

(19)
(12)(KR)
(A)(51) 。 Int. Cl. ⁷
G02F 1/136(11)
(43)2002 - 0092722
2002 12 12(21) 10 - 2001 - 0031513
(22) 2001 06 05(71) .
20(72) 1155가 512 - 901
348 - 1002

(74)

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(54)

2 TFT

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2 1 " A - A ' "

3a 3e 2

4 3

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7a 7e 6 " B - B ' "

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1,31 : 3,33:

5,35 : 7,37:

9,39 : 11,41 :

13,43 : 15,45 :

17,47 : 19,49,59 :

21,51 : 23,53 :

25,55 : 27,57 :

, , 2 TFT

가

(Thin Film Transistor; TFT)

1 2 , (13) (11)
TFT(T) , TFT(T) (7) (23) , (13) (11)
(GP) (DP)

TFT(T) (11) (3), (13) (5) (
19b) (23) (7) , TFT(T) (3)
(5,7) (9) , (3) (5)
(7) (15,17) . TFT(T) (11)
(13) (23)

(23) (13) (11)
(19b) (23) (7) (1) (21) , (21)
(1) (23) TFT(T)
(23)

(GP) (DP) (11) (13) IC(I
Integrated Circuit) (GP) IC (1
1) (DP) IC (13)

(25) (11) (3) (Al) (
Cu) (27) (13), (5,7) ,
(Cr) (Mo) (25) (19c)
(28) , (27) (19a) (29)

3a 3e 1 " A - A '"

3a , (1) (11), (25) (3) .
(11), (25) (3) (sputtering) (Al)
(Cu)

3b , (9) (15) (17)

(9) (11), (25) (3) PECVD(Plasma Enha
anced Chemical Vapor Deposition) (15) (17)
(9) 1 2

(9) (SiNx) (SiOx) (15) 1
(17) 2 N P

3c (9) (13), (27), (5,7)
(13), (27), (5,7) CVD (sputtering)
(5,7) (3)
(17) (15) (15) (5,7)
(3)

(13), (27), (5,7) (Cr) (Mo)

3d (9) (21)
(21) (9)
(21) (19a), (19c), (19b)
(21) (SiNx), (SiOx) (acryl), (T
eflon), BCB(benzocyclobutene), (cytop) PFCB(perfluorocyclobutane)

3e (21) (23), (28) (29)
(22), (28) (29) (21)

(22) (19b) (7) (28)
(19c) (25) (29) (1
9a) (27)

(23), (28) (29) - - (Indium - Tin - Oxide :
" ITO"), - - (Indium - Zinc - Oxide : " IZO")
(Indium - Tin - Zinc - Oxide : " ITZO")

Cr, MO
가 1 (6a)/ 2 (6b)/ 3 (6c) 3
1 3 (6a,6c) (Mo) , 2 (6b) (Al)

3
(6b) (electrode potential) 1 3 (6a,6c) 2 (6b) 1 3 (6a,6c) 2
, 1 3 (6a,6c) 2 (6b) , 2 (6b) 1 3 (6a,6
c)

1 3 (6a 6c) 4 2 (6b) (undercut)
(19) (15) 2 (6b) (15) 2
(6b) , 3
3 가가

1 5 (6a) (Mo) , 1 (6a)/ 2 (6b) 2 (Al)

2 / 200 200 2 (sea
I) 2 TFT

2 2 / 1 1 2

2 TFT

가

1 , 1 2
2 1

(Mo), (Cr), (Ta), (W), (Ti)
(Al)

1 , 1
2

2 1 .
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 1 2 , 1 2
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2 1 .
 1 2
 , 1 2
 .
 (Mo), (Cr), (Ta), (W), (Ti)
 (Al)

2 1 .

, 6 7e

6 TFT(T) , TFT(T) (37) (31) (43) (41) (41)
 (GP) (DP) (53) , (43)

TFT(T) (41) (33), (43) (35), 1 2
 (49b,61b) (53) (37) , TFT(T) (33)
 (35,37) (39) , (33)
 (35) (37) (45,47)
 (35,37) (45,47) (36a) (36b)
 (36a) (Mo), (Cr), (W) (Ti)
 (36b) (Al)

TFT(T) (41) (43)
 (53)

(53) (43) (41)
 (53) (31) (51) ()
 63) 1 2 (49b,61b) (37)
 (53) TFT(T)
 () (31)
 (23)

(GP) (DP) (41) (43) IC(I
 Integrated Circuit) (GP) IC (4
 1) (DP) (43)
 (57) (36a) (36b)
 1 2 (43), (35,37) (58) (63) (57)
 (49a,61a) (57)
 7a 7e 6
 7a , (31) (41), (55), (33)
 (41), (55) (33) (sputtering) (Al)
 (Cu)
 7b , (39) (45), (47) (36a)
 (39) (41), (55) (33) PECVD(Plasma En
 Enhanced Chemical Vapor Deposition) (45), (47)
 (36a) (39)
 (45,47) (36a) (45,47)
 (36a) (47) (36a)
 (39) (SiNx) (SiOx) (45)
 (47) N P
 , (36a) (Ti), (Ta), (W), (Cr) (Mo)
 7c , (39) (57), (35,37)
 (35,37) CVD (sputtering) (36b)
 47) , (35,37) (36b) , (45)
 (36a) (47) (36a)
 (45) (35,37) (33) 1 (49b) 1
 (37) (57) (45)
 (49a)
 (36b) (Al)
 7d , (39) (51)
 (51) (43), (57), (35,37) (39)

a) 2 (61a), 2 (61b) (62) 2 (61b)
 2 (61b) 1 (49a) 1 (49b)

2 (61a) 1 (49a) (45) 2 (61b)
 61b) 1 (49b) (45) (62)
 51) (55)

(51) (SiNx), (SiOx) (acryl) (T
 eflon), BCB(benzocyclobutene), (cytop) PFCB(perfluorocyclobutane)

7e (51) (53), (58) (59)
 (53), (58) (59) (51)

(53) (63) 1 2 (49b,61b) (37)
 (59) (65) 1 2 (49a,61a) (57)
 (58) (67) (62) (55)

(53), (58) (59) ITO, IZO, ITZO

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(57)

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1 4 ,
(Mo), (Cr), (Ta), (W), (Ti)

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1 4 ,
(Al)

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1 2

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11.

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9 11 ,

(Mo), (Cr), (Ta), (W), (Ti)

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13.

9 11 ,

(Al)

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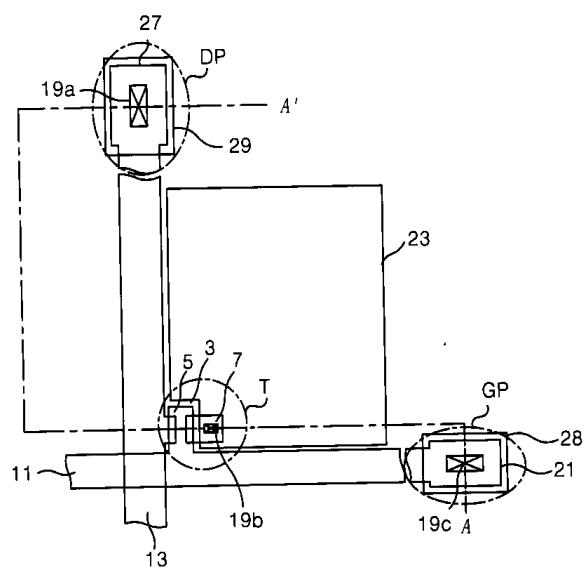
14.

11 ,

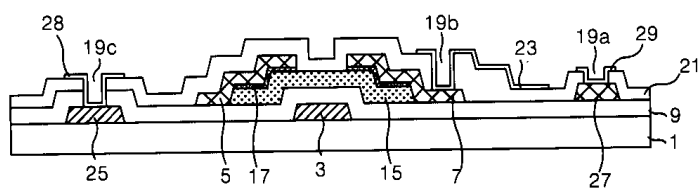
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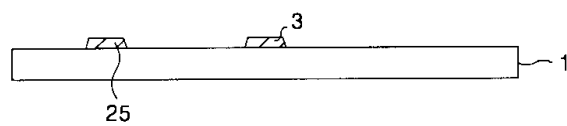
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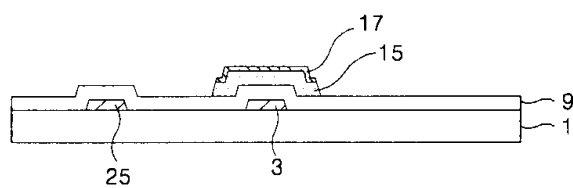
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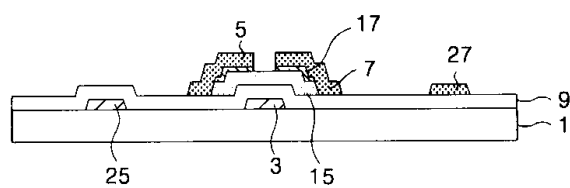
3a



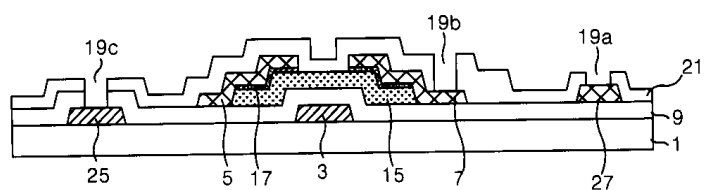
3b



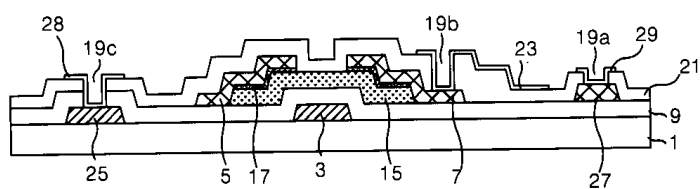
3c



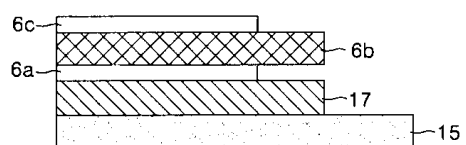
3d



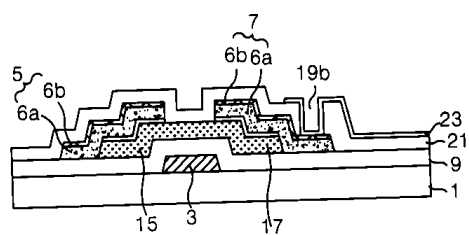
3e



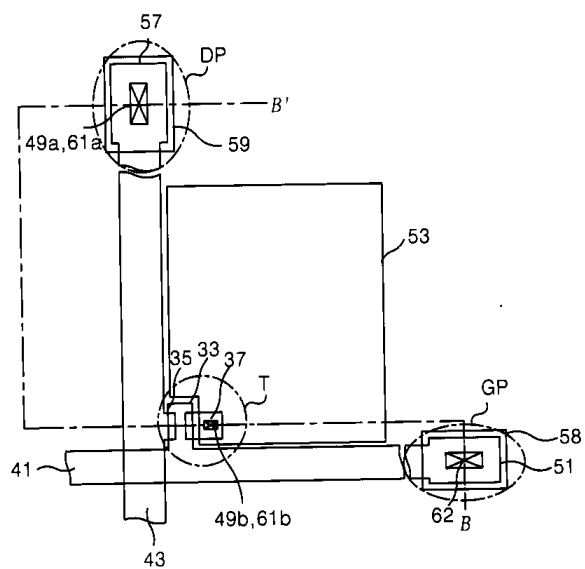
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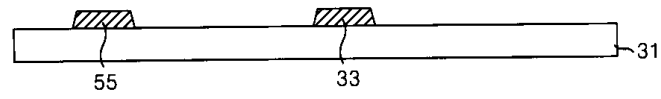
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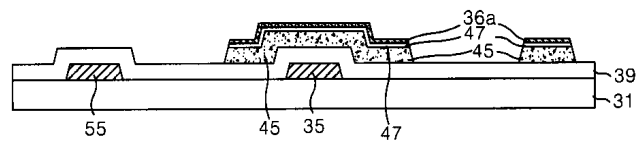
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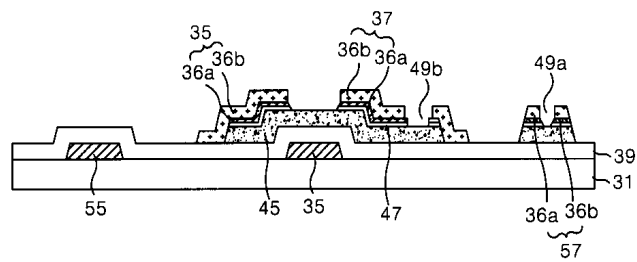
7a



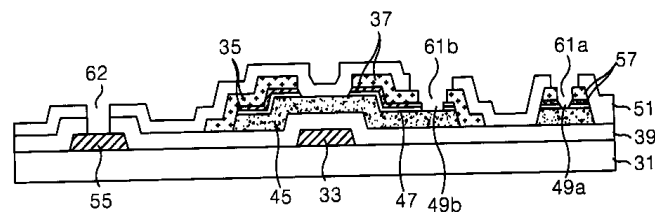
7b



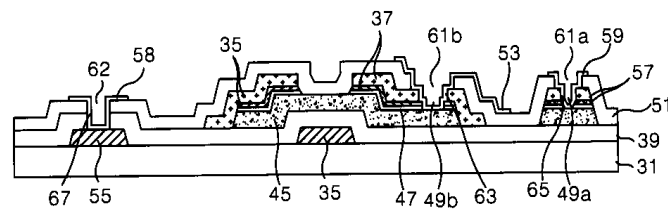
7c



7d



7e



专利名称(译)	液晶显示元件的阵列基板及其制造方法		
公开(公告)号	KR1020020092722A	公开(公告)日	2002-12-12
申请号	KR1020010031513	申请日	2001-06-05
[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	JO GYOOCHUL 조규철 YOO HONGSUK 유홍석		
发明人	조규철 유홍석		
IPC分类号	G02F1/136		
其他公开文献	KR100897487B1		
外部链接	Espacenet		

摘要(译)

目的：提供一种用于液晶显示装置的阵列基板及其制造方法，以通过以相同图案同时形成半导体层和阻挡金属层来减小半导体层和阻挡金属层之间的接触电阻。 构成：一种液晶显示装置的阵列基板，包括基板，向基板提供扫描信号的栅线，连接至栅线的栅电极（33），覆盖栅线和栅电极的栅绝缘膜，经由栅极绝缘膜与栅电极重叠的有源层，形成在有源层上并具有预定沟道尺寸的孔的欧姆接触层，以与欧姆接触层相同的形状形成在欧姆接触层上的阻挡金属层，覆盖阻挡金属层的源电极和漏电极（35,37），覆盖数据线和源/漏电极的保护层（51），穿透阻挡金属层的接触孔（49b, 61b），漏电极和保护层 薄膜，以及通过接触孔电连接到漏极的像素电极（53）。

