

(19)
(12)

(KR)
(A)

(51) 。 Int. Cl.⁷
G02F 1/136

(11)
(43)

10-2004-0062094
2004 07 07

(21)

10-2002-0088416

(22)

2002 12 31

(71)

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20

(72)

1145

640-1204

32-15

(74)

2

408-301

(54)

，

COT

가

4

3

1

2 1 -

3 COT

4a 4i 5a 5i 6a 6i 3 - ` , - ` , - ` ,
,
7 .
< >
100 : 102 :
106 : 122 :
124 : 130a,b,c :
138 : 140 :
152, 158 :
160 : 162 :
164 :

COT(color filter on TFT)
.
가 , 가
가 ,
가
1 .
(6) , (11) (8) (8)
(P) (7) (17) (7) (18) (P) (5) ,
(22) , (5) (22) (14) .
(22) (array substrate) (T)가 (T)가
(matrix type) (15) (TFT) 가 (13)
, (P) (13) (15) , (P)
(17) (17) .
(17) - - (indium-tin-oxide : ITO)
.

(C) 1 (17) (C)가 (13) , 2 (13) , (30) (13) . , (30) (17) . (5) (22) , (5) (22) . , 2 . 2 1 - ` . 2 (22,5) , 1 (22) 2 (5) , 1 (22) (14) . (22) (32) (34) (36) (38) (T) , (T) (40) . 7) (P) (T) (38) (17) , (1) (C)가 (13) . 가 (5) (13) (15) (T) (6) (22) (P) (7a,7b,7c)가 .) , (A) , (cross talk) (13) (B) (15) (17) . (15) (5) (13) (17) (A,B) (black matrix)(6)가 가 . (34) (T) (6) (40) . , , 1 , 2 , 3 , 4 , 5 , 5 , 1 , 2 ,

, 7

4

4

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2

가

× 10E6

가

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가 2

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가 2

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(102) (100) (106) (102) (P)

(122) (124)

(106) (122) (162) (156)

(164) (158)

(102) (124) (104) (132a)

(138,140) (T)

(102,124) (P) (138) (154a,154b) (160)

가 (154a,154b) (P)

(102) (C_{ST})가 (102) 1

(154a,b) (160)

(132a) (138,140) (122) (124) (162)

(164)

4a 4i 5a 5i 6a 6i

4a 4i 5a 5i 6a 6i 3 - - -

4a 5a 6a (100) (T) (P) (D)

(G)

(D,T,P,G) (100) 1

(106) (102) (104)

4b 5b 6b (104) (102) (10

0) 1 (SiN_x) (SiO₂)

(108)

112) 2 (108) (a-Si:H) (110) (n+a-Si:H) (114)
 PR (116) . , 2 (114)
 , 2 (114) (Cr), (Mo), (Cu), (W), (Ti), (Al),
 (AlNd)
 , (100) (A) (B) (C) (M)
 , (T) (B) (D) (A) (T) (P) (G) (C)
 (M) PR 가 PR (120a) 4c 5c 6c (D)
 PR (120b)
 (T) PR (120a) 가 (M)
 (C)
 , PR (120a,120b) 2 (114) (112) P
 R (120a,120b) (110) , 4d 5d 6d (122)
 (124) , (124) (T)
 (126)
 , (122) (124) 1 (130) 1
 (130) - (126) 2 (132)
 (130a,132a) (130b,132b)
 , 4e 5e 6e ,
 PR
 (E) ,
 (ashing processing)
 (E) PR PR
 PR (136a,136b) (F) (123)
 (124) - (126)
 PR (132b) , (E) PR (126)
 , PR (136a,136b) (F)
 , 4f 5f 6f , (T)
 138) (122) (CH) (138) (140) , (124)
 (130a,132b)
 , (T) (132a) (active layer)
 , (132b) (ohmic contact layer)
 , 4a 4f 5a 5f 6a 6f 2

, 4g 5g 6g (122)가 (100) , (SiN_x) (138,140) (124)
 (142) 3 (106) (122) , (146) (148) (150) .
 138) (142) (100) - -
 , 4h 5h 6h (ITO) (IZO) , (142) (100) - -
 (152) .
 , (152) , (P) (10
 6) (122) (154a) (156,158) .
 , (sol-gel))
 .
 1×10E6Ωcm 가 .
 , (140) (152) (P) , 4i 5i 6i (160) , (106) (164)
 (162) , (122) .
 , (160) (102) 2 (102) (C_{ST})가 .
 1 4 .
 , 7 .
 , (202) (204) (199) (200) (100)
 , 1 (100)
 (104) (102) .
 2 , (104) (132a) (138,140)
 .
 3 , .
 4 (160) (152b) .
 (100) , (202) 1 .
 , 5 .
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가 .

4

가 .

(57)

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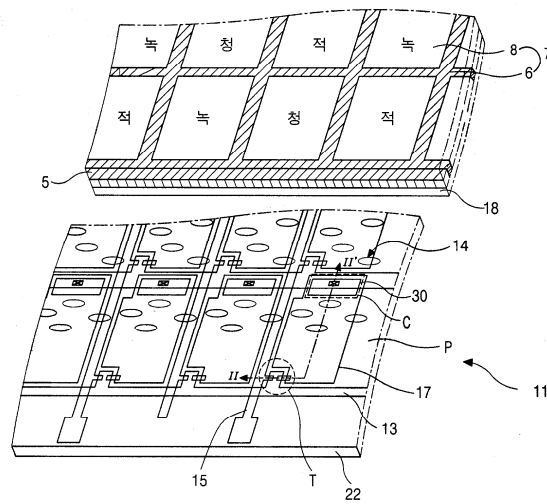
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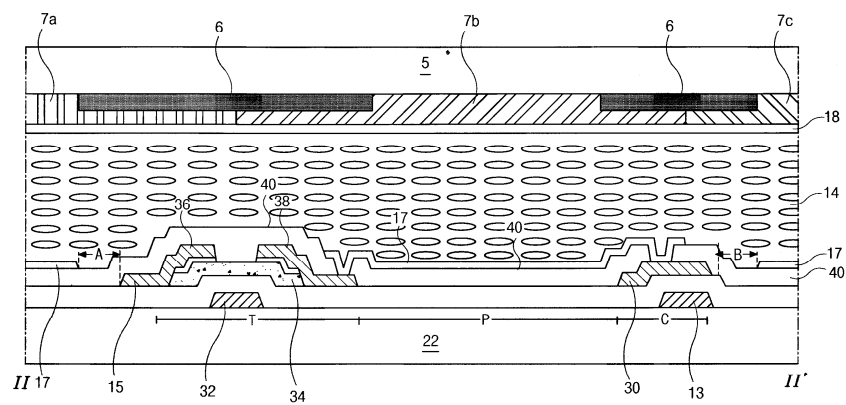
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가 2

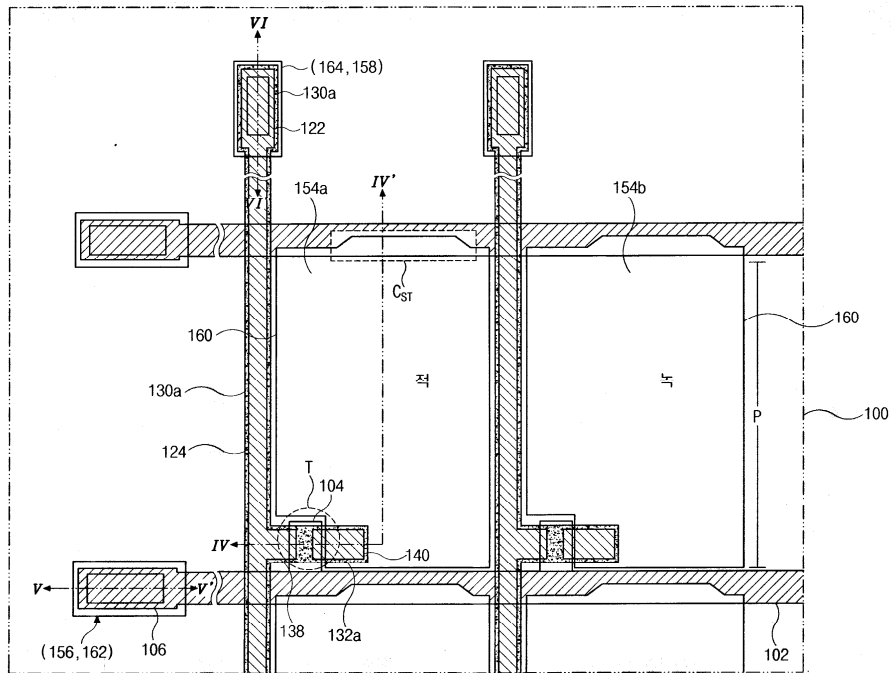
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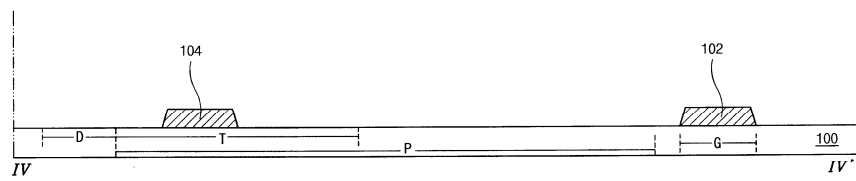
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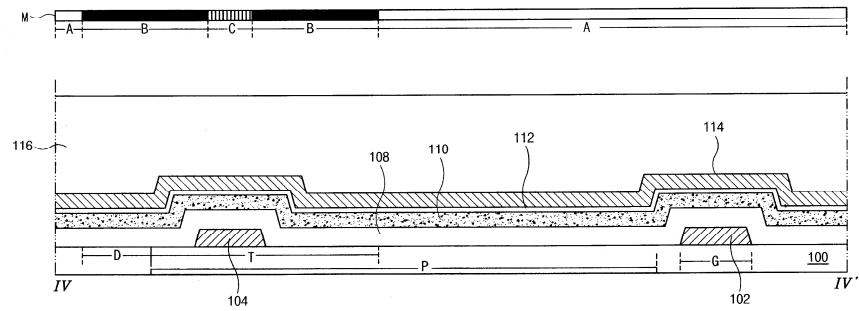
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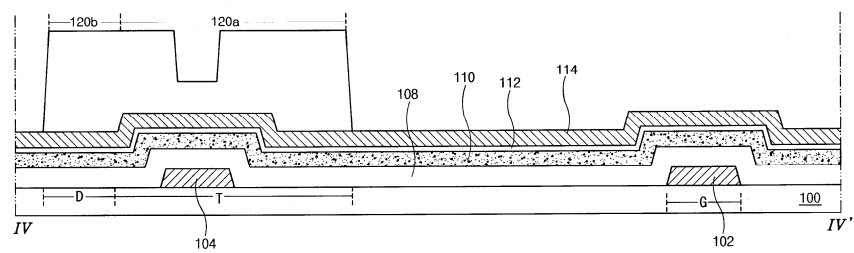
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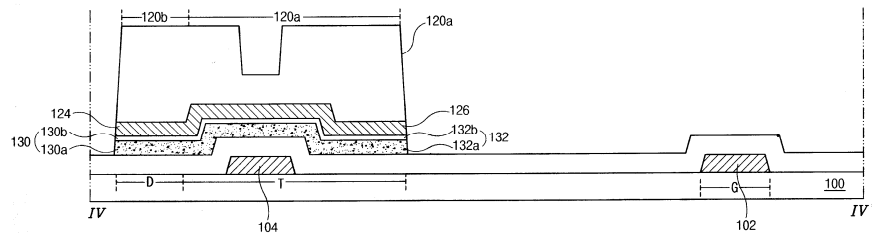
4b



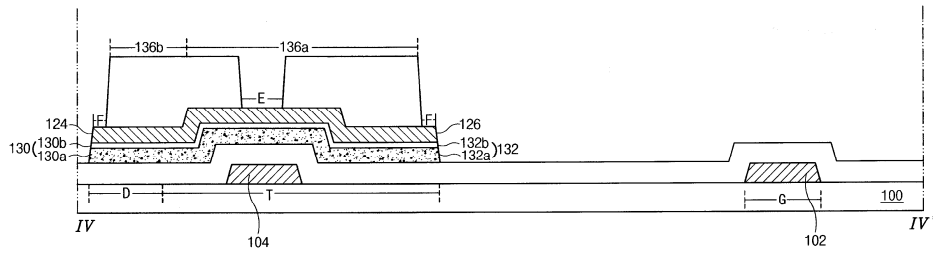
4c



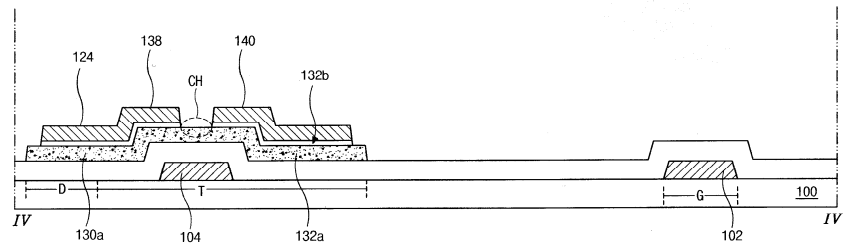
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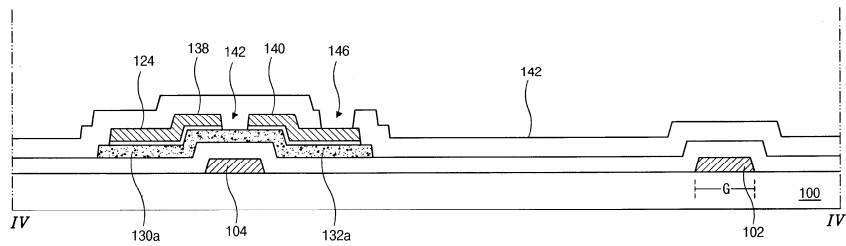
4e



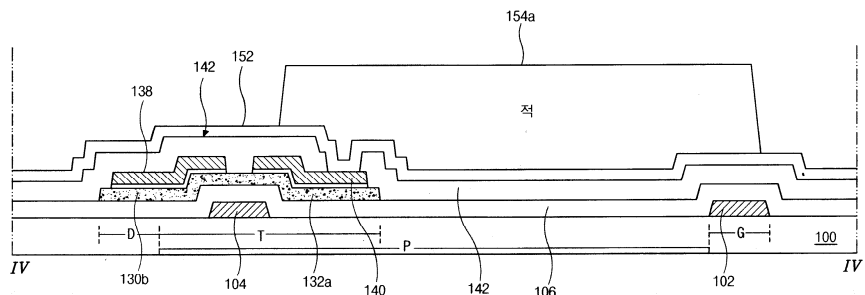
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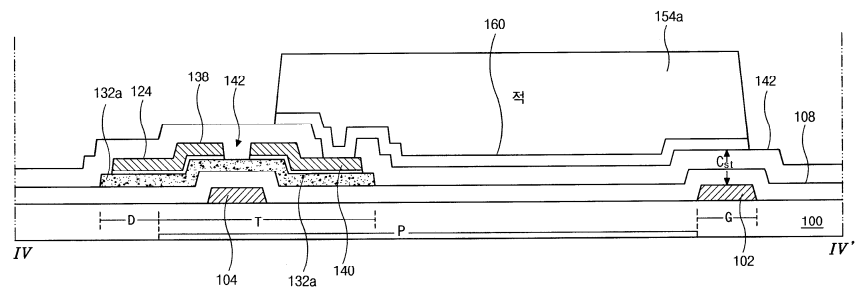
4g



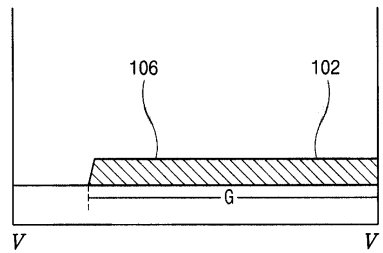
4h



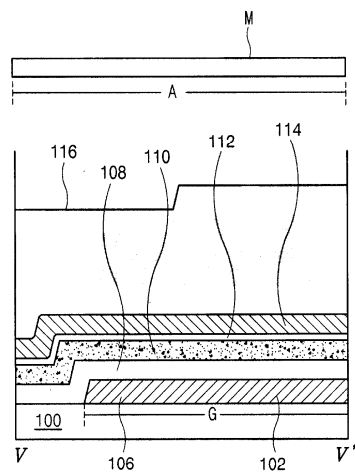
4i



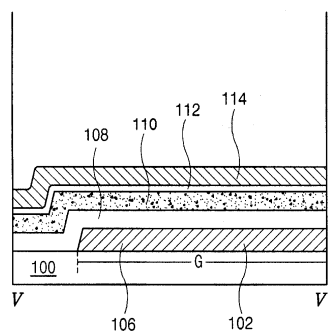
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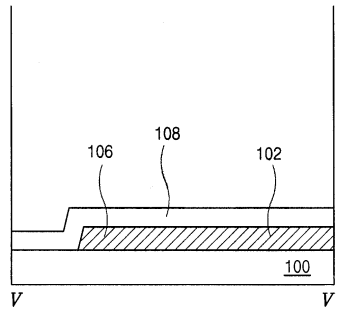
5b



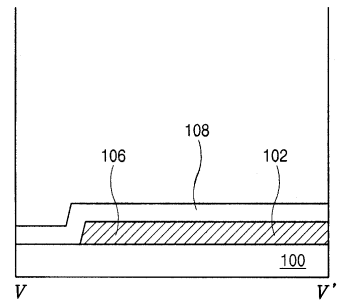
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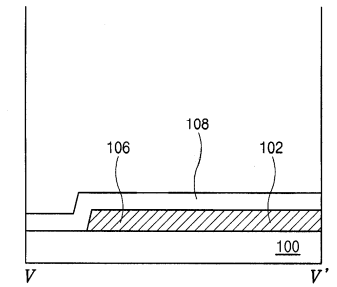
5d



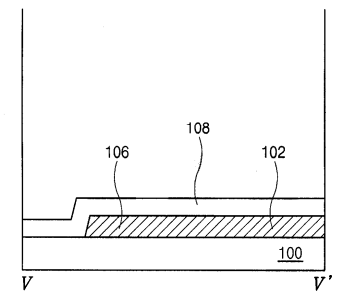
5e



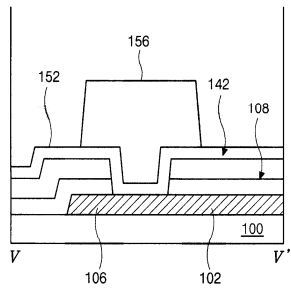
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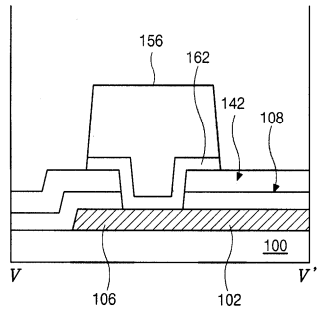
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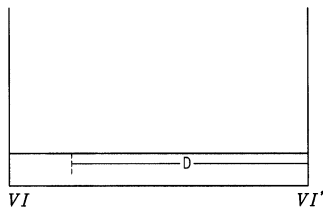
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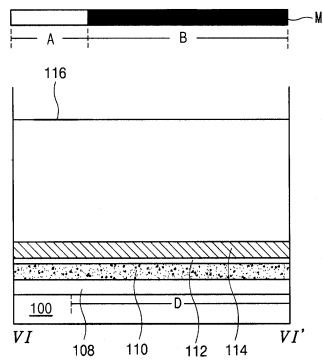
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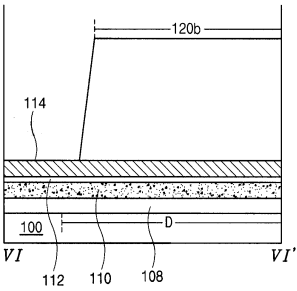
6a



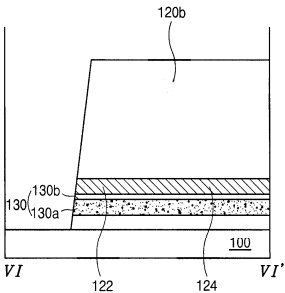
6b



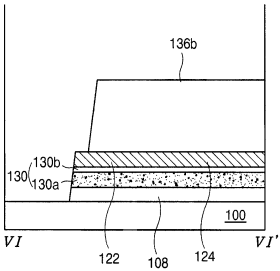
6c



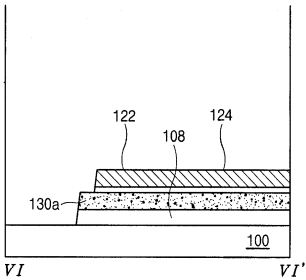
6d



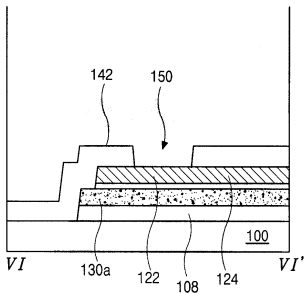
6e



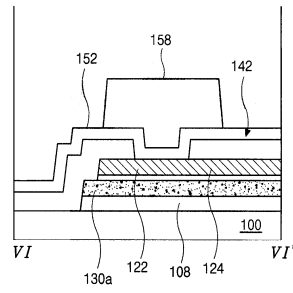
6f



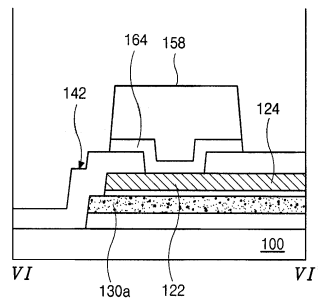
6g



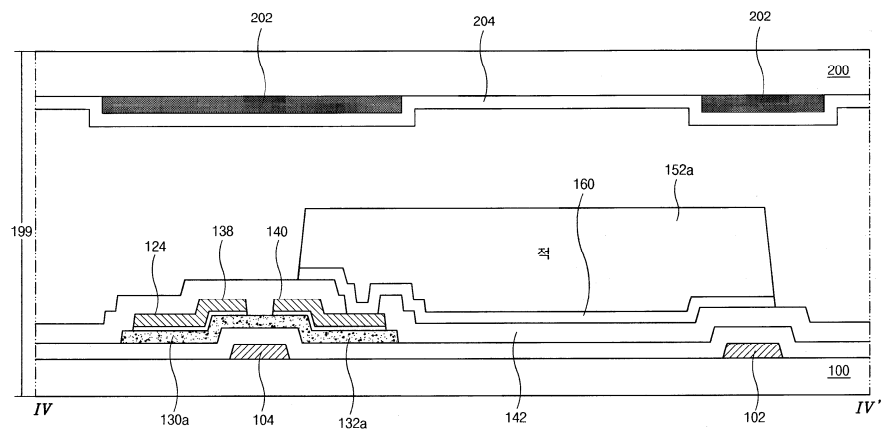
6h



6i



7



专利名称(译)	液晶显示装置及其制造方法		
公开(公告)号	KR1020040062094A	公开(公告)日	2004-07-07
申请号	KR1020020088416	申请日	2002-12-31
[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	KIM WOONGKWON 김웅권 KIM SEJUNE 김세준 CHO HEUNGLYUL 조흥렬		
发明人	김웅권 김세준 조흥렬		
IPC分类号	G02F1/136		
其他公开文献	KR100543062B1		
外部链接	Espacenet		

摘要(译)

液晶显示装置技术领域本发明涉及液晶显示装置，更具体地，涉及具有包括导电滤色器的COT结构的液晶显示装置。根据本发明的液晶显示装置具有这样的结构，其中导电滤色器形成在阵列基板的像素电极上，并且通过四掩模工艺制造。与形成薄膜晶体管阵列基板和滤色器的传统工艺相比，这可以显著简化工艺，从而提高工艺产量和成本竞争力并提高产品竞争力。 3

