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(43)

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(21) 10-2002-0027309
(22) 2002 05 17

(71) .
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(72) 1119-3 969-1202

3 1480-11 301

112 403

(74)

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(54)

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2a 2c

3 2

4a		4c	
5			
6	5		A - A'
7a		7f	6
8			2
9a		9f	8
10			3
11	10		B - B'
12a		12d	11
13			4
14a		14d	13

<				>
1,90 :		2 :		
6,104 :		8,114 :		
10,12,76,118 :		11, 70 :		
14, 74 :		16, 72 :		
22, 118 :		23, 111 :		
24, 42, 88 :		25, 102 :		
26,27,106,108 :		28, 110 :		
30, 112 :		50, 80 :		
92 :				

(Liquid Crystal Display; LCD)

(Active Matrix)

4a 4c (Ink-Jet)

, 4a (58)	(40) (40)	(58)	(50)
		가 (50) (54)	(Piezoelectric) (52)
	(Thermal) (52)		
(52)	(58)가 (nozzle ; 56) 가 ,	(54) 가	(52) (58) (52) (56) (58) (56)

(58)	4b	(56)	,	(58)	(58) 4c (W)	(H)	가 (58)
,		(50)	,				
(58)	(40)			(58)			
	TFT						

가

, 5 14c

5

6 5 A - A'

5 6 , 1 (60a) (78)
 (C) (78) (81) (80) .
 (60) (62) TFT(71) (60)
 (62) (78) 偈 .
 (80) .

TFT(71) (90) (64), (66), (68), (70),
 (72, 74) . . . (74) TFT(71) (64) (60) , (72)
 (62) (78) . , (78) (60a) TFT(71) (79a) (81)
 (78) . , (80) (78) (81)

7a 7f 6

7a , (90) (64) . (64) (sputtering)
 , (64) (Al) (Cu) , (NH₄)₂S₂O₈

^{7b} , (64) (90) (66), (68) (70)

(68) (66) (70) (66) (90)
 (Chemical Vapor Deposition : 'CVD')

,	7c		(66)		(70)			(72, 74)
.		(72,74)		(70)		(16)	CVD	
(sputtering)			,				(62)	
	(72, 74)		(Mo), MoW, MoTa		MoNb		(Mo alloy)	
(NH ₄) ₂ S ₂ O ₈			.			(72,74)		(70)
		(72, 74)		(68)		.		
(72, 74)		(12)		.	(12)		가	가
(72, 74)	가

7d	, TFT(71)가	(90)	(76)	(76)		
7e	(76) um - Tin - Oxide ; 'ITO' (Indium - Tin - Zinc - Oxide ; (78)	(78)	(78) (Indium - Zinc - Oxide ; 'IZO')	(60a)	(82)	(81) (Indi - - - (78)
	(74) (78) (79a)					
7f		(78)	(81)	(80)가		(78) (81)
		,	(80)			
			(81)	(78)	(81)	(81)
			(80)	(80)		
			(80)가	가		가
8	2					
9a	9f	8				
9a	,	(90)	(64)	.	(64)	(sputtering) (60)
	,	,		.		
,	9b	(66)	(68)	(64) (70)	(90)	(66)
						,
,	9c		(66)		(70)	(72, 74)
9d	, TFT(71)가	(90)	(76)	(76)		
	,	,	(74)	(79a)		,
	(60a)		(66)	(76)		
	(88)					
9e	,	(76)	(78)	(78) ITO, IZO, ITZO		
	,	(78)	,	(78)		
	(88)	,	(74)	(79a)		
		,		(88)		
7f	(88)	(88)	(80)	(88)		
	(80)	(88)		(80)가		
	가					
80)						
10	3					
11	10	B - B'				
10	11	,	(109a)	(109a)	(102)	(D)
)						(106)

, (109a) (106) (101) (108)가 (102) . (102), (104), (106) (109a) ,

(102)가 TFT . (102) (101),

(104) (102) . (104)
R, G, B .

$$(106) \quad (\text{Vcom}) \quad , \quad (106)$$

(108)

12a 12d 11

12a , (101) (102)가

(102) Cr

가

2) Cr
)가

1000 ~ 2000

(10
(104

(102) (100) 12b (104) 가
 (104) R, G, B (100) R (resin), G (104) 가
 . , R, G, B (Solvent) (104) 가
 가 가 (104) 가

, 12c (104) (106) . , (106)
(102) (109a) . , (109a)

12d (109a) . (108) . (108) 가
(109a) . , (108) . .

a) , (108) . (102) (109a) 가 . (109a) , (108) , (108) (108) (109a) 가 . (109) (1) (109a)

13 4

13 , (111a) . (112) , (110)
 (114) .

14a 14d 13

14a , (101) (102)가 . (102)가 (102) . (101) (101)

(102) (100) 14b (110) 가 (111a) (111a)
 (110) (102) (111a) (102) (resin), G , B
 10) R, G, B , R, G, B (100) R (110) 가

 , 14c (112) (102) (111a) (110) , (112) 14c

 110) 14d (111a) (111a) (114) 가 (114) 가

 a) , (114) (102) (111a) (111a) (111a) , (114) , (114) (111) 가

 111a)

(57)

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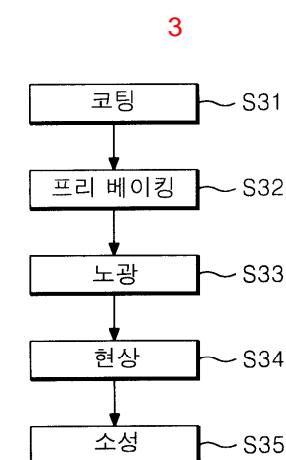
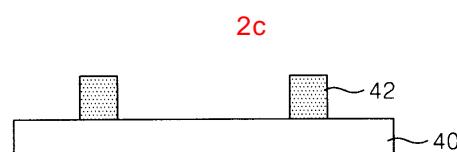
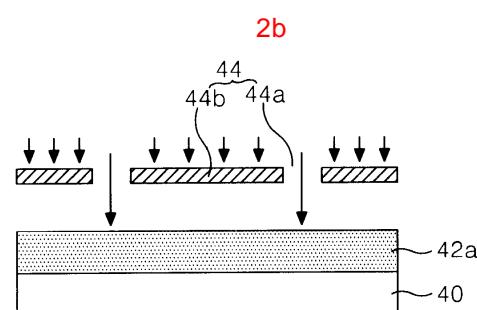
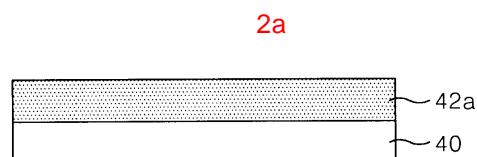
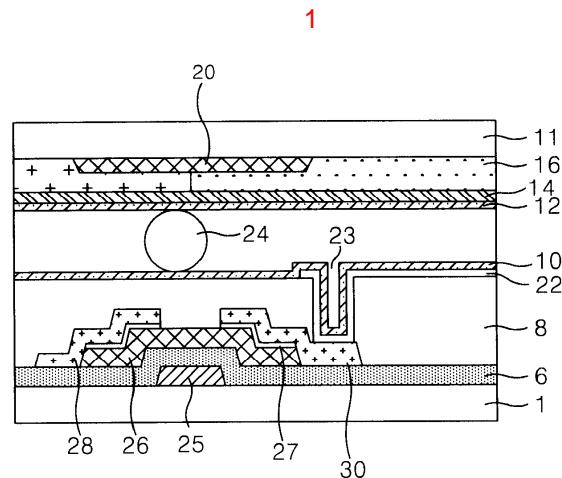
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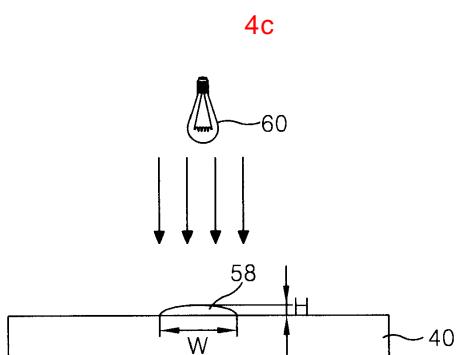
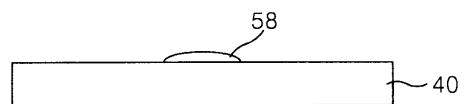
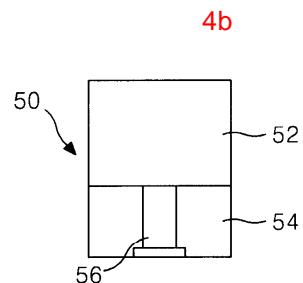
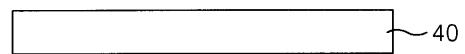
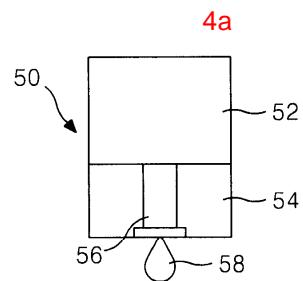
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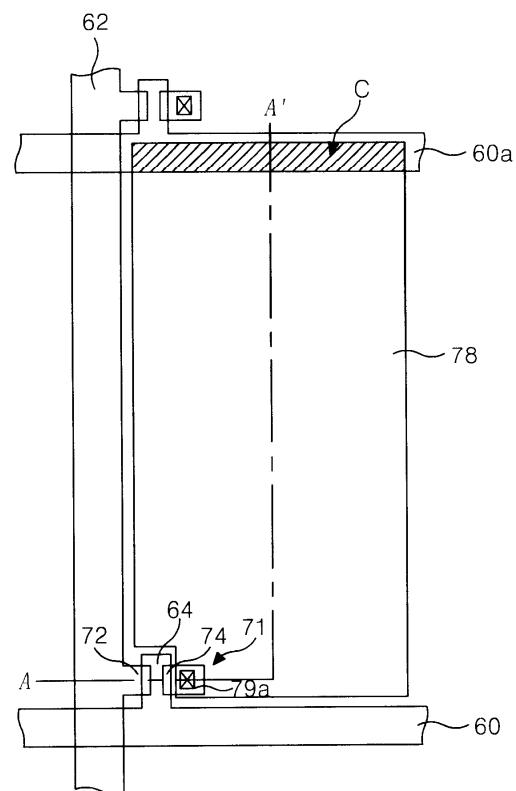
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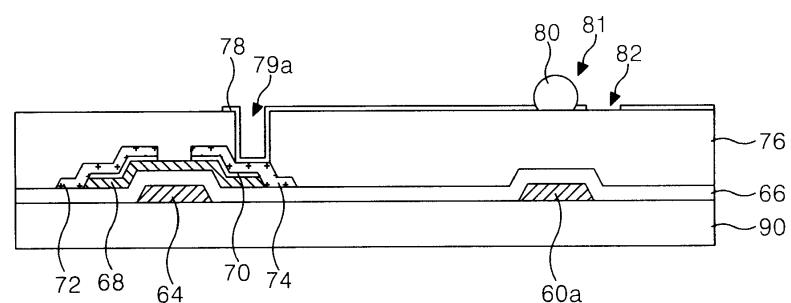




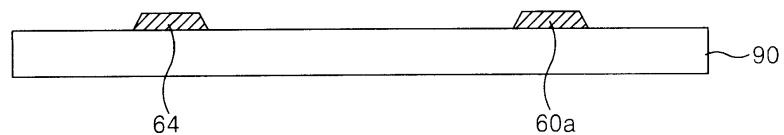
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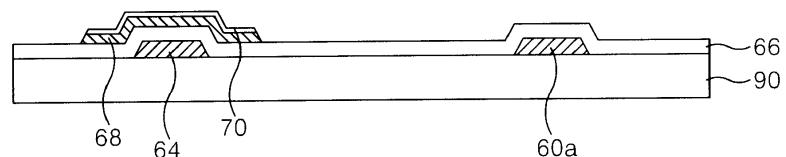
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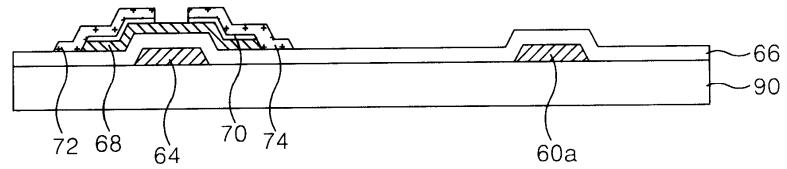
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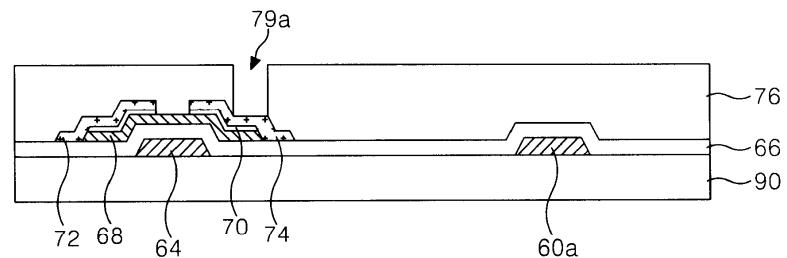
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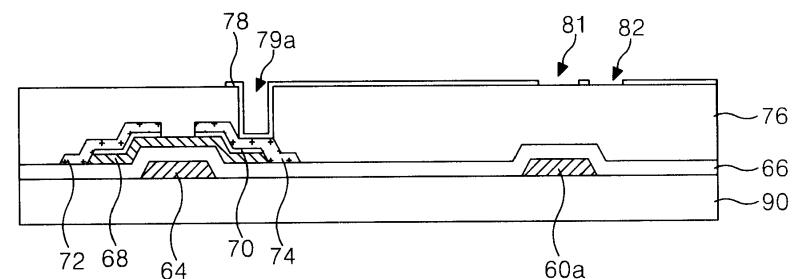
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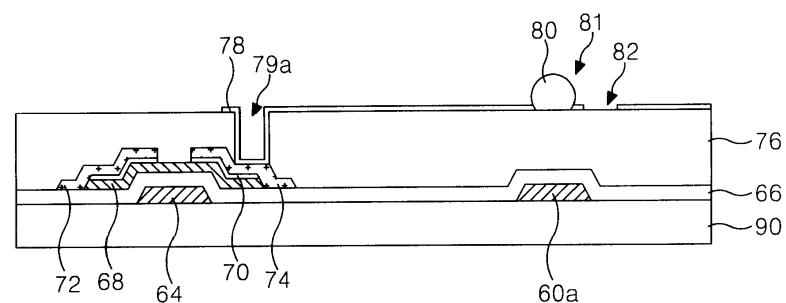
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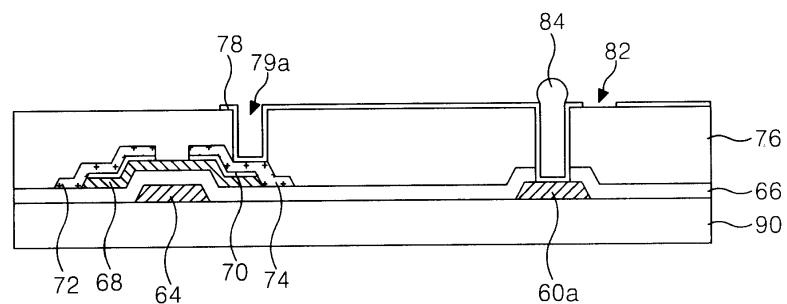
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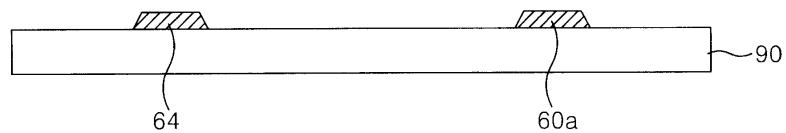
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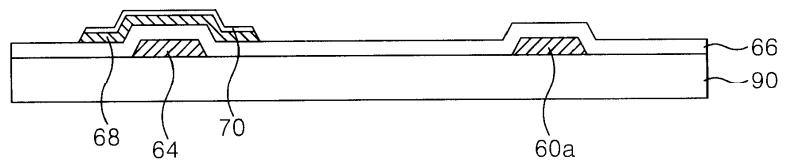
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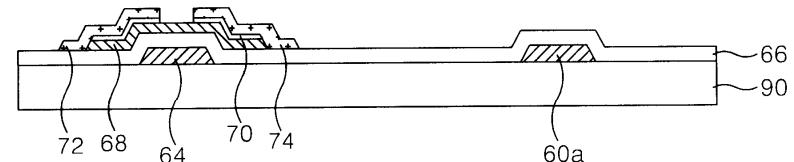
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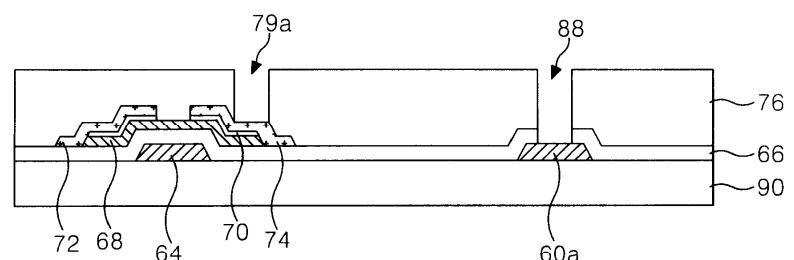
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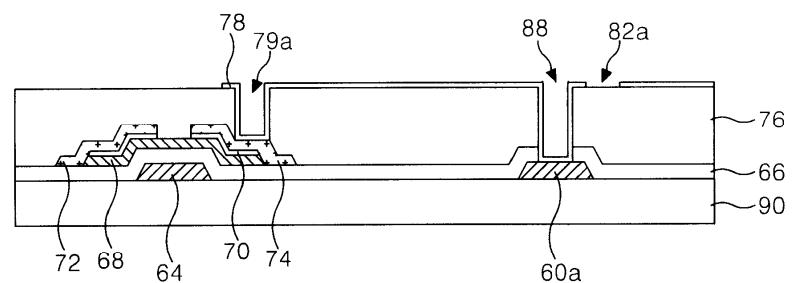
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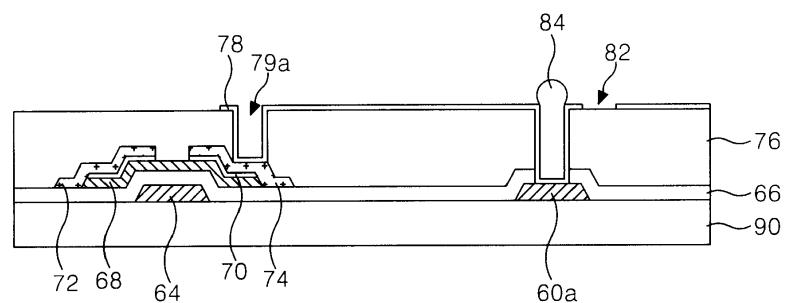
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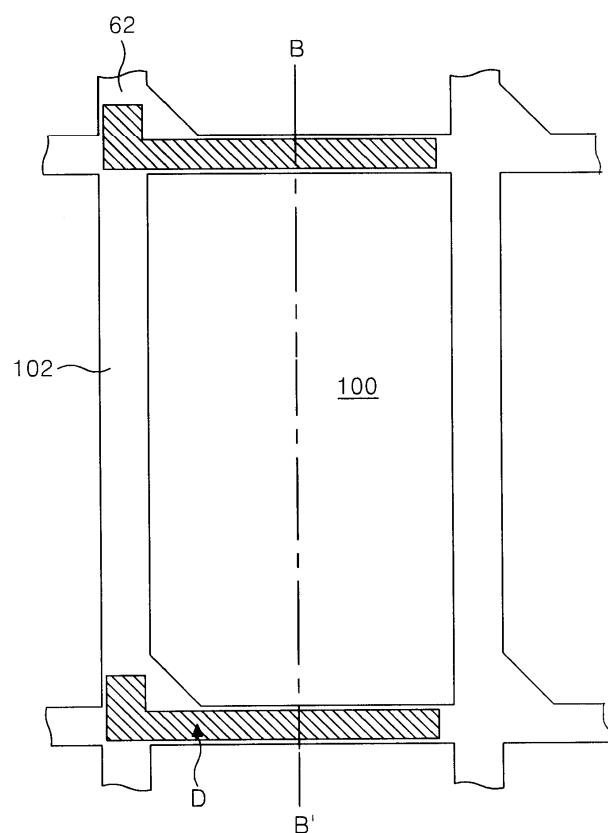
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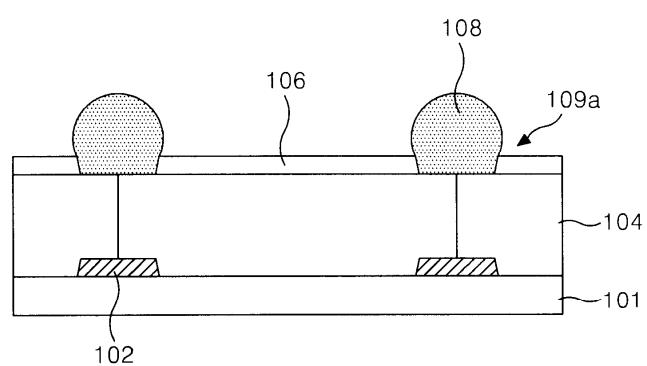
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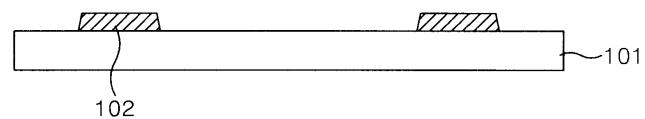
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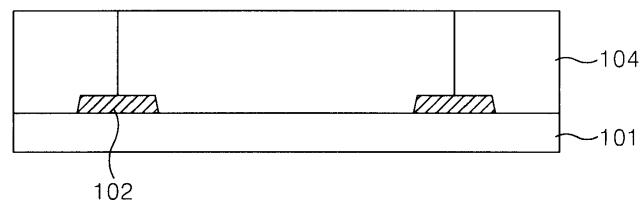
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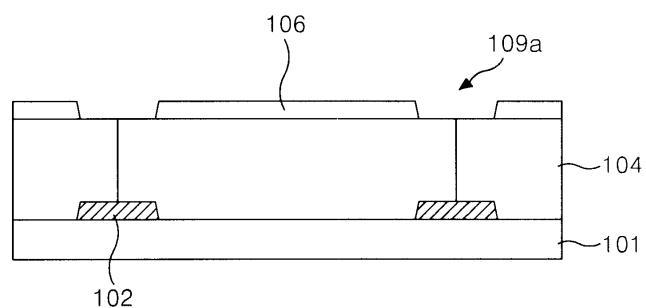
12a



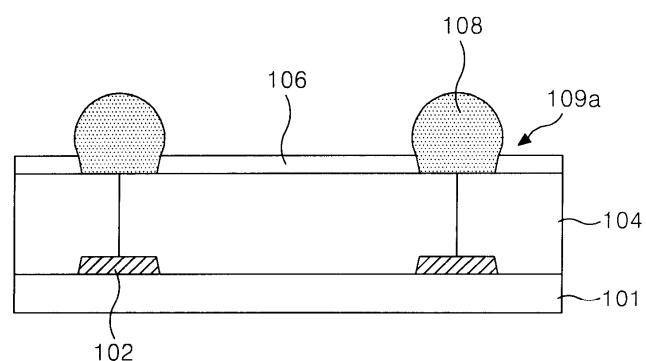
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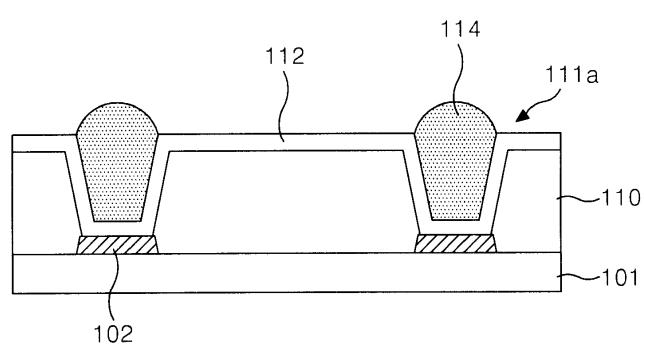
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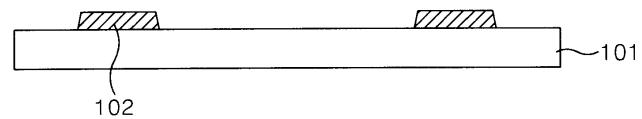
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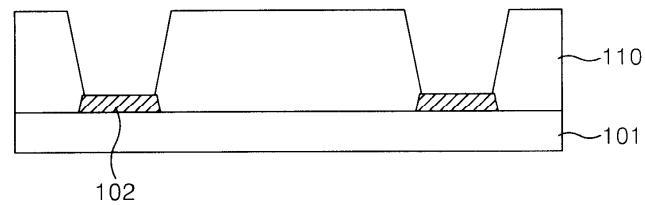
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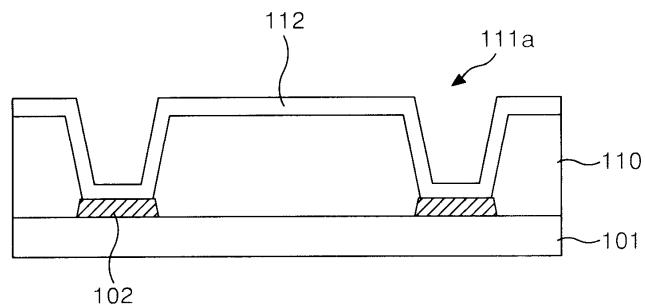
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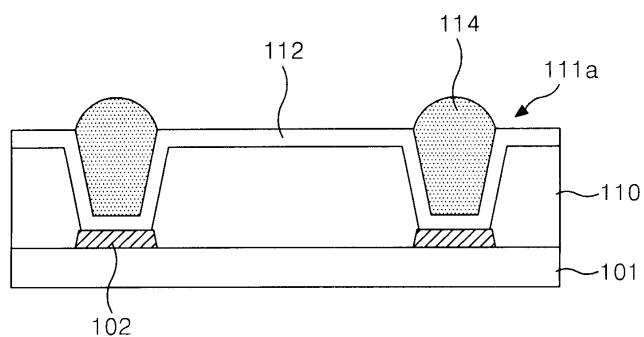
14b



14c



14d



专利名称(译)	液晶显示装置及其制造方法		
公开(公告)号	KR1020030089204A	公开(公告)日	2003-11-21
申请号	KR1020020027309	申请日	2002-05-17
[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 JEONGHYUN 김정현 JUN JAEHONG 전재홍 LEE HYUNKYU 이현규		
发明人	김정현 전재홍 이현규		
IPC分类号	G02F1/1339 G02F1/1362		
CPC分类号	G02F1/13394 G02F1/136213 G02F1/136227 G02F2201/121		
代理人(译)	KIM , YOUNG HO		
其他公开文献	KR100433229B1		
外部链接	Espacenet		

摘要(译)

液晶显示装置及其制造方法技术领域本发明涉及一种液晶显示装置及其制造方法，该液晶显示装置能够通过在未受扰动的区域中形成凹槽以在凹槽中形成间隔物而容易地控制间隔物的尺寸。根据本发明的液晶显示器包括形成在基板上的栅极线和数据线的交叉处的薄膜晶体管，形成在基板的整个表面上以覆盖薄膜晶体管的保护层，通过通孔电连接到薄膜晶体管的像素电极，通过在保护层上图案化与前栅极线重叠的像素电极形成的孔，以及通过喷墨分配方法注入到孔中的间隔物的。 6

