

(19)
(12)(KR)
(A)(51) 。 Int. Cl. ⁷
G02F 1/136(11)
(43)2002 - 0092607
2002 12 12(21) 10 - 2001 - 0031333
(22) 2001 06 05(71) .
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3a 3f

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6a 6g

7a 7g

가 (flat panel display) , , 가 (liquid crystal display)가 , ,

가 , 가

(amorphous silicon ; a - Si:H) 가 가

(poly - Si) 가 100 200 가 가

가 250 가

가 (laser annealing) ,

(metal induced crystallization : MIC) ,

(solid phase crystallization : SPC) ,

(sequential lateral solidification : SLS)
 , SLS

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 1 , 2 1 - .
 1 2 , (10) (island) 가 (21, 22, 23) (21) (22, 23)
 , (21) (30) (42) , (42) 가
 (41)
 (42) (41) (50) (50)
 (22, 23) 1 2 (51, 52) 가 .
 (50) (62) (61) (63)
 , (61) (41)
 , (62) (61) (63) (42)
 (62) (62, 63) (51, 52)
 (22, 23) .
 , (70) (10) (61) (62, 63)
 (70) 2 (52) (63) 3 (71) 가 .
 (70) 3 (71) (63) ,
 (81) .
 3a 3f 1 - .
 , 3a (10) (20) ,
 (20)
 , 3b (20) (42) (30)
 , (42) (20) (ion doping) ,
 (42) ()
 , 3c (22, 23)
 (21) (22, 23)
 , (annealing) .

, 3b (22, 23) 가
 , 가
 , 가
 ,
 (22, 23)
 , 3d (22, 23) 1 2 (51, 52) (50)
 , 3e ((22, 23) (62, 63) 1 2 (51, 52)
 0) , 3f (62, 63) (10) (7)
 (81) (63) 3 (71) (63)
 가 가
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 , 3c 가
 (3c 22, 23) 가 (3c 21) 가
 가 (22, 23)
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4 5 (110)
 (121) (121) (122, 123) . ,
 (122, 123) .

(121) (130)
 (141, 142) (141, 14
 2) 가 1 (141) 2 (142) ' ' ,
 , (130) (141, 142) (141, 142) 가 .
 , (141, 142) (150) . (150)
 (130) 가 (12
 2, 123) 1 2 (151, 152) , 1 (141)
 3 (153) 가 .

(150) (162) (161) (1
 163), (165) (161) 1
 (141) , (162) (161) 1 (151)
 (122) , (163) 2 (152) (123) .
 , (165) 가 (161)
 1 (141) 3 (153) 1 (141)
 . , (162) (161) , (161)
 , (163) .

, (170) (110) , (170) (163) 4
 (171) 가 .

(170) (181) , (181)
 (165) (161) , 4 (171) (163)
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 , 6a 6g 7a 7g , 6a 6g
 , 7a 7g , 6a 6g
 a- a g- g .
 , 6a 7a (110) 가 (120) .
 , (120) 가 ,
 , SLS .
 , (110) ,
 (K+), (Na+) , (110) (120) (1
 20) , (110) (120) .

, 6b 7b , (120)
 (141, 142) (130) , (141, 142)
 (120) (141, 142)
 , (141, 142) 가 1 (141) 2 (142) ' ' ,
 가 .

, (120)
 (120) (120) .
 3 3 5 (32, 33) 5 가 n - 가,
 3 가 p - 가 .

6c 7c , (122, 123) (121)
 , (122, 123)
 , (122, 123) (121) .
 .

, (141, 142)
 . , (141, 142) SLS .

, 6d 7d (150) ,
 (141) (122, 123) 1 2 (151, 152) 1
 3 (153) .

, 6e 7e (162) (1
 61) (163), (165) (161)
 1 (141) , (165) (162)
 1 (151) (122) , (163) 2 (152) (12
 3) , 가 (165) (161) , (163)
 1 (141) 3 (153) . (163)

, 6f 7f (162, 163) (110)
 (170) , 2 (152) (163) 4 (1
 171) . (170) 가 .

, 6g 7g (170) - - (indium - tin - oxide)
 (181) , (181) 4 (171)
 (163) .

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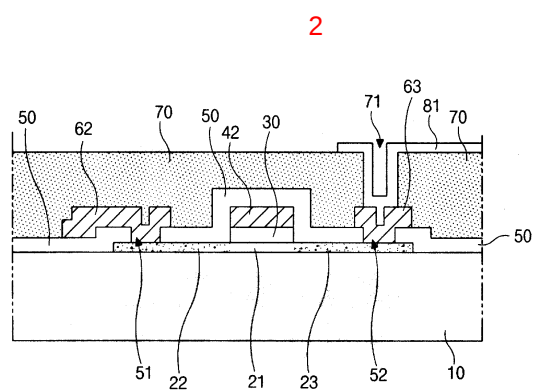
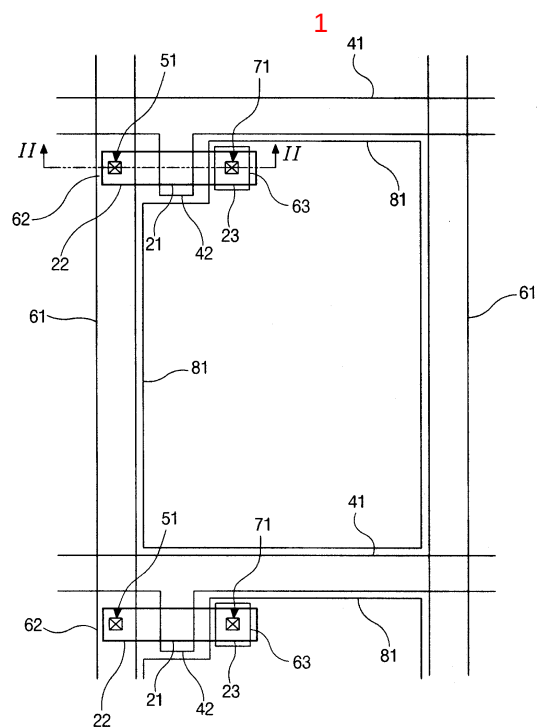
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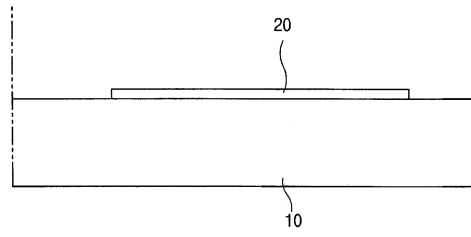
1 1 2 2 가

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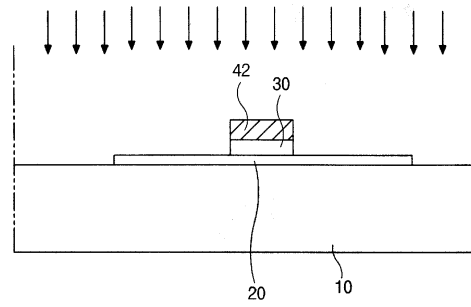


3a



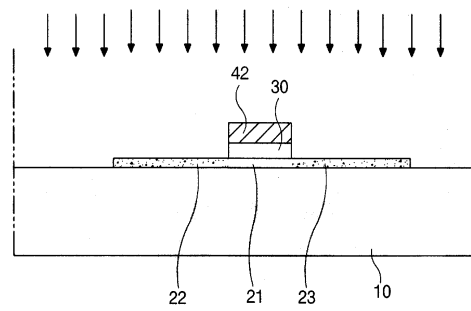
3b

이온도핑

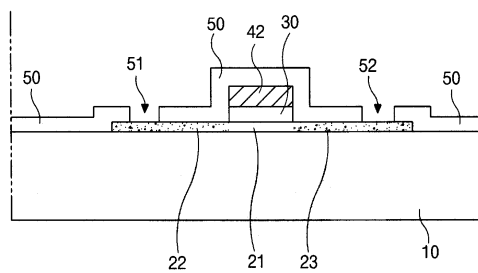


3c

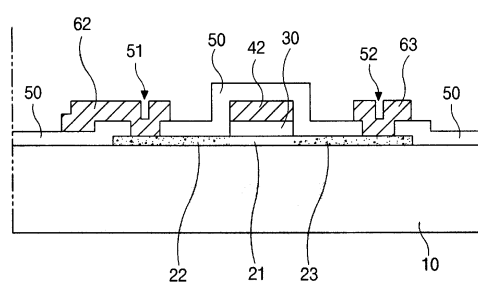
레이저 활성화



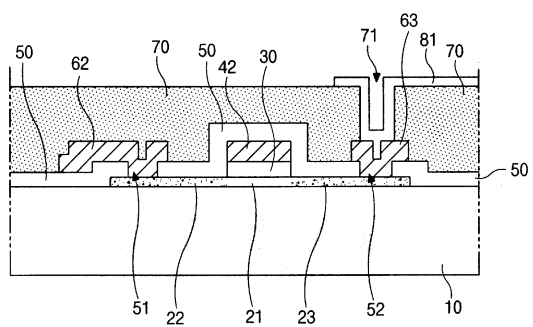
3d



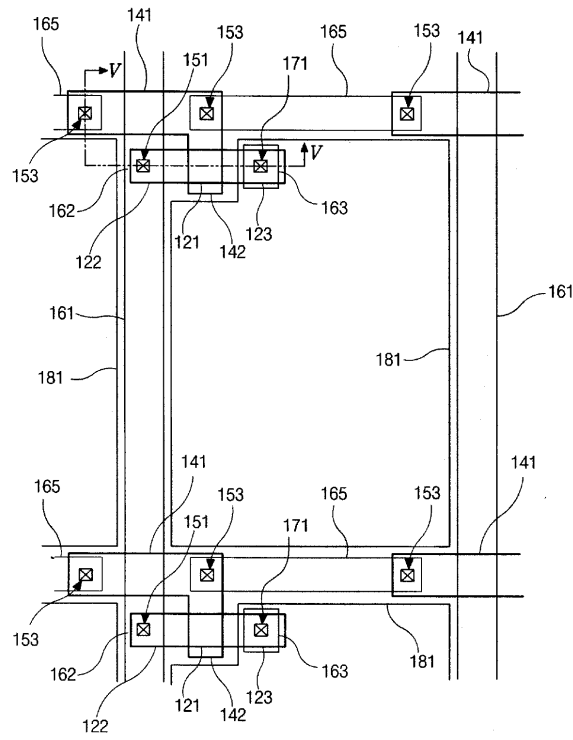
3e



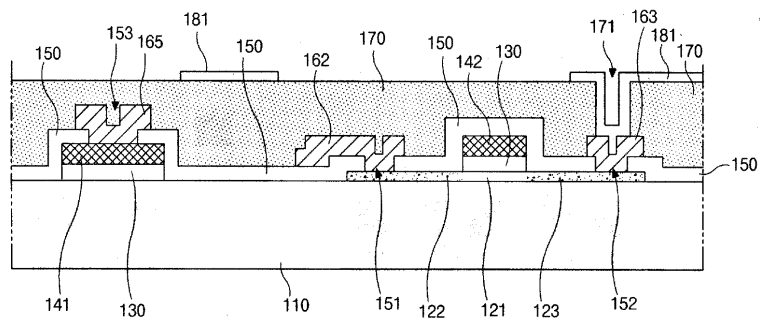
3f



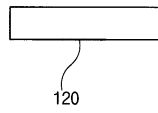
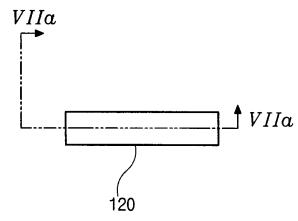
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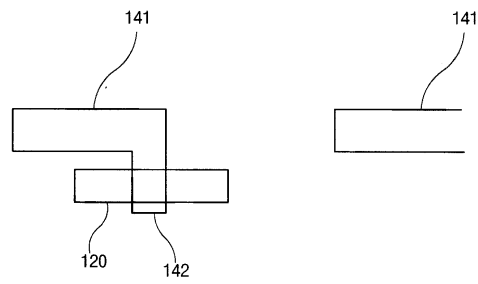
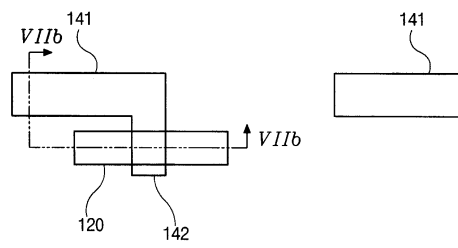
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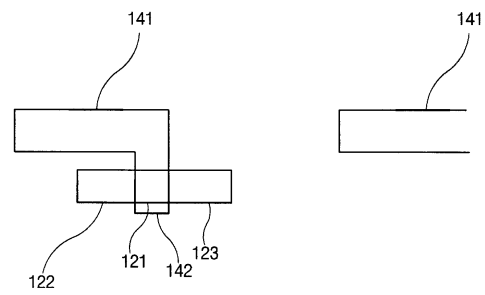
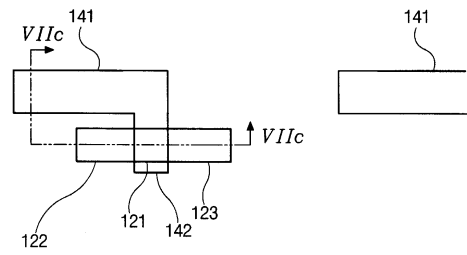
6a



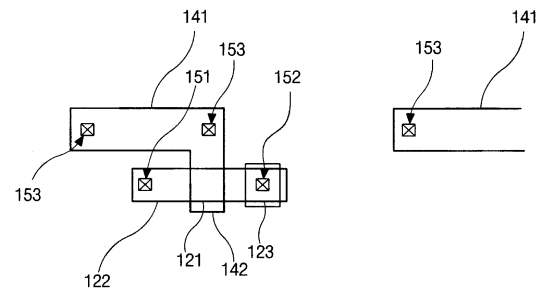
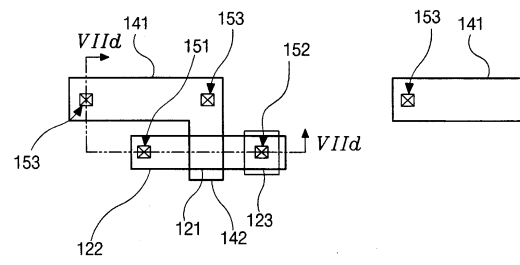
6b



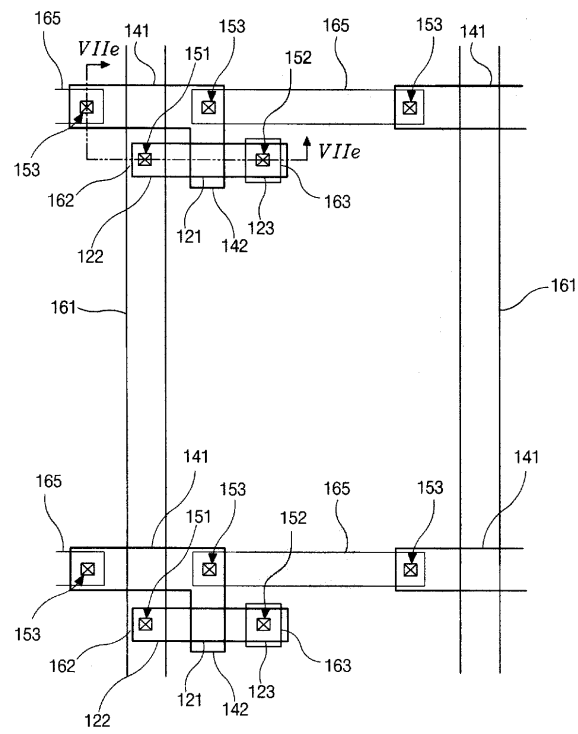
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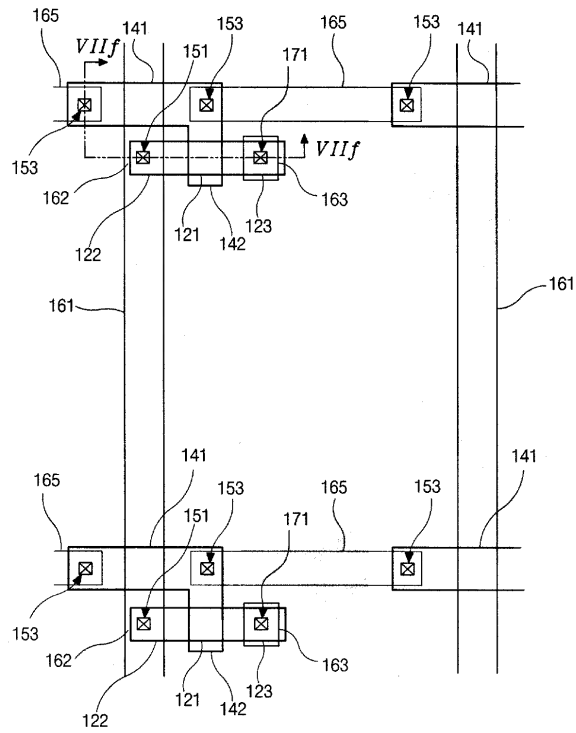
6d



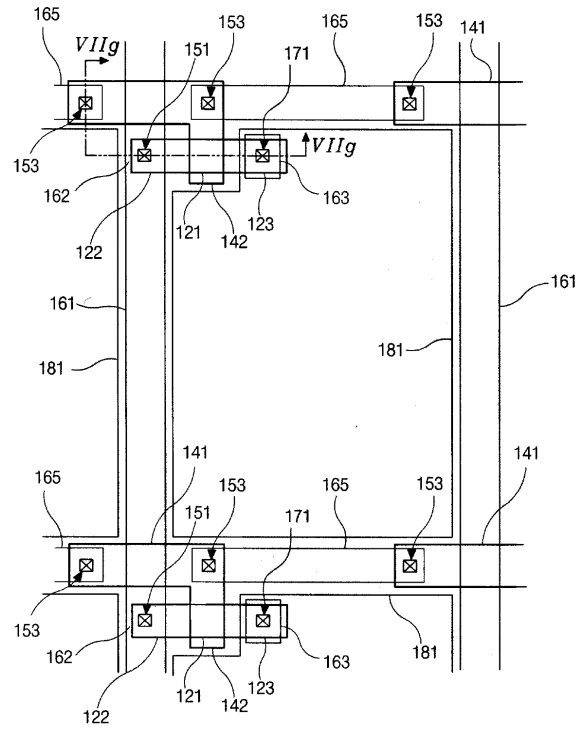
6e



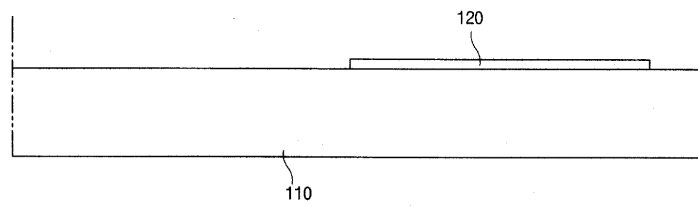
6f



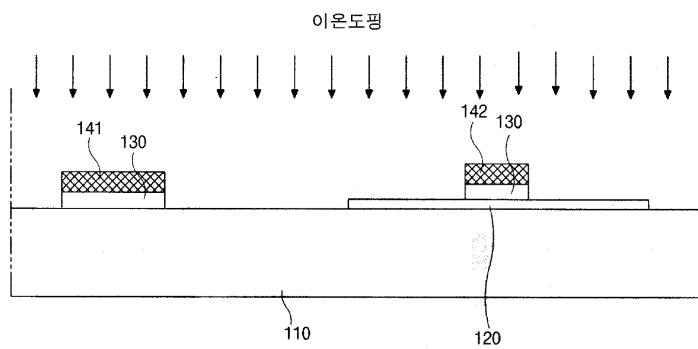
6g



7a

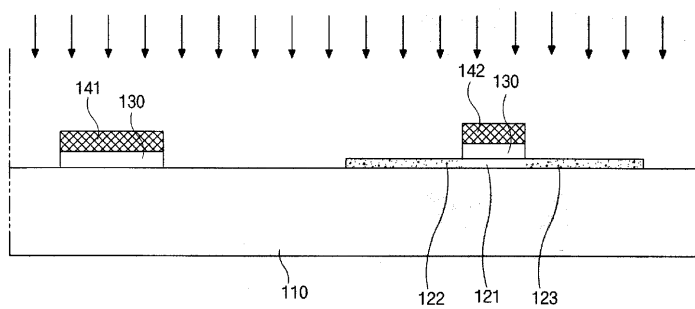


7b

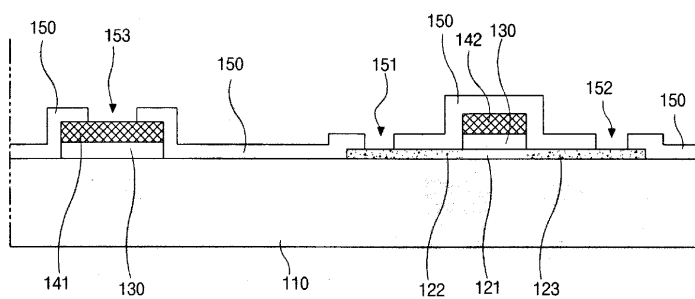


7c

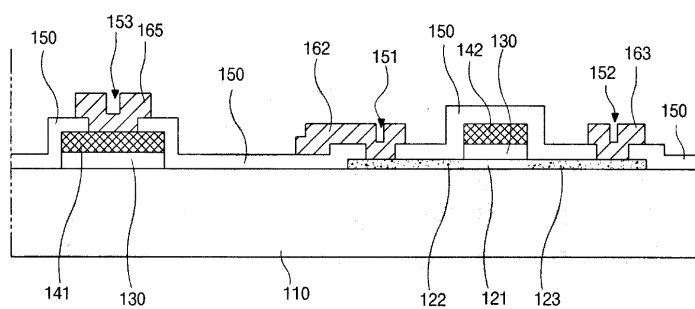
레이저 활성화



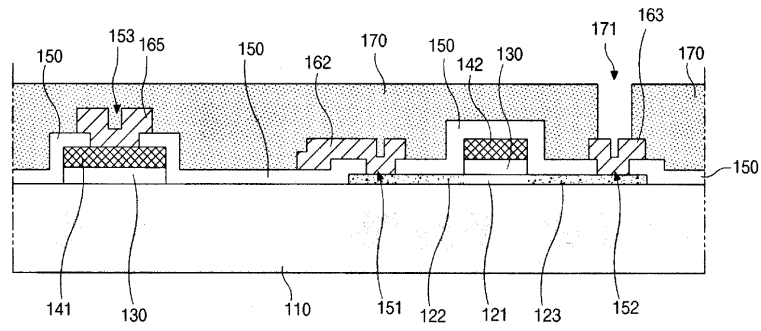
7d



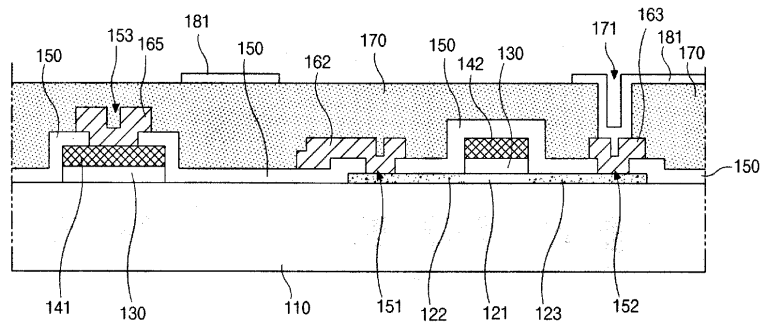
7e



7f



7g



专利名称(译)	用于液晶显示装置的阵列基板及其制造方法		
公开(公告)号	KR1020020092607A	公开(公告)日	2002-12-12
申请号	KR1020010031333	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	YANG JOONYOUNG 양준영 YANG MYOUNGSU 양명수		
发明人	양준영 양명수		
IPC分类号	G02F1/136		
其他公开文献	KR100468901B1		
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，以通过在硅上形成栅电极并用金属材料形成栅线来防止杂质注入后激光激活时栅电极的损坏。 构成：一种液晶显示装置的阵列基板，包括基板，在基板上由多晶硅形成的有源层（121），在基板的两侧由掺杂有杂质的多晶硅形成的源区和漏区（122,123）。有源层，在有源层上的栅绝缘膜，在栅绝缘膜上由多晶硅形成的栅电极（141,142），覆盖栅电极并具有用于暴露的第一至第三接触孔（151-153）的层间绝缘膜 源/漏区和栅电极，在层间绝缘膜上沿第一方向延伸并通过第三接触孔连接到栅电极的多条栅线（165），沿第二方向延伸的数据线（161）在层间绝缘膜上并通过第一接触孔与源极区域接触，覆盖数据线并在第二接触孔上具有第四接触孔（171）的保护层和像素电极 在保护膜上由透明导电材料形成并通过第二接触孔和第四接触孔连接到漏极区域的多个电极（181）。

