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2002 03 16

(30) JP-P-2000-00275708 2000 09 11 (JP)

(73) 가 가 가 , . 1753

(72) 5 7 1 가 가

(74)

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(54)

) 가 . TFT TFT (, TFT) TFT LCD (TFT

2

1 1 LCD
2 1 A-A LCD
3 1 LCD
4 3 B-B
5a 5h 1 LCD
6 2 LCD
7 6 C-C LCD

8		3	LCD	.	.
9	8	D-D	LCD	.	.
10		4	LCD	.	.
11	10	E-E	LCD	.	.
12		5	LCD	.	.
13	12	F-F	LCD	.	.
14		6	LCD	.	.
15	14	G-G	LCD	.	.
16		7	LCD	.	.
17	16	H-H	LCD	.	.
18		8	LCD	.	.
19	18	I-I	LCD	.	.
20		9	LCD	.	.
21	20	J-J	LCD	.	.
22		10	LCD	.	.
23	22	K-K	LCD	.	.
24		11	LCD	.	.
25	24	L-L	LCD	.	.
26		12	LCD	.	.
27	26	M-M	LCD	.	.
28	LCD	.			
29	28	N-N	LCD	.	.
30	29	LCD			.
31	30	O-O	LCD	.	.
32				.	.
33		(),	(),	()	.

* (), * (), ()

1 : TFT 2 :
3 : 4, 16 :
5, 18 : 6 :
7 : 8 :
9A, 9B : 10 :
11 : 12 :
13 : 14, 22 :
17 : 19 :
20 : 21 :
23 : 24 :
25 : 26 :
34 :

(, LCD) LCD , TFT TFT ()
(alignment layer) LCD , LCD
, 2000 9 11 2000 - 275708 (J
P-P-2000-00275708)
LCD , LCD TFT
가 TFT (facing substrate) LCD
TN (Twisted Nematic)-LCD IPS (In-Plane Switching)-LCD
TN-LCD , (pixel electrode) TFT
가 TFT 가 , IPS-LC
D , 가 TFT 가 , 가 ,

. IPS-LCD TFT , TN-LCD
 28 LCD 29 LCD 30 LCD 31 LCD 32 LCD 33 LCD
 O-O 31 , 30 LCD , TFT (51) , TFT (52) (53) (54)
 28 31 1 (55), 1 (54) 1 (54), 1 (54) Al, Cr, Mo
 (56), (56) (56) (57), (57) SiO₂ () SiN ()
 mic layers; 59A 59B), (58), (58) (57), (57) a-Si () (Oh
 Cr, Mo (62), (61), (62), (61), (59A)
 SiN (passivation film; 63), (63) (58)
 1 (64) (51) , (73) (56) (62)
 28 30 (51) (74) (61) (62) (74) (62)
 (, TFT (75) (74) (74) (75) T (82)
 (56) (64) (76) (76) (rubbing processing) T (82) (51)
 53) LCD (67) (52) , 2 (58), 2 (66), 2 (66) (66) Ti, Cr, (70)
 (69), (69) (70), (72) (70)
 (planarized film; 71) (80) (rubbing bristle; 79) 가 (ru
 bbing cloth; 78) (80) (80) T (82) 1 (64) (64)
 (79) (80) (80) T (82) (51) (64)
 (64) (shaving; 81) (81) (rubbing trench) 가 (53)
 (81) , T (82) (51) (64) (81) (74) (64)
 (rubbing washing)
 4) T (82) (81) T (82) (83) (70) 가 T (82) (84)
 IPS-LCD (display irregularity) (image retention) (53) T (82)
 (53) 가 가 (53) (84) (63)
 가 (63) 가 (63) 가 (64) (81) TF
 T (82) (84) (53) (84) (83) (64) (81) TF
 33 (rubbing pushing depth(
)), (alignment layer peeling level()) ()
 (80) (64) (81) (64) (cutting depth)
 , 1000 RPM () , (rayon) , 30 mm/s
 33 e-off) 가 , 가 , (trad
 가 0.8 mm , 4 가 , (64) (81) T (82)
 (84) (83) 0.5 가

FT LCD 가 , (64) (81) T
(51) TFT (82) (83) , 가 .
30 31 , LCD (64)
(81) , TFT (51) TFT (82) (84)
(64) (81) (83) (53)
TFT (82) (84)

LCD , LCD , TFT TFT

[illegible][illegible]

(8), n + a-Si (8) n + a-Si (9A), (8) (9B), (9B) Cr, Mo (12), SiN (13), (13) TF
 (11), (11), (12) (34) , TFT (32) (34) (33) (13)
 T (32) (26) (10) (23) (6) (12) (,
 TFT (1)) , TFT (11) (24) (25) (6)
 (25) (24) (12) (26) , TFT (1) (23) (2)
 (3) TFT (, (23))
 (10) , 가 1 (14) , TFT (1) TFT (32) (34)
 (33) TFT (32) 1 (14) (31) (26) (1
 0) , 1 (14) (31) TFT (32) (10) TFT (1) (2) (cell ga
 p) , (10) (W) (lithography) 가
 5 μ m
 2 (17), (17) 2 (18), 2 (16), 2 (16) Ti, C
 r, (19), (21) (20), (20)
) 1 LCD , (10) TFT (1) TFT (32) (34)
 (33) TFT (32) (14) (31) TFT (1) TFT (32) (34)
 , 4 (33) TFT (32) (14) , 1 (14) , 1
 (14) (31) (3) TFT (32) (43) 가 (24)
 (31) , 1 (14) (31) (24)
 5a 5h , LCD 1 (4) , 5a
 , Al, Cr, Mo (6) (7) SiO₂ (7
 A) SiN 5b (7B) , CVD () , a-Si n + a-Si
 (9) (8) (8) n + a-Si (9) , 5c
 , 5d , (8), n + a-Si (9) SiN (7B) , n + a-
 Cr Si (9) (11) (12) (11) (12)
 , 5e , n + a-Si (9) 가 (11) (12)
 (34)
 , 5f , SiO₂ (13) CVD (27)
 (13) (27) (24)
 () (28) , 5h (33) TFT (33)
) (10) , TFT (32) (34) (2) TFT (1) TFT (1)
 (3) , 1 2 LCD (5 18) (2) TFT (1) 1
 4 , 1 LCD , (28) (10) TFT (1)
 TFT (32) (34) (33) TFT (32) (14) (31) TFT
 (1) TFT (34) 가 1 (33) TFT (32) (1) (28) TFT (32)
 , 1 LCD , TFT (32) 가 TFT (1) 가 (10)

(1) TFT (32) (10) , 1 (14) (31) TFT

2 LCD 2 LCD (30) 7 C-C 6 LCD

6 (30A) (30A) 가 (8) (26) (30) (30B)

가 (30) 가 (guide) (30) 1 (14) (31) (34)

(33) TFT (32) (31) TFT (1) TFT (32) LCD 4

1 가 6 7 1

3 LCD 3 LCD (35) 9 D-D 8 LCD

8 LCD (8) TFT (1) (35) (26) (35A)

가 (35A) (35) 가 (31) TFT (1) TFT (32) (3)

1 (34) (35A) (33) TFT (32) 가 3

4 LCD 4 LCD (36) 11 E-E 1 LCD

10 LCD 4 LCD (23) TFT (1) (36) (26) (8) 2 'L'

(36A) (36) (36A) (33) TFT (32) (14) (31) (34) 가 4

31) TFT (1) TFT (32) (37) (37A) (37) (37A) (33) TFT (32)

5 LCD 5 LCD (37) 13 F-F 1 LCD

12 LCD 12 LCD (23) TFT (1) (37) (8) 2

(26) 'L' (37A) (37) (37A) (34) TFT (32)

가 (31) TFT (1) TFT (32) (34) (37A) (33) TFT (32)

가 5

6 LCD 6 LCD (38) 15 G-G 1 LCD

14 LCD 15 LCD TFT (32) (1) (38) (38)

, 3 , R (), G (), B () (26) (20) (2) , 6 , (20) TFT

33) TFT (32) (1) 5 (1) (20) (38) 가 (38)

가 1 (14) (31) (38) (38) (33) TFT (32) (14) (31)

TFT (1) TFT (32) (34)

가 6

7

16 LCD 7 LCD 17 H-H

16 LCD 6 LCD 17 (39) 2 LCD TFT (1)

(39) , 2 (39A) (G) (39B) , R (), G (), B () (34)

B) (33) TFT (32) (26) (39B) (39A)

(39A) (39)

(39) (39)

가 1 (14) (31) (39) (39) (33) TFT (32)

TFT (1) TFT (32) (34)

가 7 (39)

2

가

8

18 LCD 8 LCD 19 I-I 1

8 LCD 7 LCD 19 (40) 3 LCD TFT (1)

(40) , 3 (40A) (B) , 3 (40B) (G) (40C

) (R) , TFT (32) (34) (33) TFT (32) (2

6)

(40A) (40B) (40A) (39)

(40C) (40B) (40)

(40) (40)

가 1 (14) (31) (40) (40) (33) TFT (32) (31)

TFT (1) TFT (32) (34)

가 8 (40)

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가

9

20 LCD 9 LCD 21 J-J 2

0 LCD 6 LCD 21 (41) 9 LCD TFT

(1) (41) , 3 , R (), G (), B () TFT (32)

(34) (33) TFT (32) (13)

(26) (13) (41) 6 (14) (14)

(13) (13) 1 (41)

가 1 (14) (31) (41) (41) 1 (14)

(31) TFT (1) TFT (32) (34) (33) TFT (32)

가 9 (41)

6

가

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22 LCD 10 LCD 23 K-K

22 LCD 9 LCD 23 (42) 2 10 LCD

(13) (42) , 3 , R () , G () , B () 2 (42A)

(42B) 2 TFT (32) (34)

(33) TFT (32) (26)

(13) (42) 7

(13) 1 (14)

(42) 1 (14)

가 (31) TFT (1) (14) (31) (42) (42) (33) TFT (32)

(9)

가 10

11

24 LCD 11 LCD (43) 3 25 L-L

24 LCD 10 LCD (13) (43) , 3 (43B) TFT (32)

25 (G) (43C) (26) (13) (43) 9 (14)

(R) (43A) (34) (B) (43B) TFT (32)

(13) 1 (14)

가 (31) TFT (1) (14) (31) (43) (43) (33) TFT (32)

(10)

가 11

12

26 LCD 12 LCD (6) 27 M-M (34)

26 LCD (29) 가 1 LCD (29) (6) (6)

27 (1) 11 LCD (6) 가 가 (13) (13) TFT (32) (34)

FT (1) (3) TFT (1) TFT (32) (34)

(6) , TFT (1) TFT (32) (13)

34 (3) TFT (1) TFT (32) (34) 가 12

(poly-Si) , TFT 가 TFT ,

ISP-LCD

TFT 가 , TFT TFT TFT

TFT TFT

TFT TFT

TFT TFT

(57)

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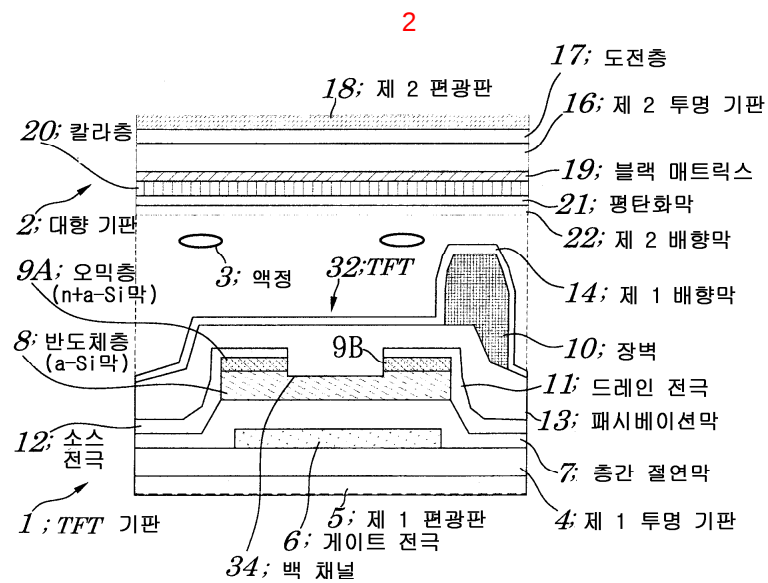
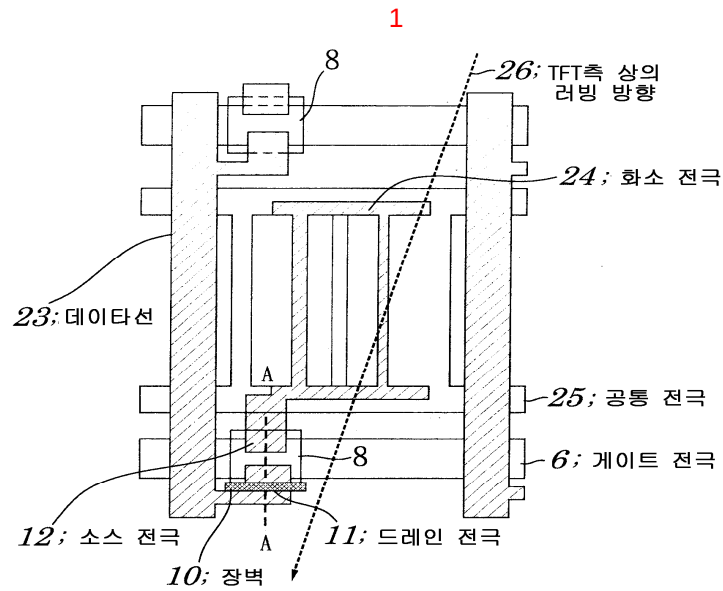
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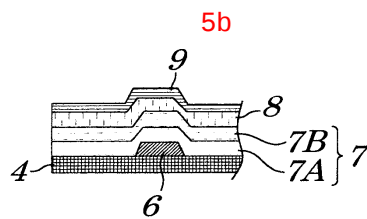
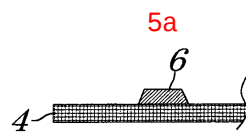
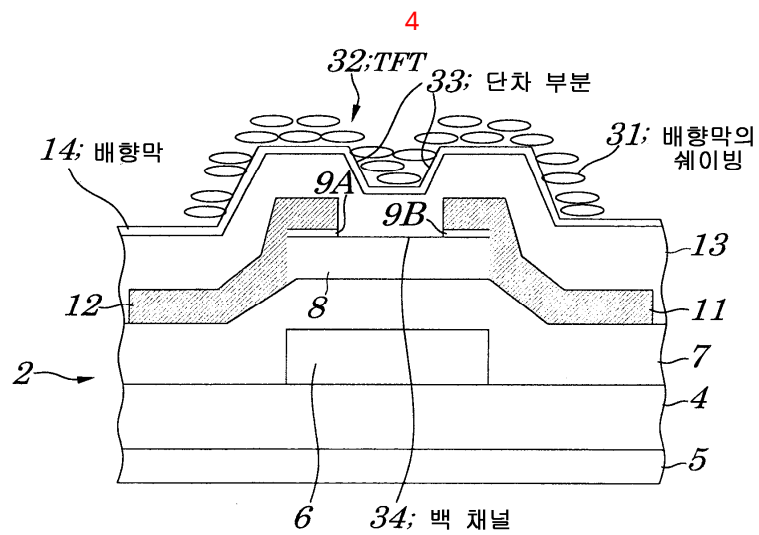
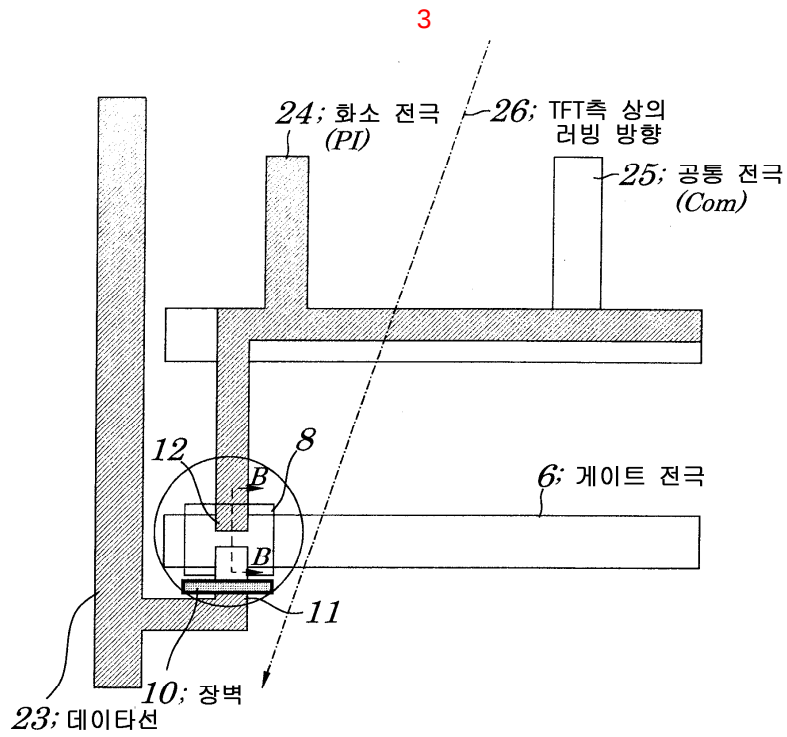
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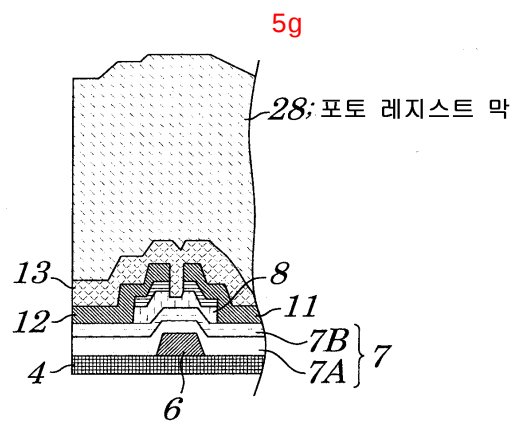
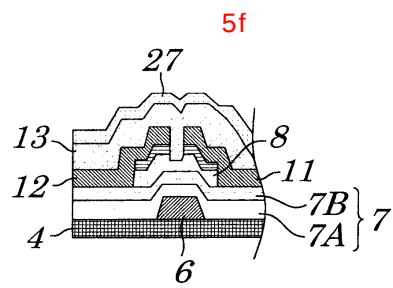
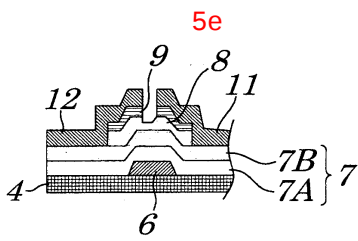
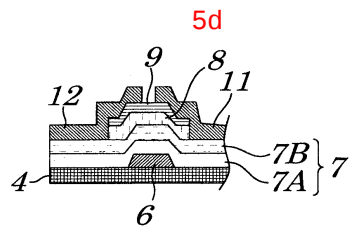
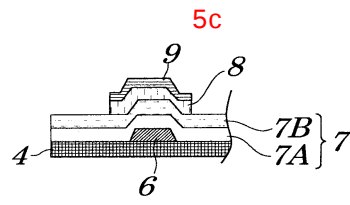
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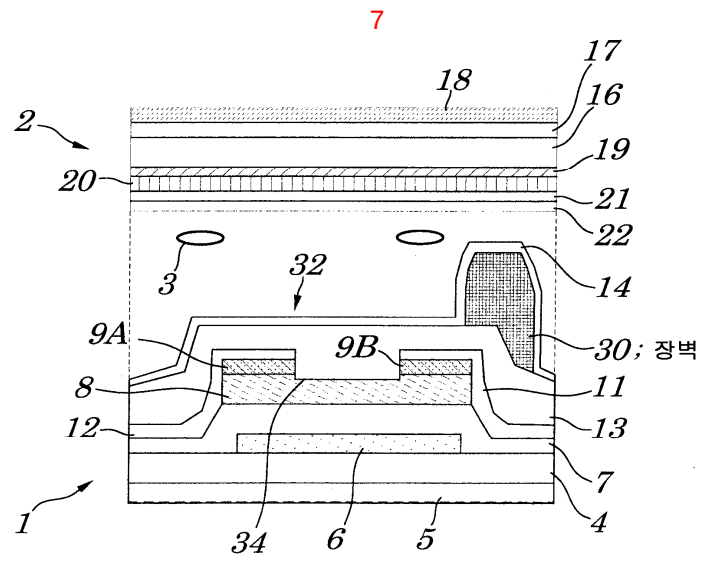
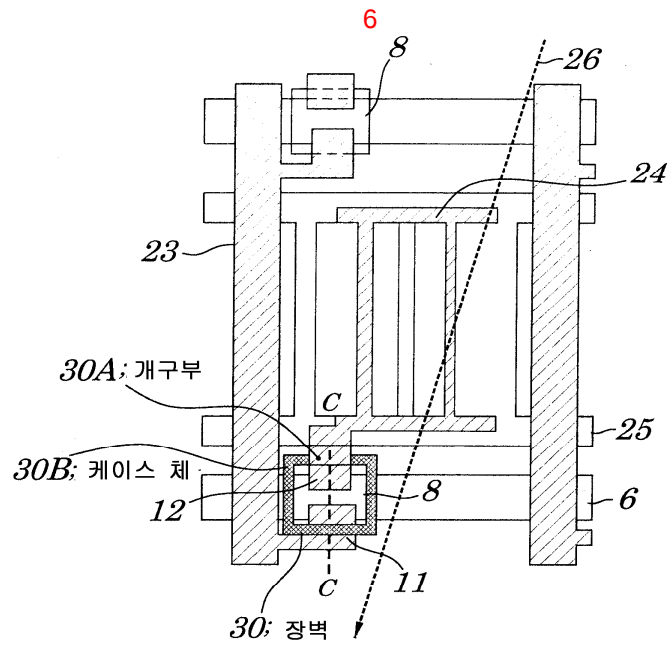
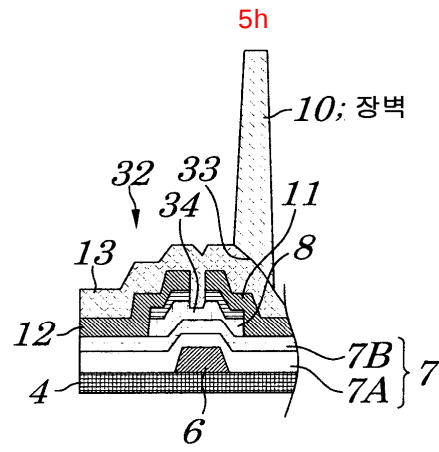
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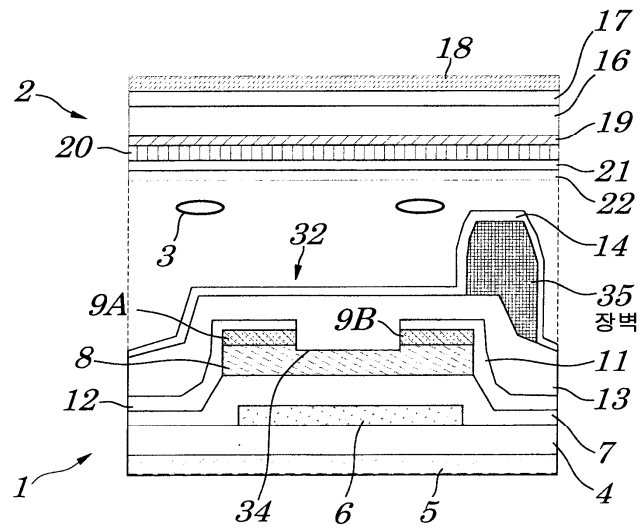
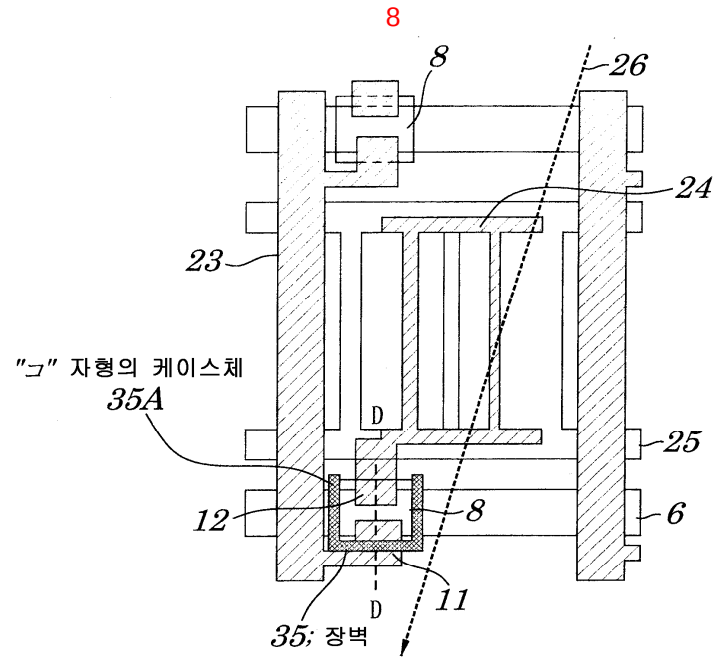
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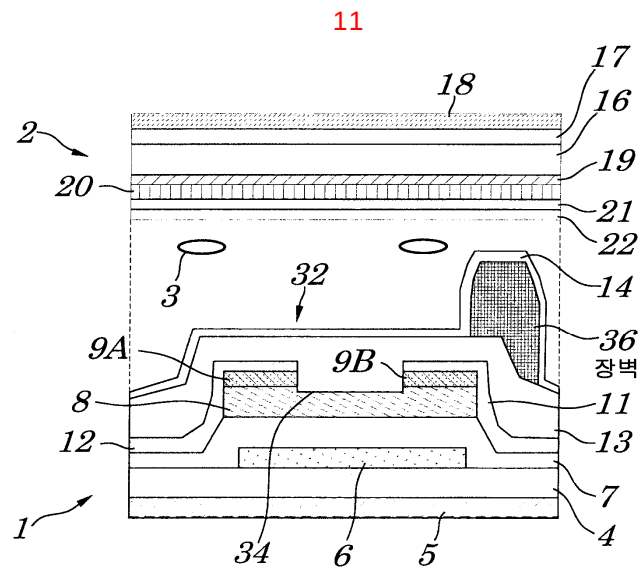
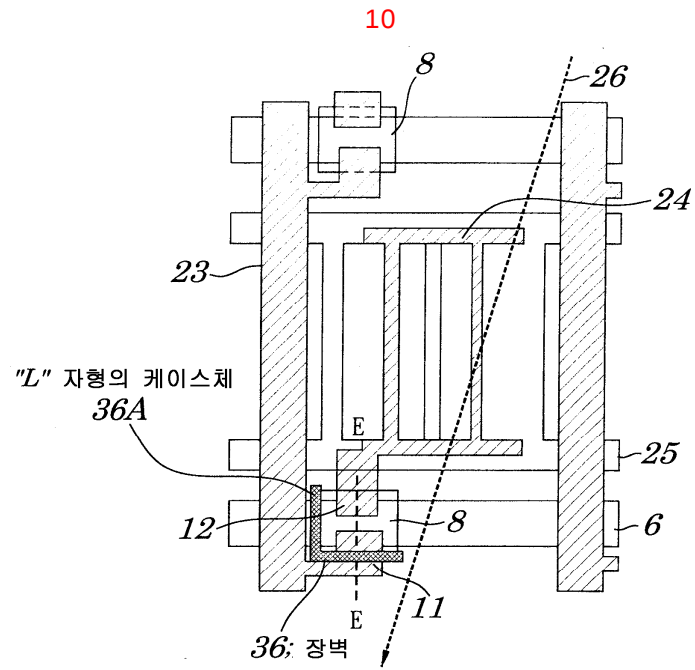


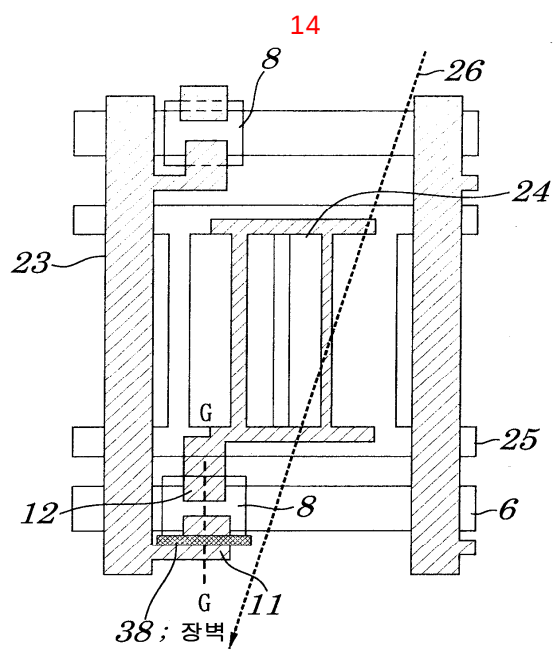
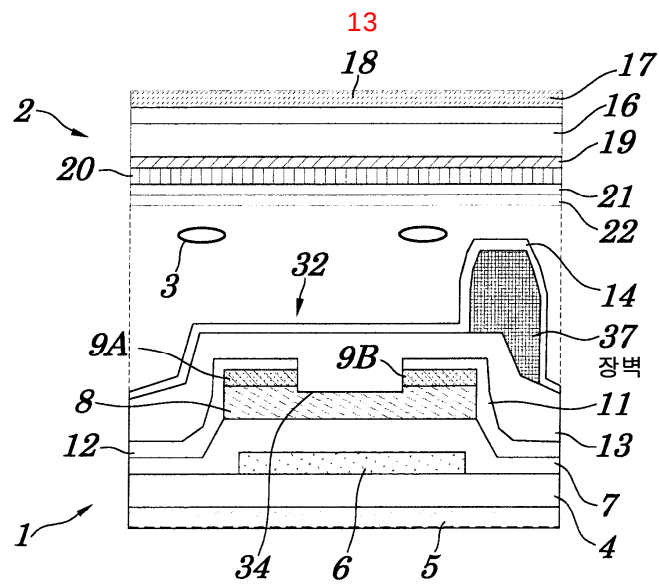
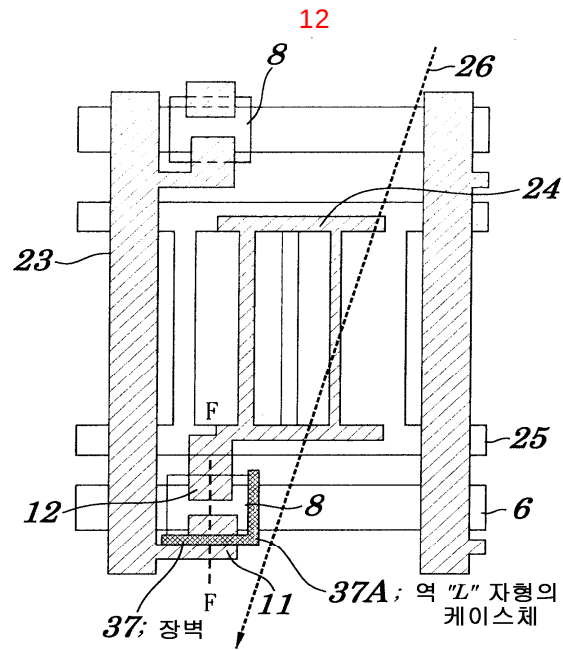


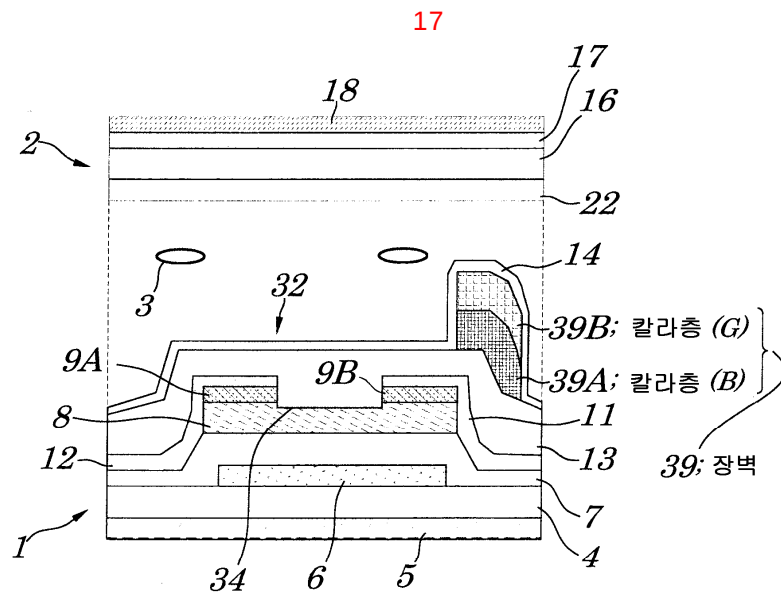
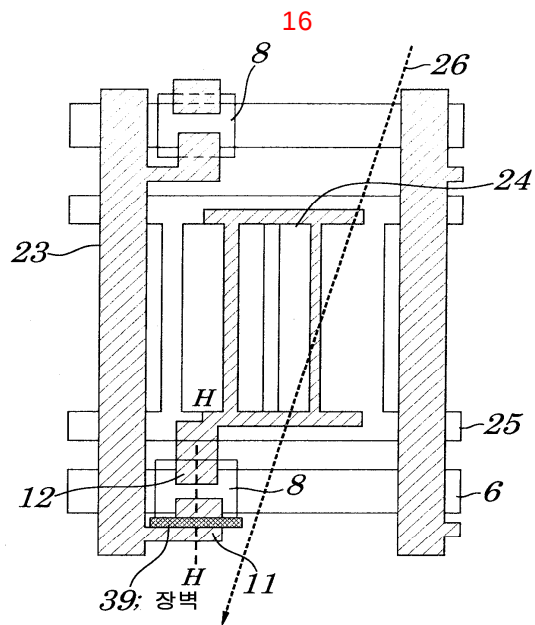
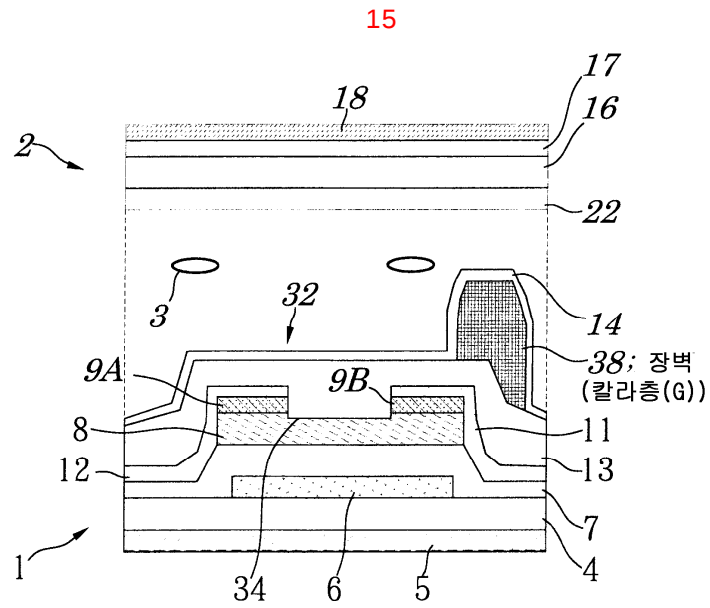


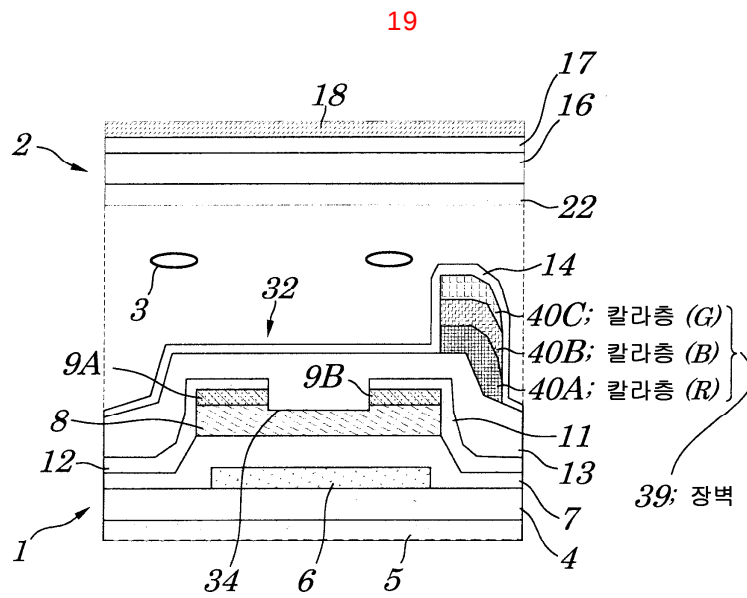
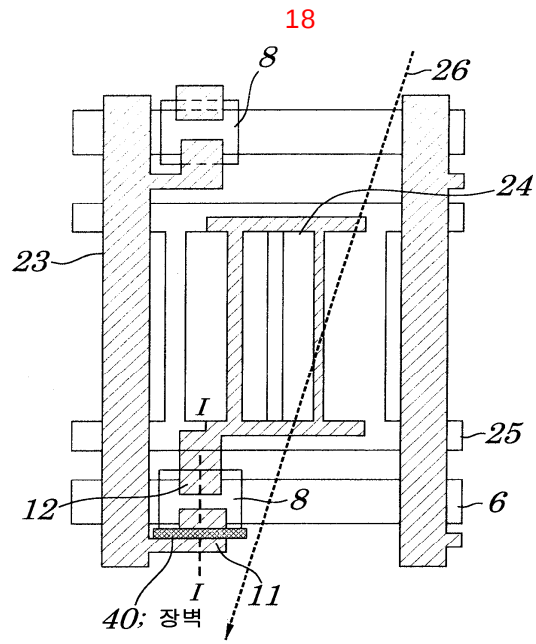


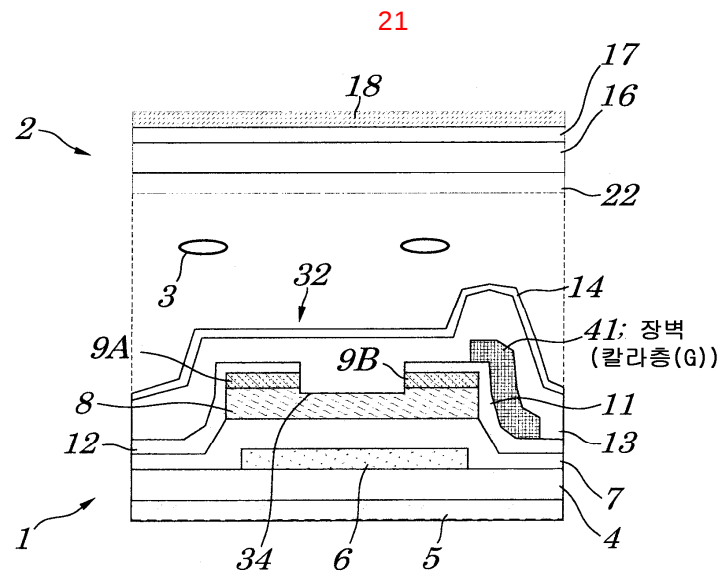
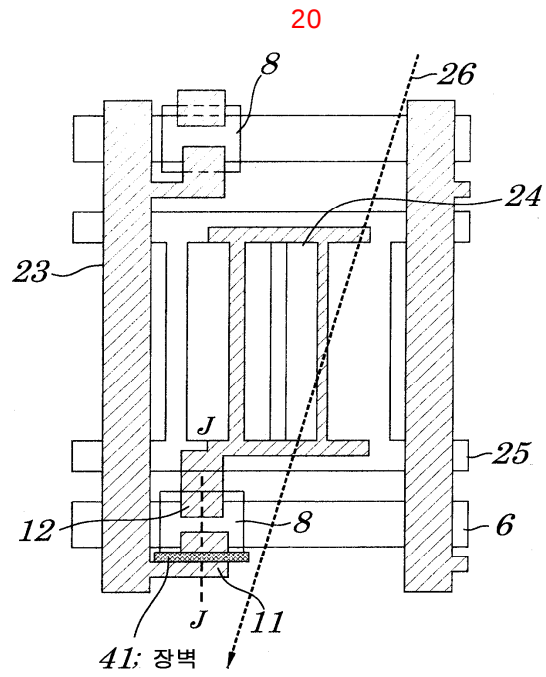


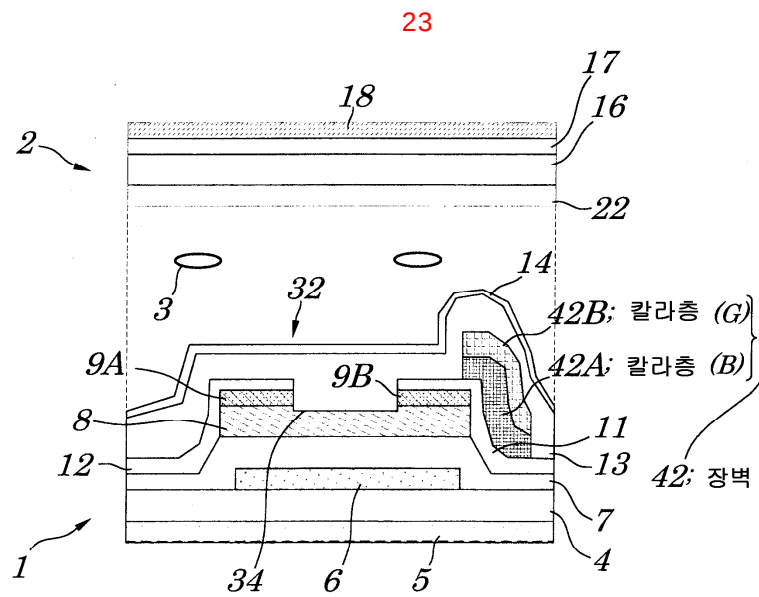
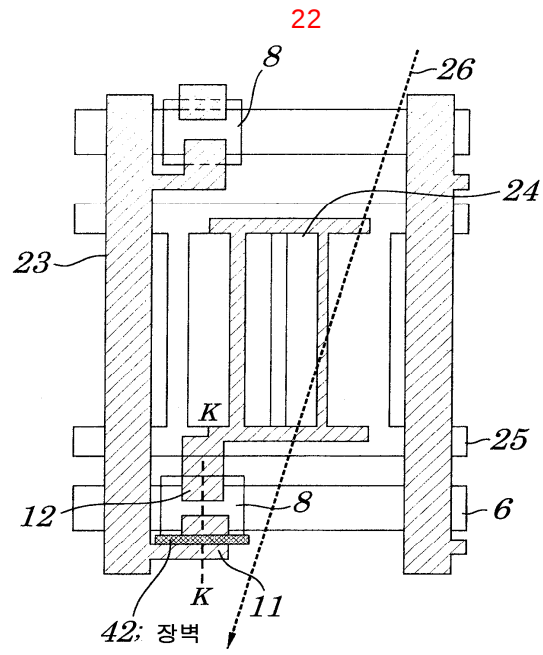


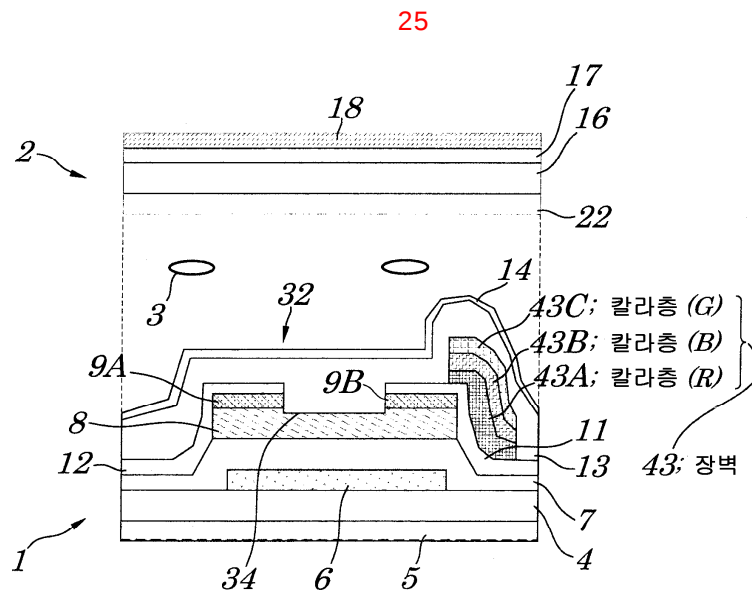
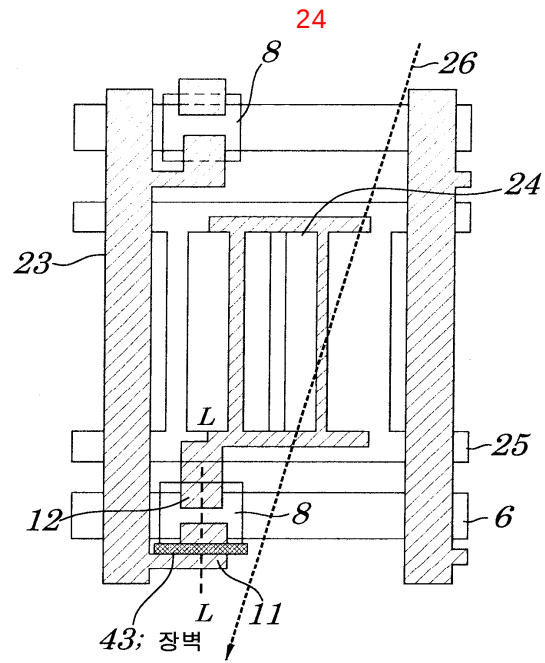


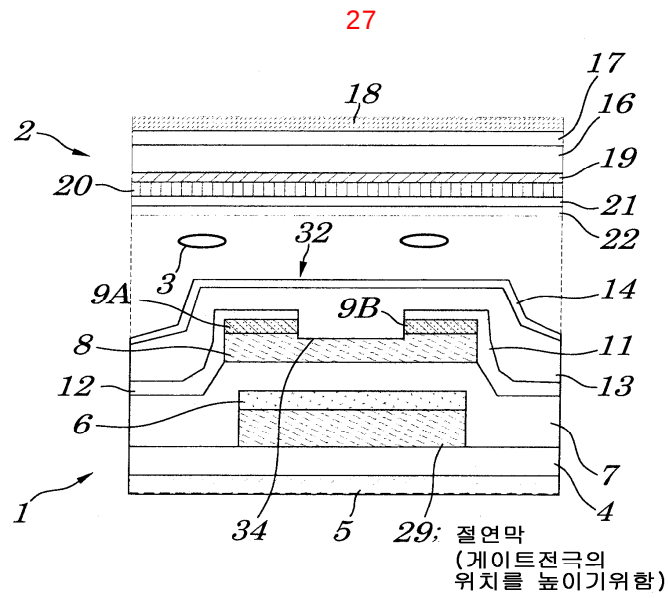
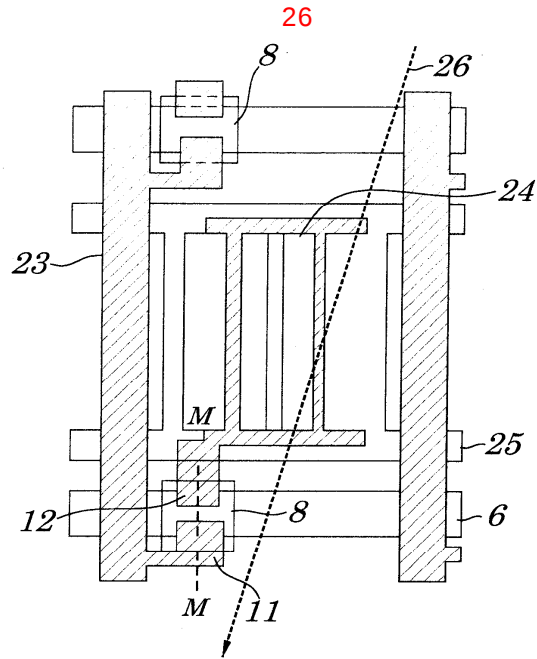




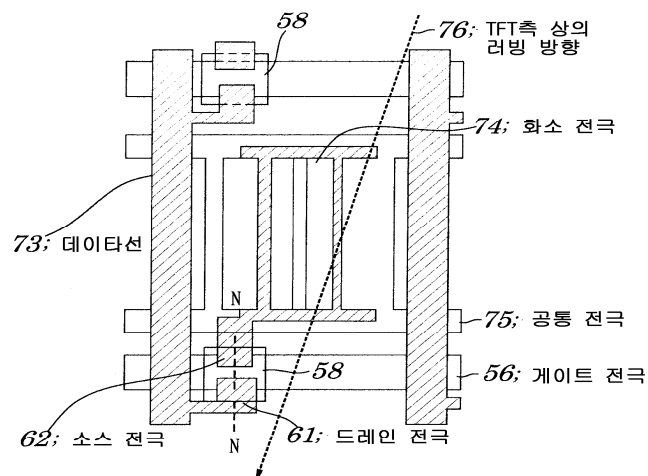




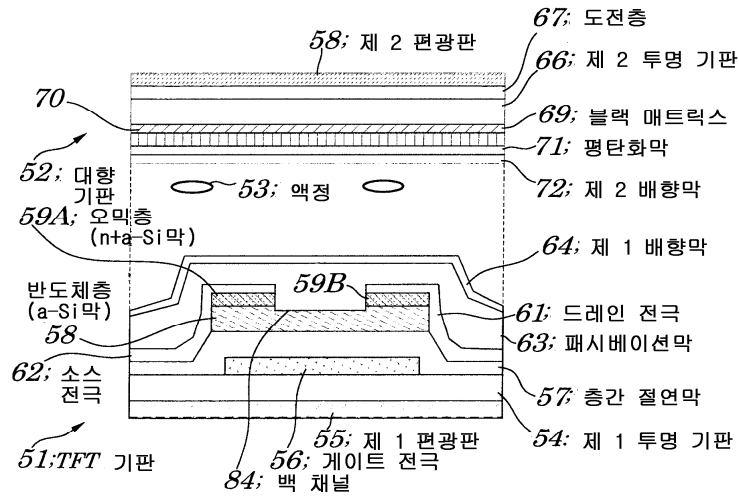




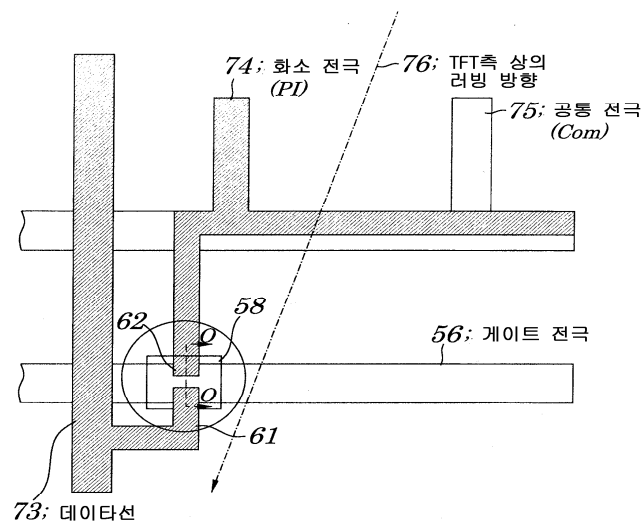
28
종래 기술



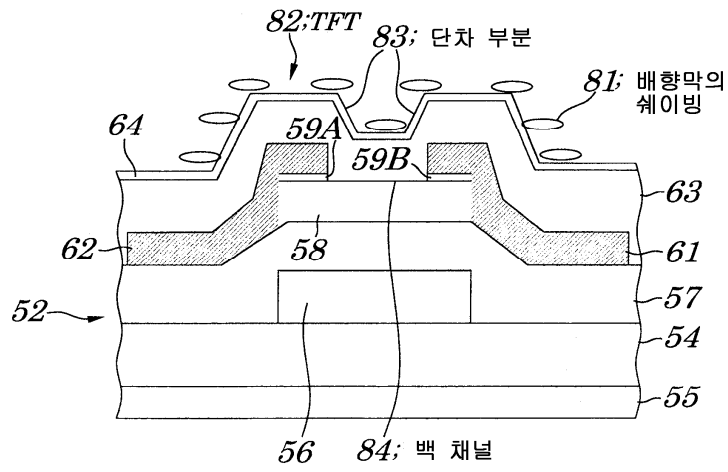
29 종래 기술



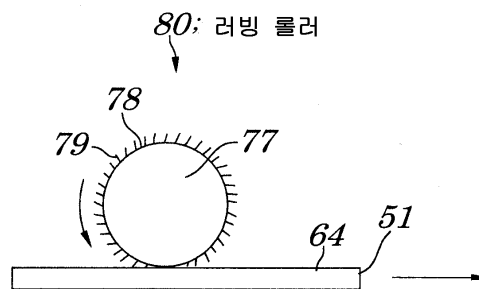
30 종래 기술



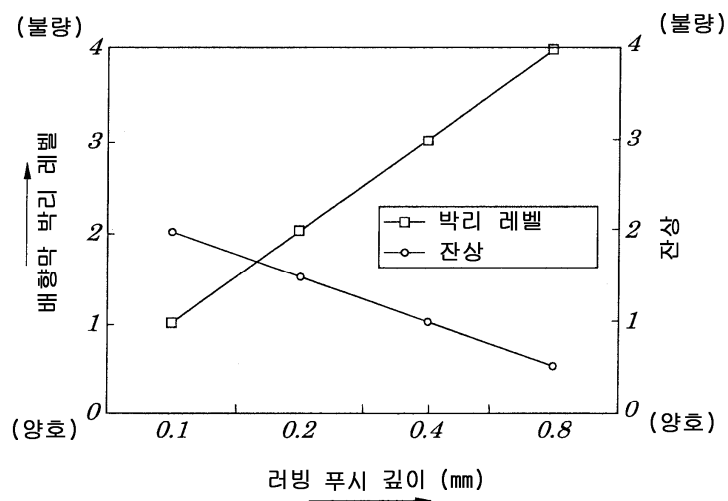
31 종래 기술



32 종래 기술



33 종래 기술



专利名称(译)	液晶显示装置及其制造方法		
公开(公告)号	KR100458994B1	公开(公告)日	2004-12-03
申请号	KR1020010055783	申请日	2001-09-11
[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		
当前申请(专利权)人(译)	日元号技术可否让这个夏		
[标]发明人	MATSUMOTO KIMIKAZU		
发明人	MATSUMOTO,KIMIKAZU		
IPC分类号	G02F1/1333 G02F1/1337 G02F1/1343 G09F9/30 G02F1/1368 G02F1/136		
CPC分类号	G02F1/134363 G02F1/133784 G02F1/1368		
代理人(译)	韩国专利公司		
优先权	2000275708 2000-09-11 JP		
其他公开文献	KR1020020020868A		
外部链接	Espacenet		

摘要(译)

提供一种LCD (液晶显示器)，其中取向膜的刮削仅集中在TFT基板中的TFT (薄膜晶体管) 周围的区域中。形成由绝缘材料制成的屏障，以覆盖包括TFT基板的TFT的背沟道上的台阶部分的TFT周边部分，并且设置在沿摩擦方向的下游侧的位置。2 指数方面 液晶显示器

