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(43)

10-2004-0065205
2004 07 21

(21) 10-2004-0053506 ()
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2003 03 24

(30) JP-P-1998-00027663 1998 02 09 (JP)
JP-P-1998-00046036 1998 02 26 (JP)
JP-P-1998-00046048 1998 02 26 (JP)

(71) 가 가
2 4-1

(72) 가 3-3-5 가 가
가 3-3-5 가 가

(74)

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(54)

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TFT , 가

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TFT (3a) (10) TFT(30) , (6a) (5) (9a) , (6a)
(9a) TFT(30) (嵩上)(lift-up) (13a)

1			가			
2	1		TFT			
3	2	A-A'	.			
4	3				(3-1).	
5	3				(3-2).	
6	3				(3-3).	
7a	7d		2 B-B'		6 (17)	(20)
8	2		TFT			
9	8	C-C'	.			
10	3		TFT			
11						
12						
13	12	H-H'	.			
14		가				
15		가				
16		TFT				
17a	17d		16 D-D'		6 (16)	(20)
18						
19						
20						
21		TCP				

3a: () 3a':

3b: 4: 2

5: 6a: ()

7: 3 8:

9a: 10: TFT

11a: 12: 1

13a: 20:

21: 22: 2

23: 30: TFT

50: 52: (seal)

52: 70:

101: 104:

200, 200': 200a, 200a':

201:

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(, TFT)

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, 16 , 16 (6a) (9a) TFT (3a) TFT (30') 가 (縱橫) TFT (30') (8) (3a) (1a) (1a)' (6)
 16 a) (5) (3a) (3a') , (9a) (1a) (6a) , (9a) (3a) (1a) (開)
 孔) (8) TFT (30')

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		(9a) TFT(30)	TFT(30)가		
1	(6a) S1, S2, ..., Sn	(線) TFT(30)	,	(6a)	,
0)	(31)	G1, G2, ..., Gm	(3a) 가	.	(9a) TFT(3
,	,	,	TFT(30)	,	
,	,	()	()	(9a)	
가	가	가	가	가	,
가	가	,	가	가	,
		,	,	,	
	(9a)		(70)	(leak)	
,		가	가	가	,
		(3b)		(70)	
			,		
			(3a)		

	1		2
(1a')	Sx 2 (6a), Y) 가 1 (1a) 1 가 2 가	(6a) , TFT(30) 1 (段) (1f) 가 1 가 9a)	X TFT(30) S _{x+1} (3b) (6a) S _x S _{x+1} (disclination) 가 (8) (9a) 가 (9a) (1a) (1a)
(3b)			Y (3a) (5) (6a) (1f) X (1a) (1a)
(8)	(3a) (3b) (8) (9a) 2 (1a) (1a)	(1a) 가 9a)	(9a) (disclination) 가 (8) W((13a) , Ti((8)
Cr(, Mo(, Ta((margin)			(13a) (3a) 2 (3a) (3b) S _x (3b) (3a) (6a) S _{x+1} (9a)
			(3b) (8) (3a) (13a) (3b) (6a) S _{x+1} (9a)
			(3b) (8) (3a) (13a) (6a)

, ,
(定) TFT(30)
, TFT

3 2 A-A'
LDD(Lightly Doped Drain) , TFT(30) , (70) 3
(1a) (1a'), (3a)(1a), (3a)
(1b) (1d) LDD (1e) (1c)(1c), (1d) LDD (2), (1a)
(1d) (1e) (1e) (dopant) (9a) (1a) 1 가 n p n
n p TFT
가 (6a)() Al (3a)(), (2) 1 (silicide) (12) 2 (4)
(5) (1d) (1e) (5) (6a)(8) (6a)(4) (1e) (1d)
(8) 3 (7) (1e) (1e) (8) (13a) (9a) (8)
3 (9a) (7) (1a) (1e) (1e) (13a) (13a) (3a) (3b)
(1e) (1a) (1a) (8) 가
가
TFT(30) LDD 가 , (1b) (1c)
TFT
, 3 TFT(30) , TFT(30) 2 (1d) (1e)
(2) TFT TFT LDD TFT(30) TFT(30)
TFT(30) (1d)
(3a) 3
(11a) 3
(1a) (1a'), (3a)(1a) (1a') (1a') LDD TFT(30) (6a)(1b, 1c) Al
(1c) (1b) (1c) (1b, 1c) TFT(30)
(11a) 3
(1f), 1 (1a) (2) (9a) (1e) (70) (3a)(70) 1

(3b)(2), 2 3 (4 7) 2 3 (4 7)
 (3b) 가 (9a) 가 가 . (3b)(2)) 2
 (duty) TFT (10) (1f) (3a)(1 (12) (12) (11a)
 , 1 (12) ,
 가 .

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, 4 6 . , 7a 7d TFT 4 7a 7d
 . , 6 (17) 7d TFT . , 4 7a 2 A-A'
 . , 7a 2 B-B' 7d
 가

4 6 2 A-A' TFT(30)

4 N₂(1)
TFT 가 (10), 900, 1300 TFT (10),
TFT (10)
TFT (10) Ti(), Cr(), W(1000), Ta(5000) Mo() Pd()
2000 (11) (11) (crosstalk) 가
가
, (2) (11) (11) (11a)
, (11a) 2 (11a)

(3) 가, TEB(11a), NSG(), BPSG(), CVD(), TMOP(), PSG(), TEOS() 가, BSG(), 8000, 15000, 1, (12), 1
 (12), (4) W(), Ti(), Cr(), Mo(), Ta(), CVD(), (13), (13), (13), 가, (13)

(5) ,
(9a) (1a) (9a) (13a)
(5) (6a)
(5) 가 .
(6) 400 600cc /min (13a) 가 , 450 550 500 CVD(600
20 700 40Pa CVD) 1 10 (amorphous) 4 6 (固相) (1) 500 TFT(30)
2000 , 1000 가 , , n

(cap) (材)가 1 6 μm TFT (10), (20) (19 22)
 (nematic) (seal) (bead)
 (50)

(17) 7a (3a) 7d (3b) 2 B-B' 7d , 7a (8) 7d 17a (a) 17d 6
 7a 7d (a) 3 (7) (8) (3a) (3b)

, 7a 7d (b) , (303) (303) (302) (304)
 (, (302)가) 3 (303) (302) (304) (8) , 17b 가
 ,
 7a 7d (c) (8) (8) ,
 , (8) ,
 7a 7d (d) (9a) TFT

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 TFT 2 8 9 , 9 8 8 C-C'
 , 가 , 2 7a 7d ,
 9 , 8

2 (11a') TFT(30) 2 3 1 (11a') , 8
 , 9 , 1 (12) (11a') (12) , TFT (10) (11a') 가
 , 1 (12) , 4 (1) (3) ,
 ,
 2 3 (7) , 3 (13a) CMP
 (8) , (3a) ,
 3b)

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 T 3 10 , 10 TF

3 (L)가 . 2 3 1 (L) 3 1 , X
 1 3 (單板)
 X (9a) (L)가 가 (6a) 가 AI() (6a) (8)
 . AI 3 (8) (8) 3 (7) (7)
 . (13a) (1a)
 가 가 ,
 11 (8) 2μm , 11 (a) (6a) 5μm (L) , 11 (b) 가 20
 μm 가 , , (6a) (3a) (9a) (8) (3b) (9a) , , (1a)
 , 3 (6a) (8) (6a) (8) (6a) 가 (8) (13a)
 , , , (8) (8) (9c)(2, 8, 10) (9a) (50)
 TN , , , (8) (50)
 , , , , , ,
 , , , , , ,
 16 (8) (9a) TFT 가 , , , ,
 , , , , , ,
 12 , 8 , 6 , 10 X , , , ,
 (6a) 2, 8, Y (8) (3a) 2 (3a) (3b) (3b)
 , , , , , ,
 < >
) , TFT (10) TFT(30)가 (p-Si) TFT TFT(30)
 TFT (100) 12 13 , 13
 12 H-H'
 12 , TFT (10) (52)가 (52) (53)가 (10)
 1) 2 (102)가 TFT (10) TFT (10) (104)가 (10)

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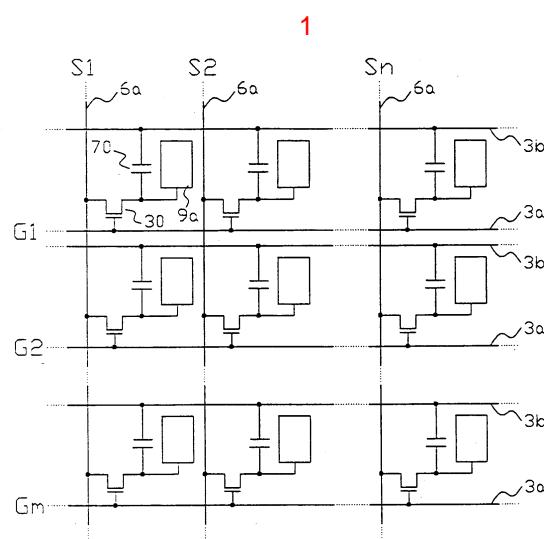
18 , (1000), (1002), (1004), (100),
(1008) (1010) . (1000) ROM(read only
)
memory), RAM(random access memory),
, (1008)
(1002) . (1002) , , ,
,
(CLK) (1004) . (1)
004) (100) (1010) (1004) . ,
(100) TFT (1004) . , (1)
002) .

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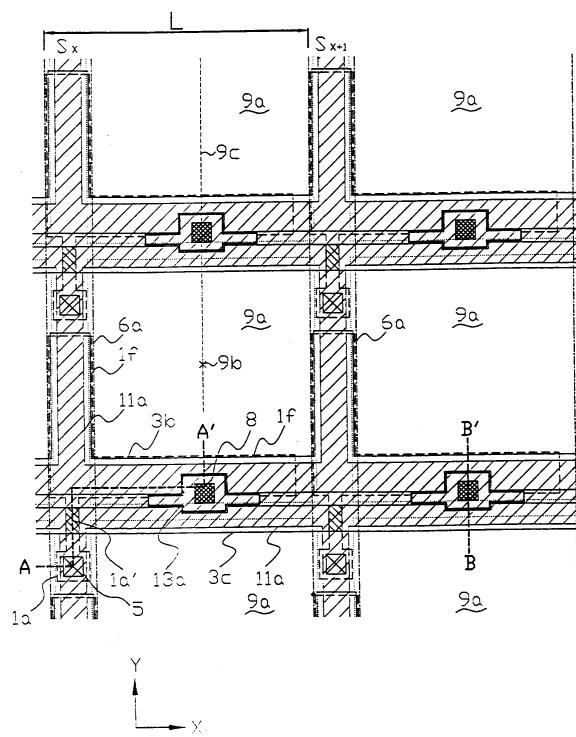
19 , (100) 3 (1100), RGB (1004)가 TFT
 (100R, 100G 100B)
 (1102) , 3 (1100) (mirror) (1106) 2 (halide)
 RGB 3 R, G, B , (dichroic) (1108)
 (100R, 100G 10
 0B) , B , (1121) (1122), (11
 23) (1124) (1112) (100R, 100G
 100B) ,
 (1114) 3 (1120) ,
 TFT , (100)

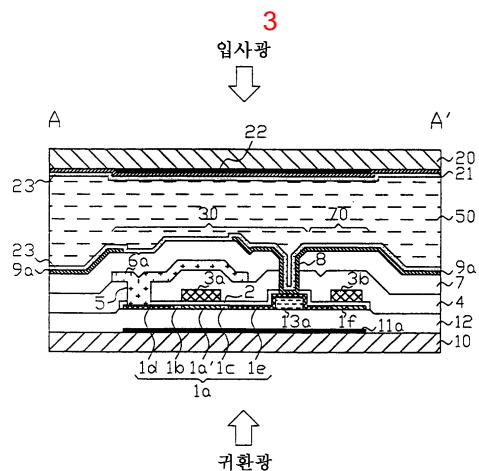
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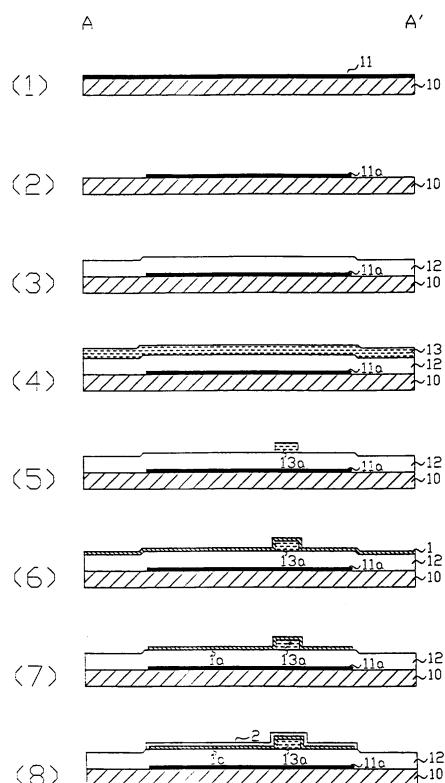


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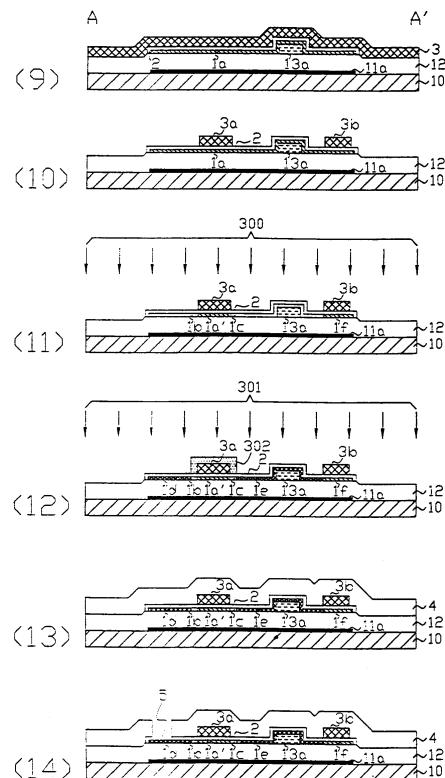




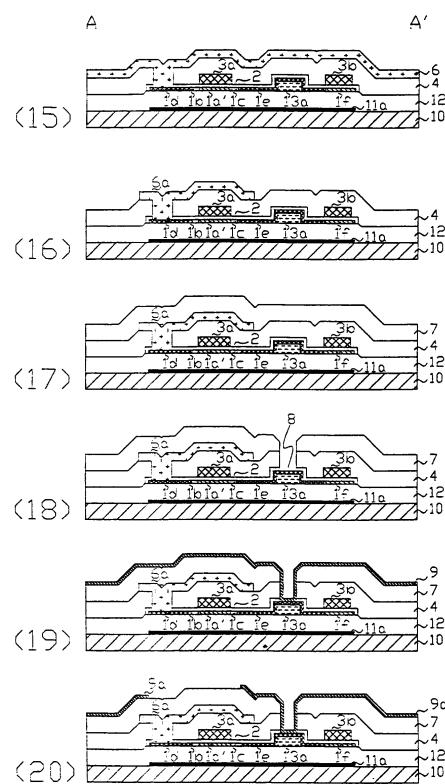
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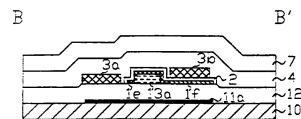
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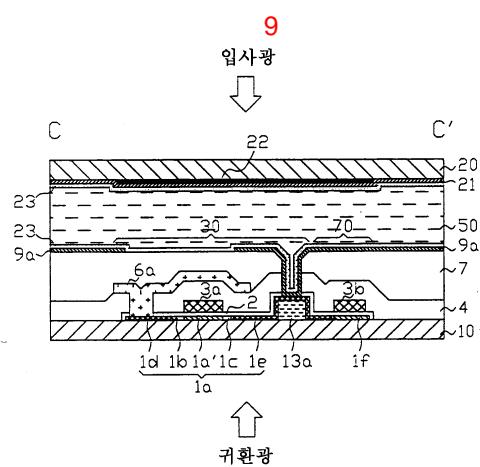
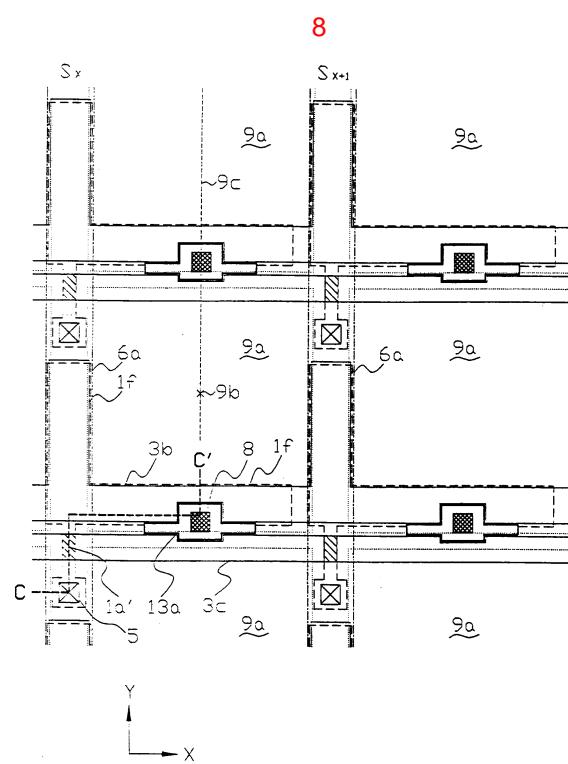
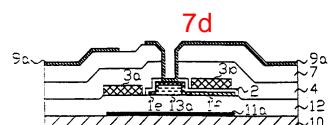
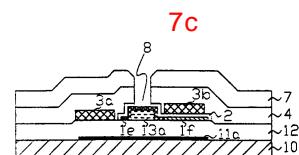
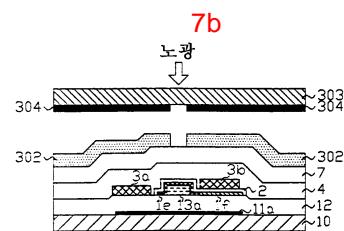


6

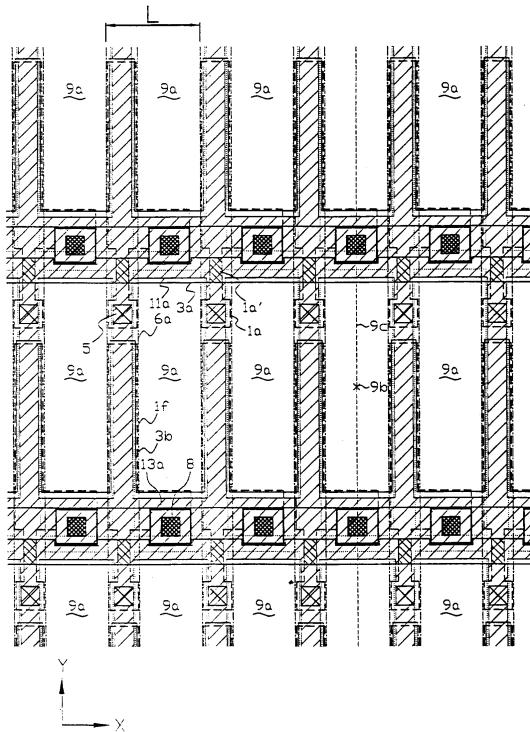


7a

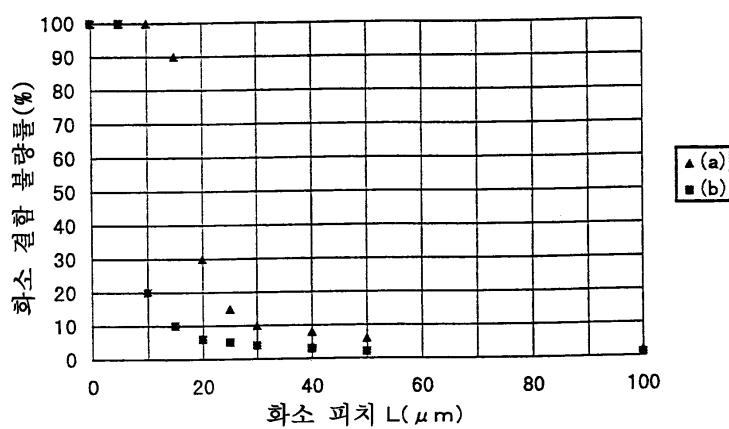


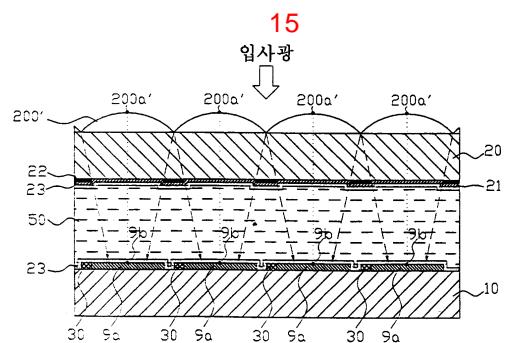
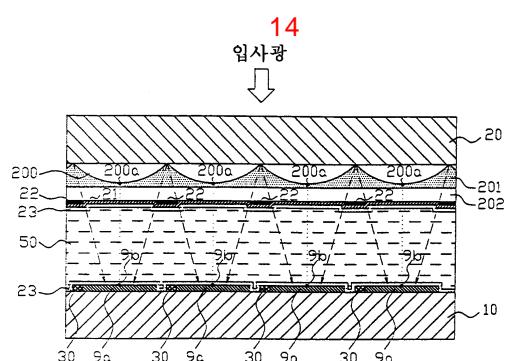
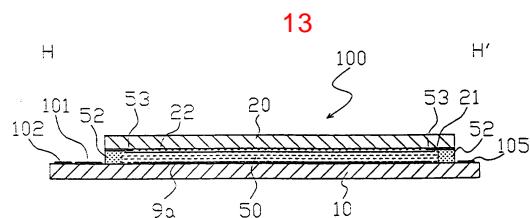
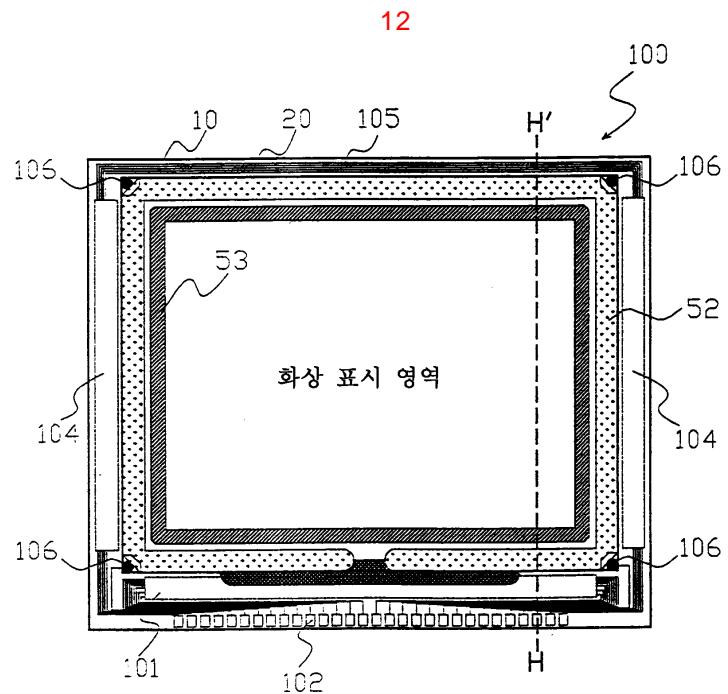


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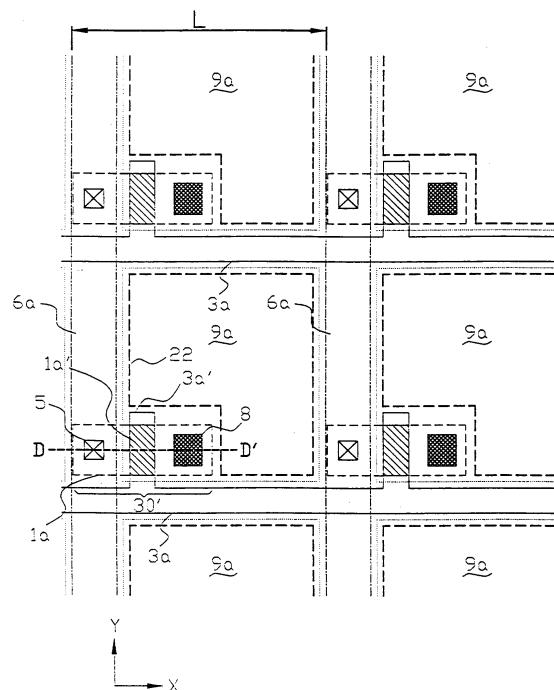


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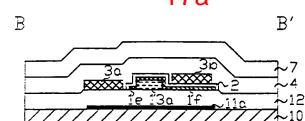




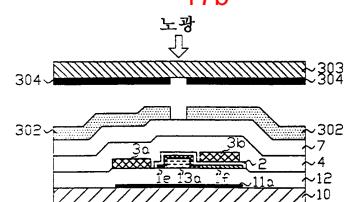
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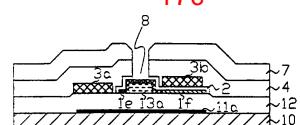
17a



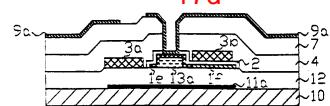
17b



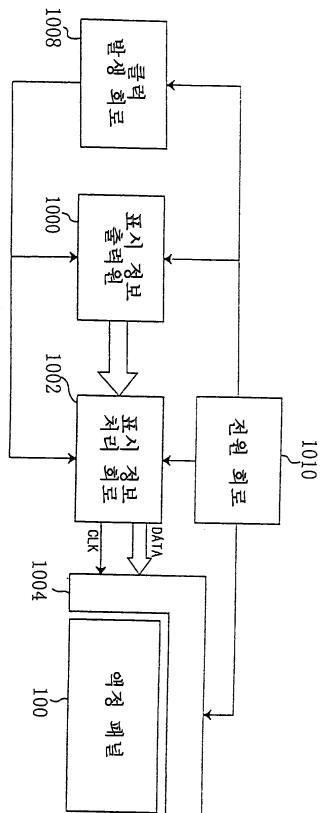
17c



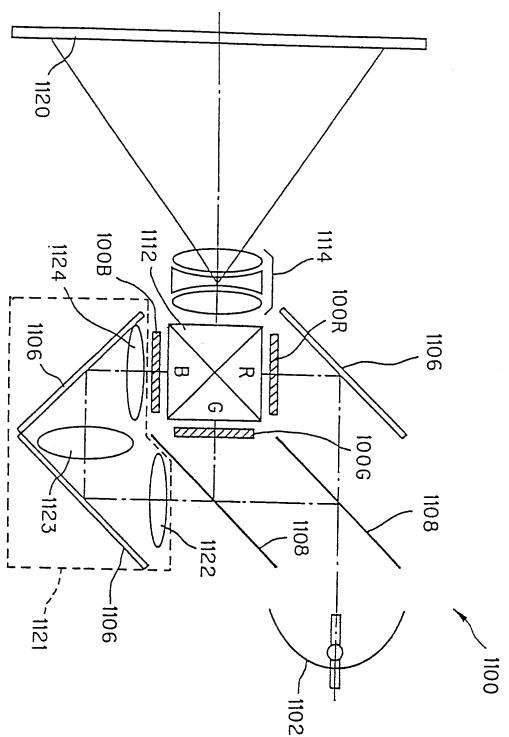
17d



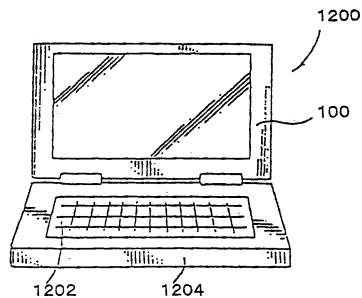
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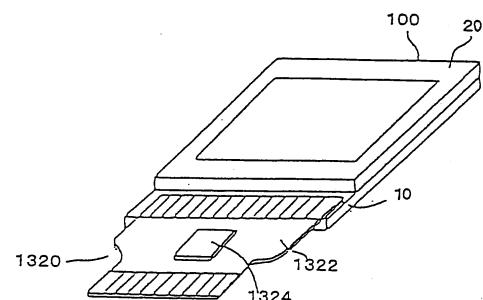
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专利名称(译)	液晶面板		
公开(公告)号	KR1020040065205A	公开(公告)日	2004-07-21
申请号	KR1020040053506	申请日	2004-07-09
[标]申请(专利权)人(译)	精工爱普生株式会社		
申请(专利权)人(译)	精工爱普生株式会社		
当前申请(专利权)人(译)	精工爱普生株式会社		
[标]发明人	MURADE MASAO 무라데마사오 ISHI KENYA 이시이겐야		
发明人	무라데마사오 이시이겐야		
IPC分类号	G02F1/1362 G02F1/136 G02F1/1368		
CPC分类号	G02F1/136227 G02F1/1368		
代理人(译)	李，何炳 李贝尔 申铉MOON		
优先权	1998027663 1998-02-09 JP 1998046036 1998-02-26 JP 1998046048 1998-02-26 JP		
其他公开文献	KR100506566B1		
外部链接	Espacenet		

摘要(译)

对于包括TFT驱动等的有源矩阵操作方法的液晶面板，提供了即使像素被细化也不会导致处理产量或像素开口率降低的液晶面板。通过数据线(6a)和扫描线(3a)使用TFT(30)，使用TFT(30)通过接触孔(5)连接到TFT阵列基板(10)上的多条数据线(6a)通过数据线(6a)和扫描线(3a)，通过接触孔(5)连接到TFT阵列基板(10)上的多条数据线(6a)，安装驱动的多个像素电极(9a)。为了连接TFT(30)的漏极区域和像素电极(9a)，在层间绝缘膜(7)的下方形成尊重(提升)膜(13a)，它甚至打开并形成孔。电容线，缺口，接触孔，电容电极区域。

