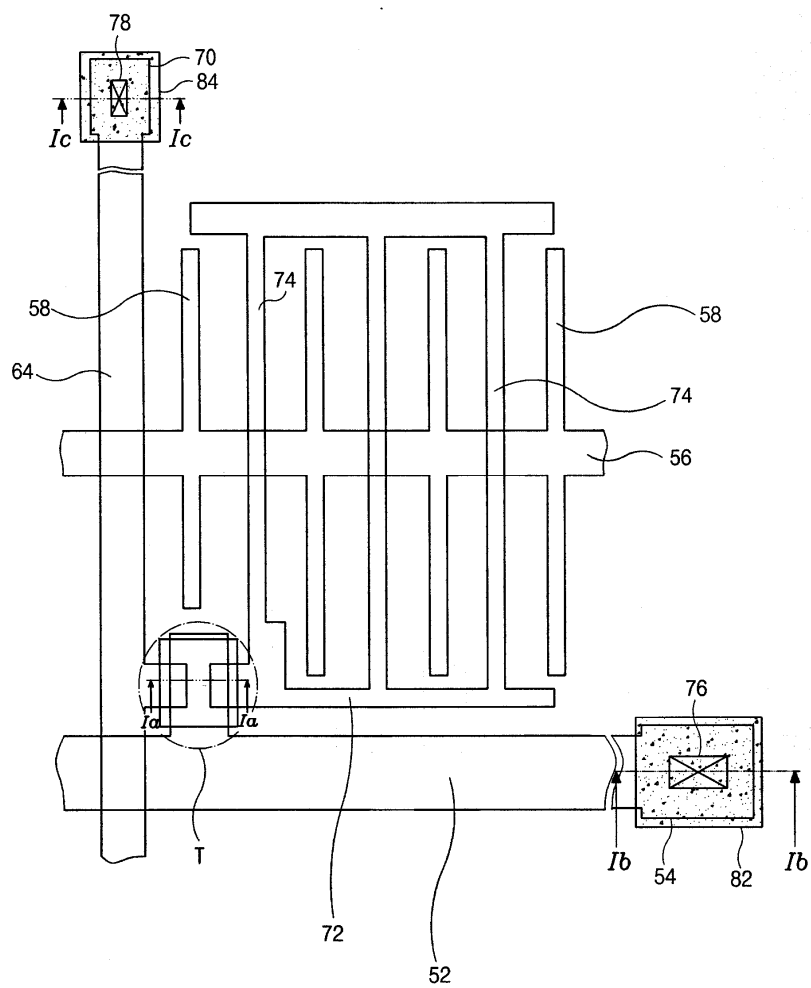
2a



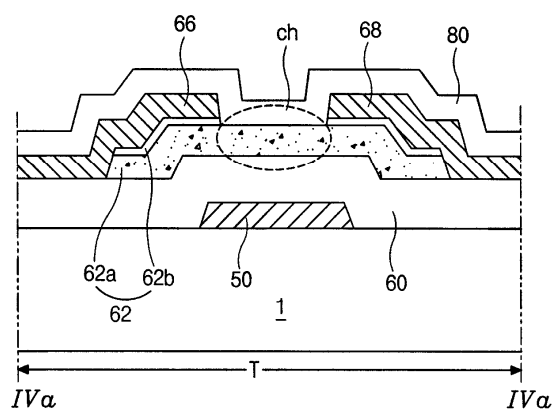
2b

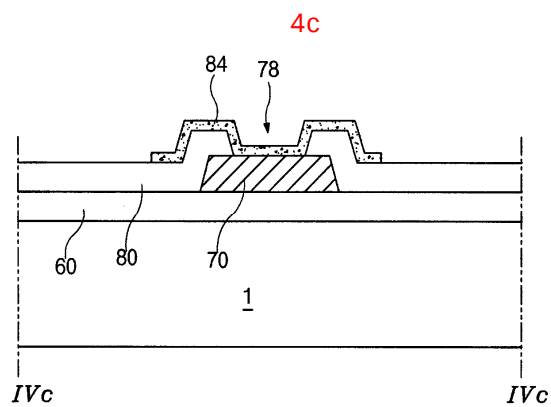
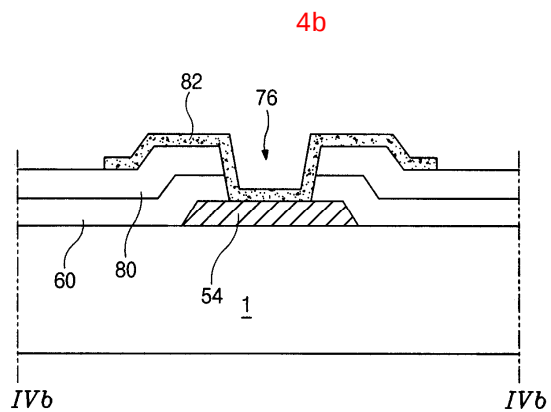


3

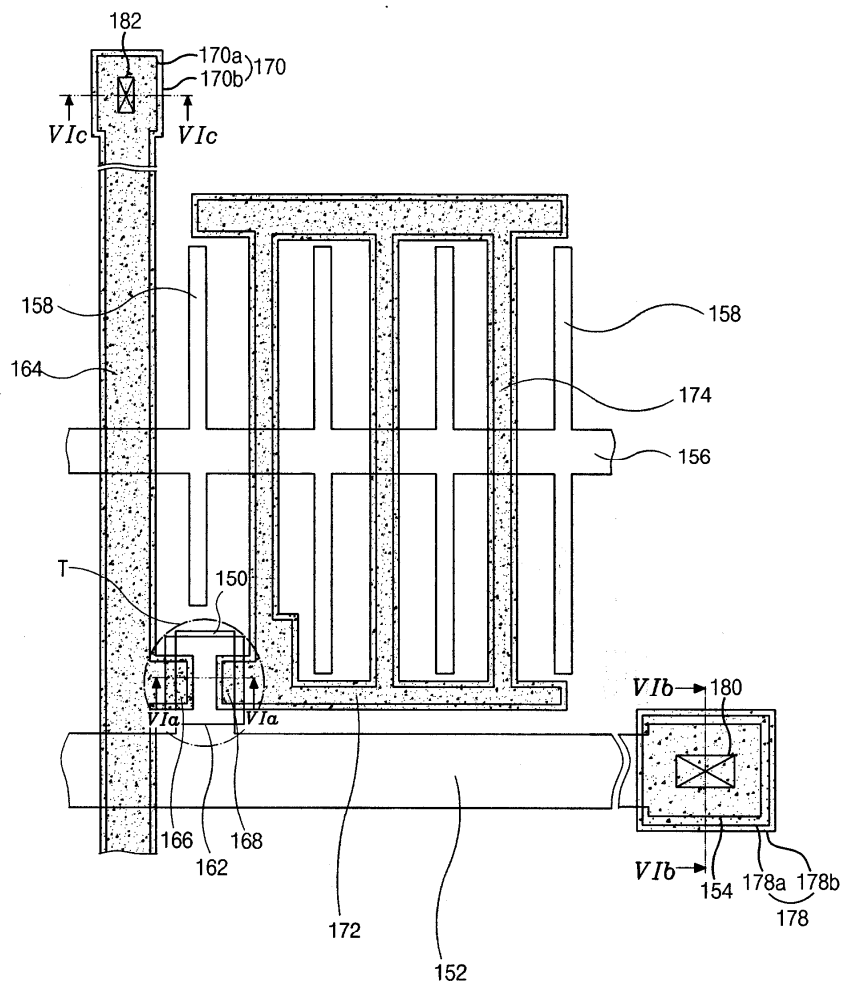


4a

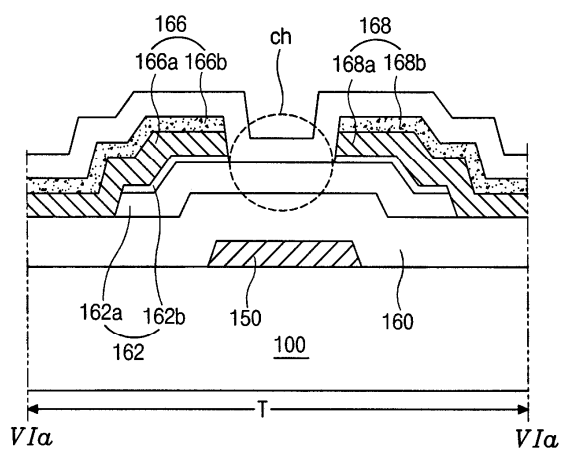


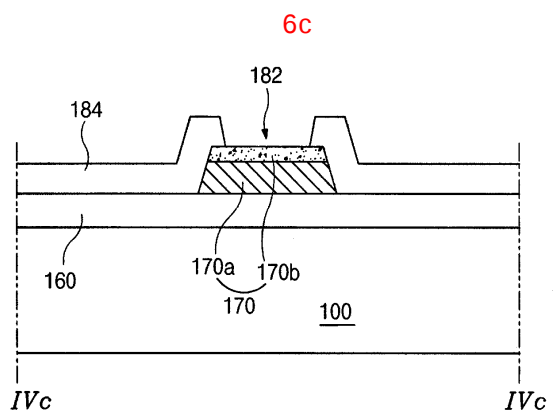
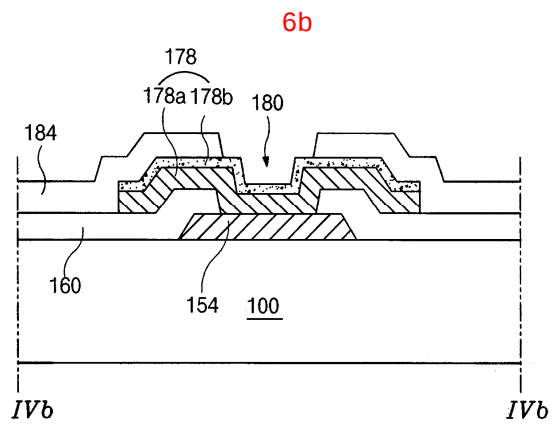


5



6a





专利名称(译)	横向电场型液晶显示装置		
公开(公告)号	KR1020030058223A	公开(公告)日	2003-07-07
申请号	KR1020010088618	申请日	2001-12-29
[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	CHOI YOUNGSEOK 최영석		
发明人	최영석		
IPC分类号	G02F1/136		
其他公开文献	KR100490474B1		
外部链接	Espacenet		

摘要(译)

在本发明中，形成在像素电极和公共电极在同一基板上，在横向 jeongyehyeong阵列基板的液晶显示装置，其通过所述像素电极和所述公共电极，以在基板产生平行的电场之间施加电压，栅极焊盘形成在包括栅极电极的栅极布线的一端上；栅极绝缘层，位于栅极和栅极焊盘上方，并具有暴露栅极焊盘的一部分的接触孔；形成在栅极绝缘膜上的半导体层；源极和漏极形成在半导体层上；一种数据焊盘，由至少两层金属材料制成，位于数据线的一端，包括源电极，并具有选自导电抗氧化材料的上层；栅极焊盘电极通过形成在栅极绝缘层中的接触孔连接到栅极焊盘，并由与数据焊盘相同的材料制成；并且，保护层用于部分地暴露数据焊盘的上层和栅极焊盘电极。本发明还提供了一种用于液晶显示器的阵列基板。图6b

