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(24)

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2004 10 25

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(22) 2002 02 07

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(43)

10-2002-0066982
2002 08 21

(30) JP-P-2001-00036799 2001 02 14 (JP)

(73) 가 가 5 7 1

가 가 가 , . 1753

(72) 5 7 1 가 가

5 7 1 가 가

5 7 1 가 가

5 7 1 가 가

5 7 1 가 가

(74)

:

(54)

가 , , 1 (60) (56) (59) (55) (61)
(56) , (51) (59) (58) 1 (61)
(59)

‘ ‘ ‘

1
 2a 2b 1
 .
 3
 4
 5 1 , a g
 6 5 , 1
 , h i
 7 1
 8 1
 9 1
 10 1
 11 , a f
 12
 13 12
 14a 14b 가
 15
 16 , a f
 17 16 , h i
 .
 < >
 48, 55 : 49 : ()
 50 : 51 :
 52 : 53 :
 54 : 56 :
 57 : 58 :
 59 : 60, 61 :
 71 : 72 : ()
 73 : TFT() 74 :
 75 : 76 :
 77 : 78 :
 79 :

(PDA; personal digital assistant),

가
가
(TFT; thin film transistor) MIM(; metal - insulator - metal)
가 가
가
가
50% 가
가
가
가 (鏡面)
(moire fringe)가
15
(2), (3), (1) (7; TFT) (14) (1) (8),
(8) (4), (5), (6;) (9), 가 1 (10),
2 (11), (9) (12) ()
(13) (13) (Al) (1) (7) (14)
(13) (16) (16) (15) (2), (3), (4),
(5), (6), (14) (13) (15)
(15) 가 (11)
(13) 가 (13) 가 (20)
16 17
(22), (23), (24) (20) (21) (16[a]).
(25) (16[c]), (16[b]). (23) (24) (27)
(16[d]). (28) (16[e]).
(16[f]), 가 (29) (30) (17[g]).
(31) (32) (17[h]).
(17[j]). (33) (17[i]), (34)
61-6390 가
(28)) 가 가
가
() (flicker)가
()
(28) (11)
16[f]
(29) (29) 1 20 μ m

0.5 5 μ m (29) 16[f] (29) (가 ,가 ,)

(55)); 2 (1 (48)); 2 (1 ; 2 ; ; 1 2 ; 2 (全面) 가 가 (), , 1 2 가 1 가 2 가 (; black matrix) 가 ; ; ;) 가 , (:

(2) , 1 , (1) 2 1 , 1 ; .

가 , .

가 , , 가 , , .

1 , , (2 A-A 1)

가 2 (51) (50) , (52;) (53) , (51, 52) (50) , (50, 53) (54) , 15 (51) 가 (網狀) , 15 (51) , (79; 2) (51) (TFT; 1) (51)

가 . (50) , (55) , (55) (58) , TFT (56) , (56) (59) , (59) (57) (56) , , (57) (57) , , (50) (51) (57)

1 (60) 1 (60) 2 (61) 1 (60) (51) , 2 (61) (57) 2 (61) , 1 (60) (60) 1 (60) (60) 1 (60) 2 (61) (79; 2) 1 (60) 2 (61)

1 (60) , () , . 2 (61) () 2 (61)

61) , , 2 (61) (53) , (48) , (48) (62)가 , (52) () (rubbing))가 (53) , (51) (6) 2) (49;) (58) (59) (58) , .

() , (59) (58) (59) , (59) , 1 (60; () , 1 (60) (59) , 가 . , 2 , (50) , 1 2a 2b , a (51)

2 (分圖) 2a 2b , a (51)

, 2b 2a (51)
 (71;) (72;)
 2 (71) 2 (72) 1 (75) (72)
 TFT(73) (74) TFT(73)가 , TFT(73) (76) (59)
 (59) (58) (71) (71)
 (51) , (79) (76)
 (71) (72)
 (53) , (71) (72) (49;)
 (51) , (49) (5)
 1) (51) 1 가 ((77) ,
 77) 1 (77)가 (77)가
 (59) (58) , T
 FT(73) , TFT(73) (59) (58) , TFT(73)
 가 , (59) 가 ,
 (58) (58) (59)
 (57) 가 1 (60) , 가 (57) 가
 3 , (50)
 (77)가 , 1 () 3 , 2 , (77)
 가 (78) (77) (78)
 (77) (77) (78)
 (77) 1 (60) ((57))
 4 , (50) 2
 B-B (57) (51;) TFT(73) (76)
 (51) 2 (61) (79) (59) ,
 TFT(73) 4 , TFT(73) (51) 가 , TFT(7
 3) (77)) 가 (76) (7
 (79) (76) (79)
 6) (59) (79) 가 (59)
 (79)
 6 , 5 6 , 5
 (57) (53)
 (55) (50) (Cr) 50nm ([a]),
 (74) (58) ([b]). ([b]가
 (1PR) , n nPR
 (56) CVD 400nm , TFT
 (80) CVD 200nm (80) ,
 ([c]). (80) TFT(73) (81) ([d]: 2PR).
 (81) ITO() (75), (76) 50nm ([e]).
 PR). ITO ([f]: 3
 , 1 (60; 3 μ m) ([g]). ,
 1 (60) ([h]: 4PR). 1 (60) ,

가 , , , 1 (60) , (60) , 1 (60) , (59) , 1 (60) , (59) , 1 (60) , (59) , 가 , , , 1 (60) , ([i]). , , , 260 1 10 40 ° , 60 80 ° , 2 (61) 1μm ([j]). , 1 (60) 2 (61) , 2 (61) , 2 (61) ([k]; 6PR). , 2 (61) , 2 (61) 300nm ([l]; 6PR). (79) , (51) (76), (酢酸) (59) (硝酸) , 60 가 가 , 1μm , (50) . (51) , 0.4 5μm , (50) (53) , 가 (50) (53) (spacer) , 가 (54) , 가 , n 가 (silane) 가 , 가 CVD , 가 (/) 0.1 0.5 , 200 300 , 133Pa, 200W , 가 (/) 0.1 0.8, 250 , 133Pa, 200W , 가 (/) 0.25 2, 200 250 , 133Pa, 50W (phosphine) , 가 (/) 1 2, 200 250 , 133Pa, 50W , 65 39.9Pa, 100 300W , 0.665 39.9Pa, 50 200W , Cr 가 , 가 0.6 , , Cr, Cr , Ti, W, Mo, Ta, Cu, Al, Ag, ITO, ZnO, SnO , , 7 , 1 , (59) (58) , 1 (60) , (59) (59) , (58) (58) 8 , 1 , (58) , (59) (59) , (58) , (58) (59) (59) 9 , 1 , (59) (58) (58) (59) / (58) , (59) (59) (5)

8) , 1 (60) 가

10 , , 6 [i]() 가

, 7 9 (59) (58) 10 (51)

가 , 1 (60) 2 (61) ()

가 , (halftone photoresist)

11 ,

(59) (5 [f]) 가 , '63

11 [a] , (63) , (64) 1 $5\mu\text{m}$

11 [b] , (64) (65)

2 (66) , 11 [c] ,

11 [d] , (,

(64) 200 60 가 , 11 [e] , (,

40% , 가 , 11 [f] , 200nm

(51) (51) ,

가 , 가 ,

1 , 7 9 (

1 4

12 , (50)

13 , 13 12 C-C

12 13 , 1 4 가 , 1 4 (51)

12 13 2a , (51)

12 (91) 13 (90) , 1 4 ,

(91) (90) (71)

(59) (90) (91)

(59) (90) , (59)

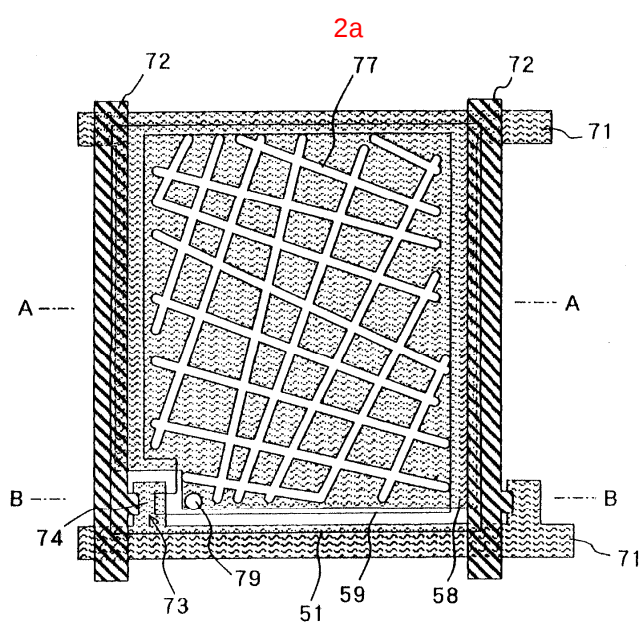
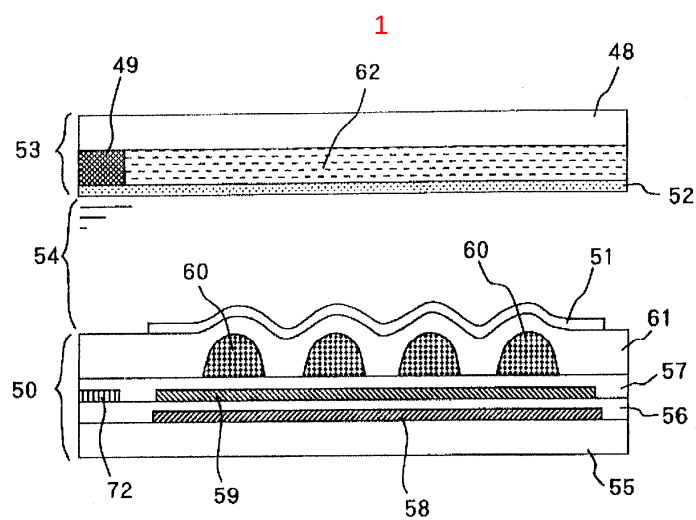
14 , 가 , 14a 1 4

14b 12, 13 가 ,

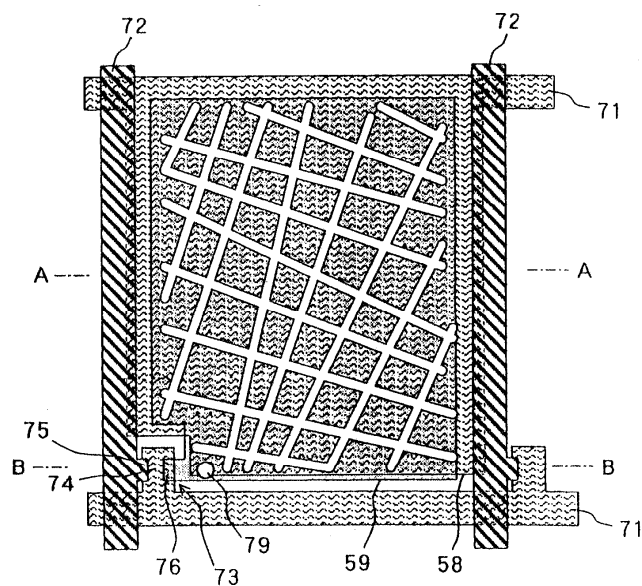
1 ,

8

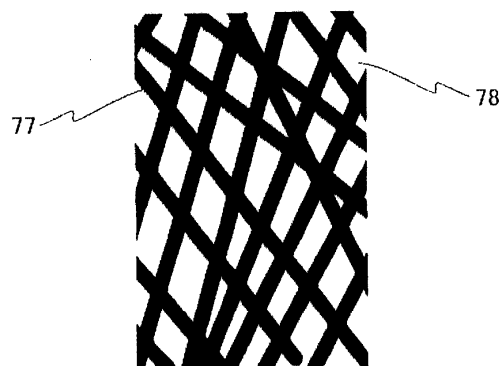
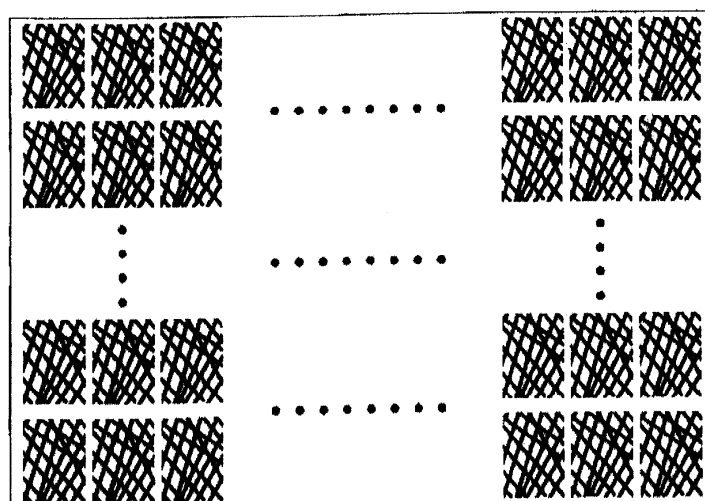
9

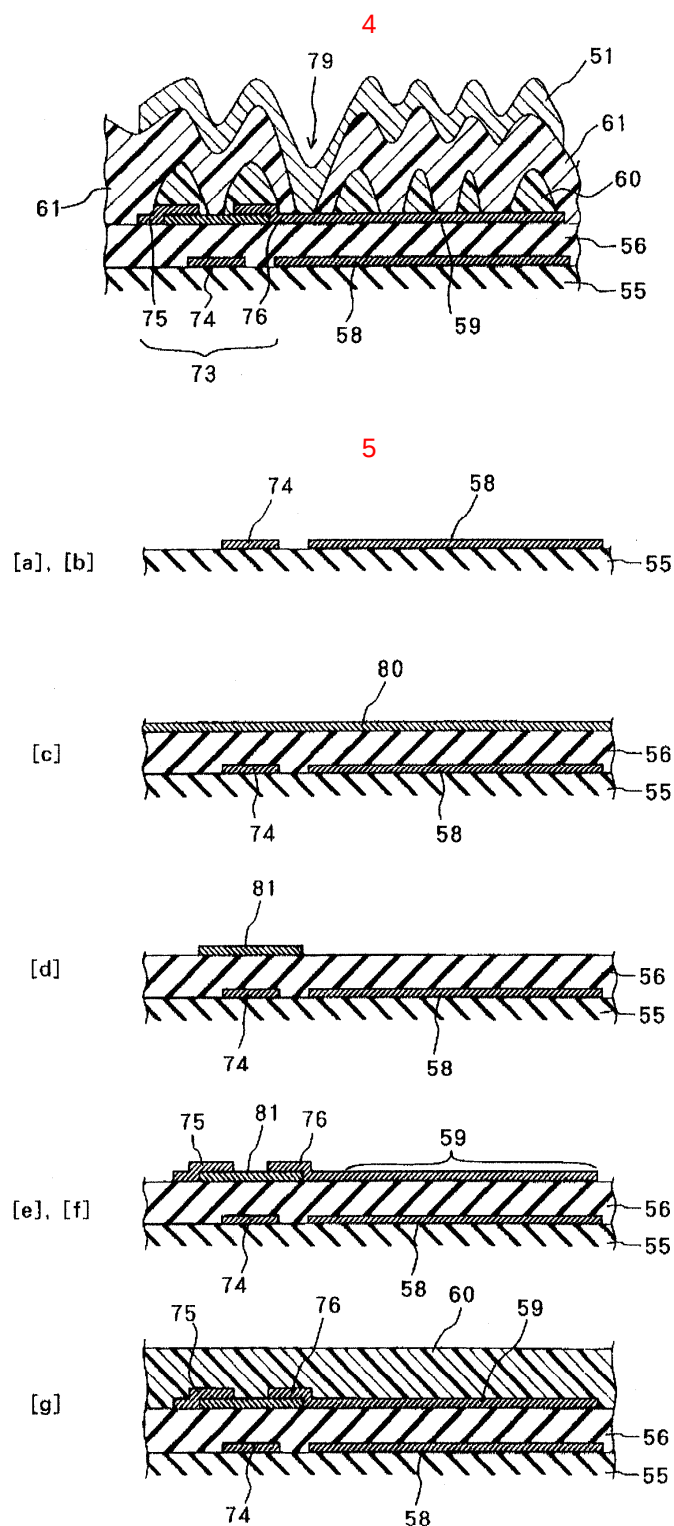


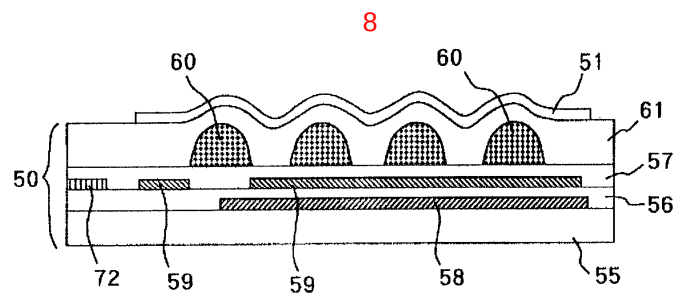
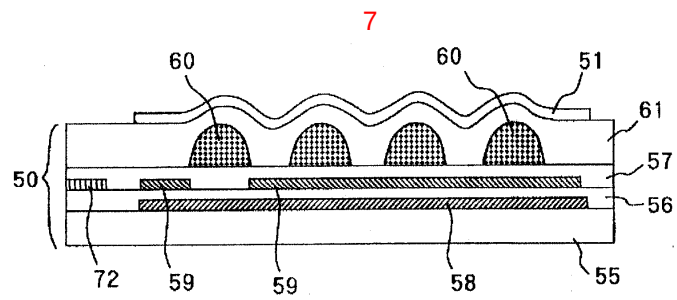
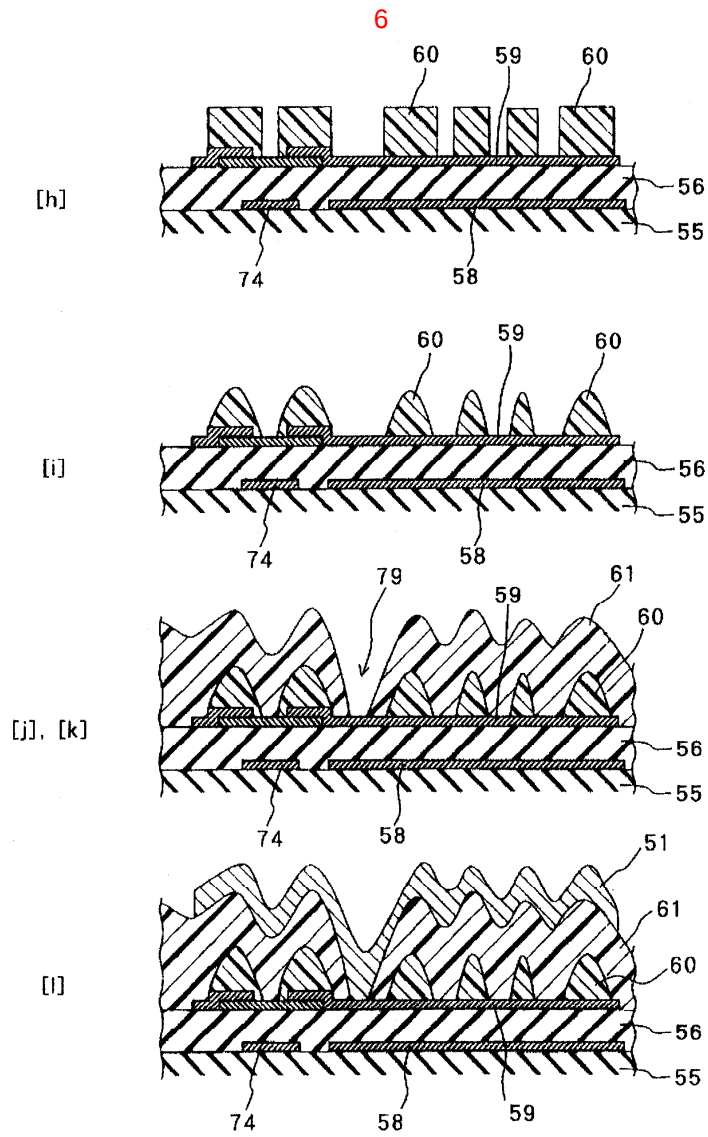
2b

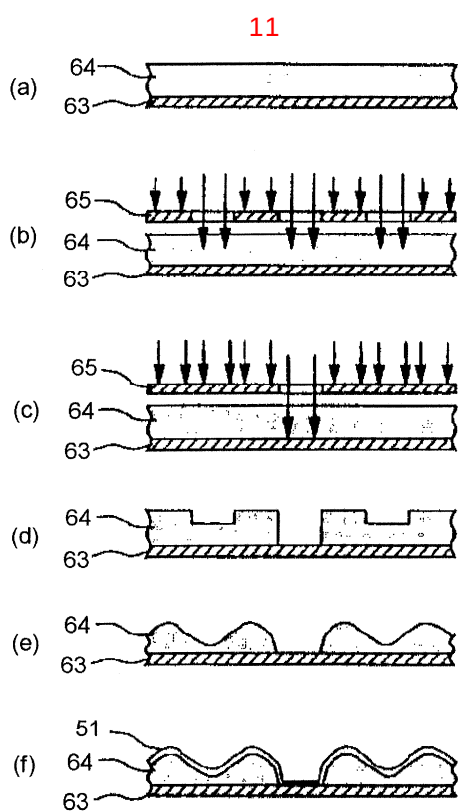
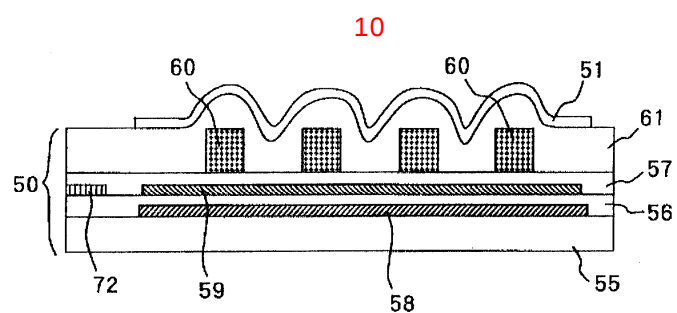
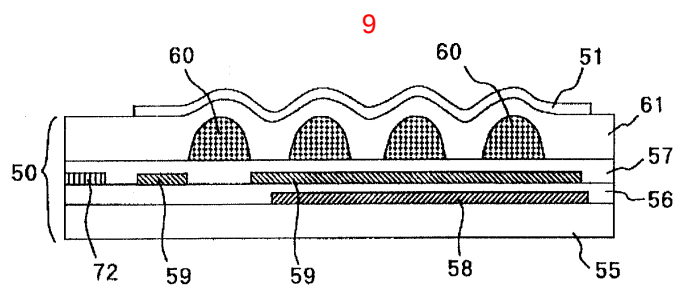


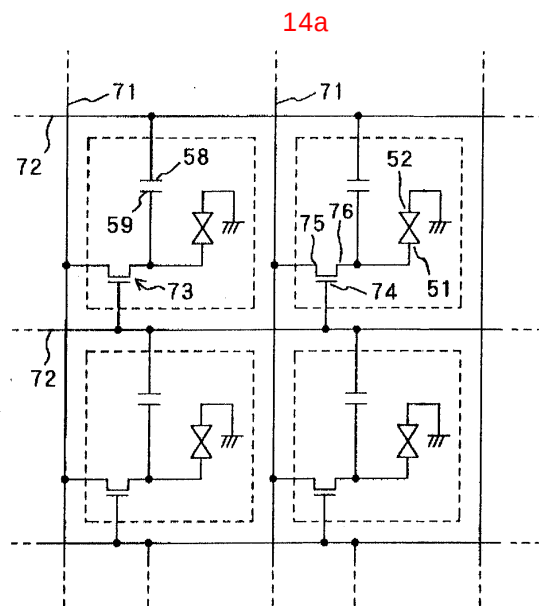
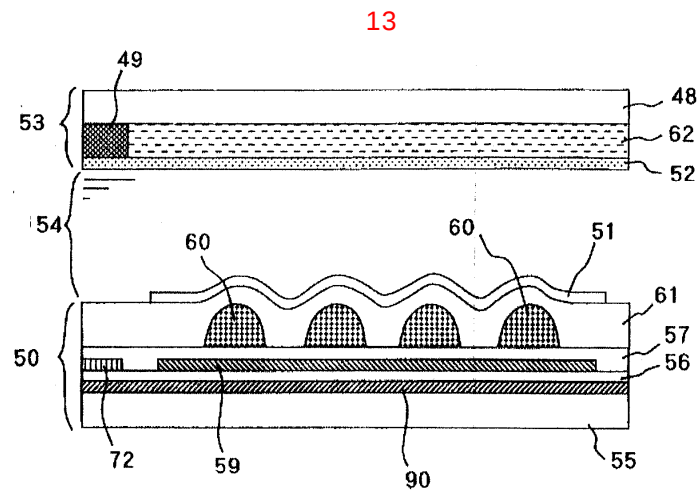
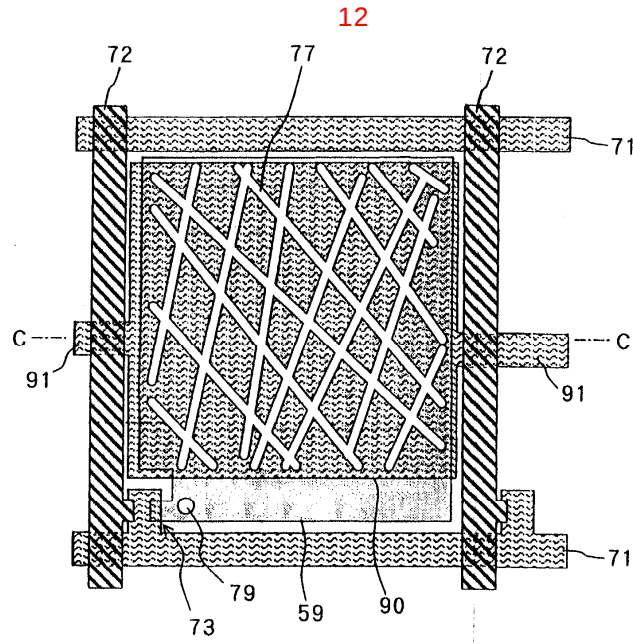
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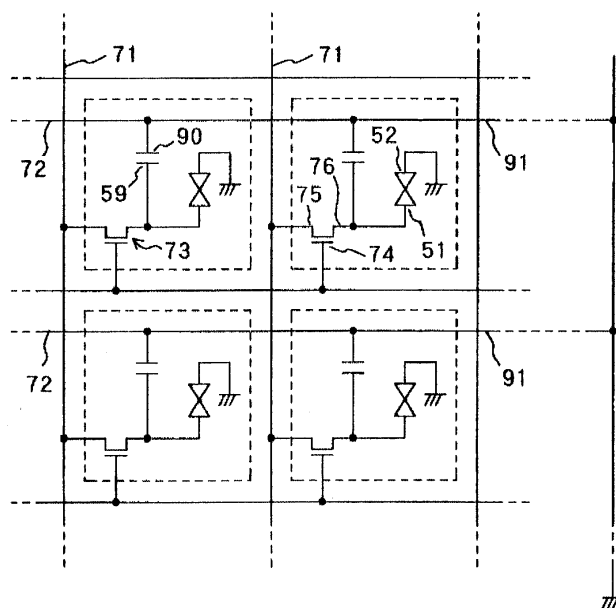




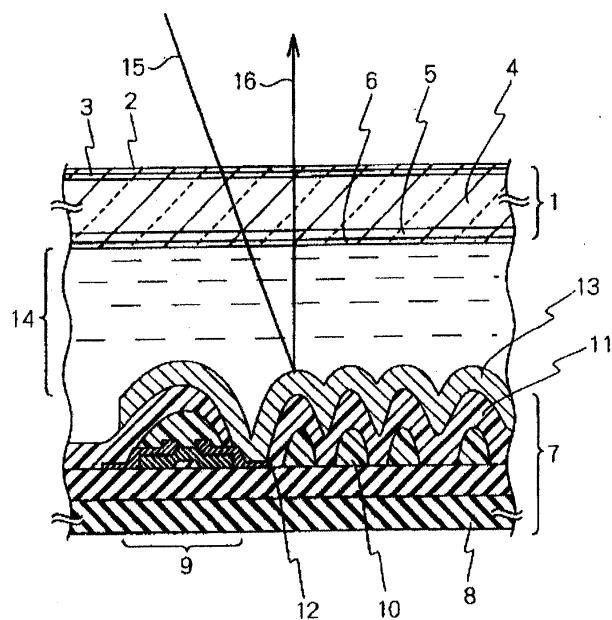


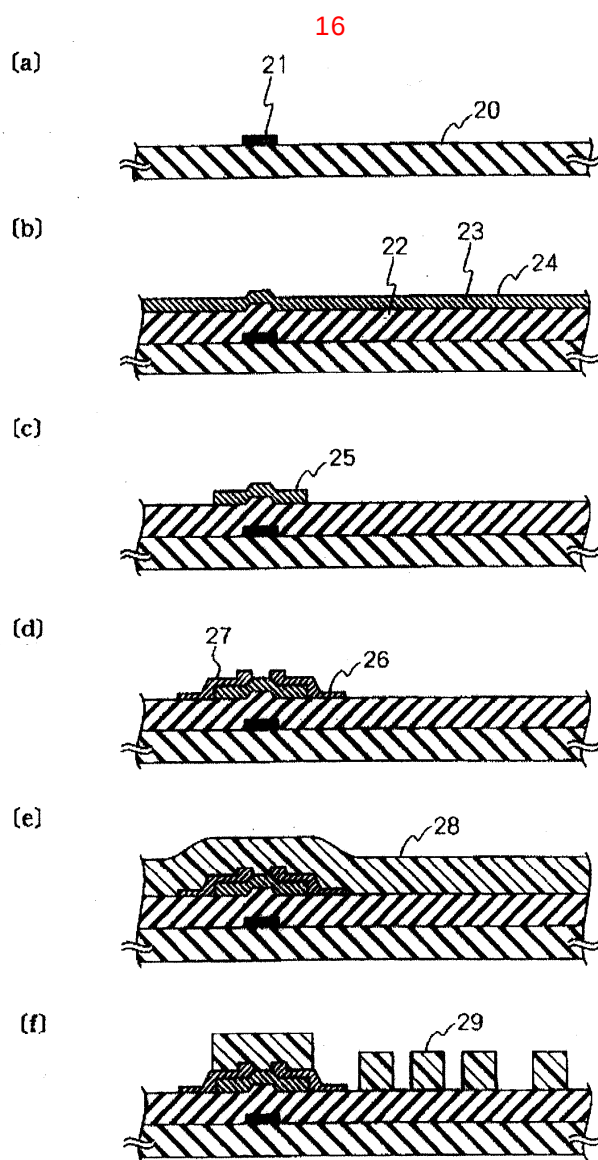


14b



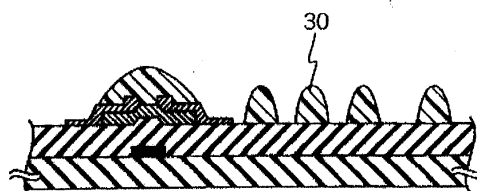
15



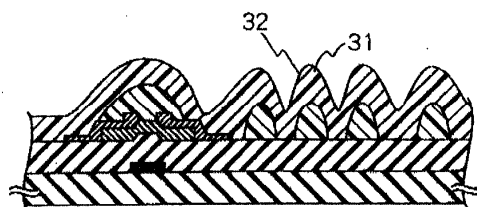


17

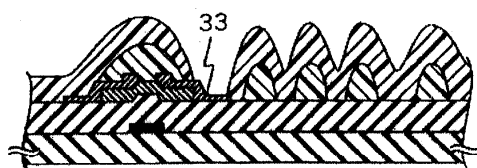
(g)



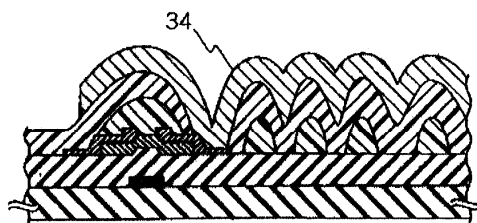
(h)



(i)



(j)



专利名称(译)	有源矩阵液晶显示装置及其制造方法		
公开(公告)号	KR100455557B1	公开(公告)日	2004-11-06
申请号	KR1020020007184	申请日	2002-02-07
[标]申请(专利权)人(译)	NEC液晶技术株式会社		
申请(专利权)人(译)	日元号技术可否让这个夏 日本电气有限公司sikki		
当前申请(专利权)人(译)	日元号技术可否让这个夏 日本电气有限公司sikki		
[标]发明人	SAKAMOTO MICHIAKI 사카모토미치아키 YAMAGUCHI YUICHI 야마구치유이치 IKENO HIDENORI 이케노히데노리 MATSUNO FUMIHIKO 마쓰노후미히코 KIKKAWA HIRONORI 기카와히로노리		
发明人	사카모토미치아키 야마구치유이치 이케노히데노리 마쓰노후미히코 기카와히로노리		
IPC分类号	G02F1/1368 G02F1/1335 G02F1/1362 G09F9/30 H01L21/336 G09F9/00 H01L29/786		
CPC分类号	G02F1/136213 G02F1/133553		
代理人(译)	JO , EUI JE		
优先权	2001036799 2001-02-14 JP		
其他公开文献	KR1020020066982A		
外部链接	Espacenet		

摘要(译)

在反射型有源矩阵型液晶显示装置中，可靠地形成反射膜，用于形成反射膜的曝光量减少，制造时间缩短，制造工艺简单，是这样。上电极（未示出），设置在第一绝缘层60和下绝缘膜56之间，并且电连接到薄膜晶体管的源电极并电连接到反射膜51如图59所示，下电极58设置在玻璃基板55和下绝缘膜56之间，并形成上电极59和存储电容器。基于图案化的第一绝缘层61的形状确定反射膜51的表面的凹凸。当通过光刻将第一绝缘层61图案化时，上电极59用作反射构件。 1 指数方面 液晶显示器，反射膜，存储容量，绝缘层

