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10-2004-0060600
2004 07 06

(21) 10-2002-0087407
(22) 2002 12 30

(71) . 20

(72) 107-801

(74) :

(54)

IPS . 가 0 가

11

1

2 (IPS)

3a 3b (IPS)

4 (IPS)

5 4 'A' .

6 4 V-V

7 6 'B' .

8 가 ,

9 (IPS) .

10a 10d
9 'VI-VI' .

11 10d 'E' .

< >

100 : 152 :
154a : 170 :
172 : 162 :
164 : 166a :
154a :

Switching : IPS 가 . (TFT) (LCD) (In-Plane 가 가

Display Device : AM-LCD)가 가 (Active Matrix Liquid Crystal

(2) 가 (4) (2,4) (20) (10) (2, 4) (20) 가 (8) , (8) (12) (2) (10)

(12) (4) (10) 가 (S) (S) 가 (10)

(P) 가 (14) (14)

(2) (1) (Al), (Cr), (Mo)

(11) (1) (11) (13)

(11) (13) (15)

(15) (16, 17) (14)

(14) () (1) (18)

(2) (4) (2) 가 (6)가 (4)

(2) (10)

(2) (S) (14)

가

가 , 2 (IPS)

2 (IPS) (30) (34)

) (36) (35) (10) (30) (32) (34)

(36)

3a 3b (IPS) 3a 3

b (on)/ (off) 3a

(34) (36) (35)가 가 (off) 45° ()

가

3b (34) (36) 가 (on)

3a 45° () 가 (34) (36)

, IPS

(35) , IPS

IPS 70° () 가 가 , / / /

가 (36) (34)

(align margin)

(IPS) 가

4 (IPS) , 가

(50) (54) (50) (54) (50) (60) (60)

(52) (52) (62) (62) (62) (64)

(64) (54) (54) (54a) (66) (66) (66a)

(66a) (54a) (IPS) 가

66a) (54a) (L) 4 'A' 5 (66a) (54a)

(L) (L) , IPS (V_{th}) (V_{th}) (66a, 54a) L L d 가 d

(V_{th}) (66a) (54a) L L d 가 d

$V_{th} \quad L / d \text{ ----- (1)}$

(1) L 가 가

L (66a, 54a) 가 가

가 가 가

IPS (66a) (54a) (L)

가 가 가

6 (1) 1 4 V-V (54a) (72)

(70) (72) (52) (54a) (72)

2 (54a) (L) (62, 64) (70) (66a) (62, 64, 66a)

(74) (74) (72) 2

IPS 가 (54a) (66a) (1)

가 (IPS) (66a) (54a) 가

가 (66a) (54a)

7 6 'B' (20) (24)

(2) (54a) (66a) 가 가

(66a) (54a) 가

(1, 2) (54a) (66a)

(54a, 66a)

가 가 (66a)

(54a) 가

(C)

가

8

가

66a)

(54a)

(66a, 54a)

(8 D)

가

가

TN 2 가

가

가

가
가

가 ;

가 가 ;

(Al), (Cr), (Mo) (W)

1 가 ;

1 ; 2 가

;

9 (IPS)

(154)

(152)

(162)

(160)

(150)

(162)

(164)

(160)

(152)

(152)

(150)

(150)

(154)

(154) (154) (154a) (166) (166) (166)

(164) (166) (154a) (166) (166a)

(166a)

10d 10a 9

'VI-VI'

10a (100) 1 (152) 1 (100)

(152) (Al), (Cr), (Mo), (W)

10b 1 (152) (170) (172)

(170) (SiNx) (SiO₂) (172)

154a) 1 (152,

10c (172) 2 (162, 164)

(154a) (162, 164) (172)

(166a) (162, 164) (170)

(162, 164) (154a) (166a)

(Al), (Cr), (Mo), (W)

(154a) (166a) 가

(154a) 가 (166a) 가 (100) 가 (154a) (166a)

가 가 (154a) (166a) (100)

(wet etching), (dry etching)

가 가 (vacuum chamber) 가

(154a) (152), (162, 164) (172)

(9 154) (166a) (9 166)

(164)

10d 2 (162, 164, 166a) (174)

(174) (172)

11 10d 'E'

(200) ()가 (220) 가

(220) (224)

(166a) (154a) 가 가 (1

66a, 154a) 가 가 (7 66a) (7 54a)

가 (166a) (154a)

1

;

2

가

,

가

;

2

5.

4

,

(Al), (Cr), (Mo) (W)

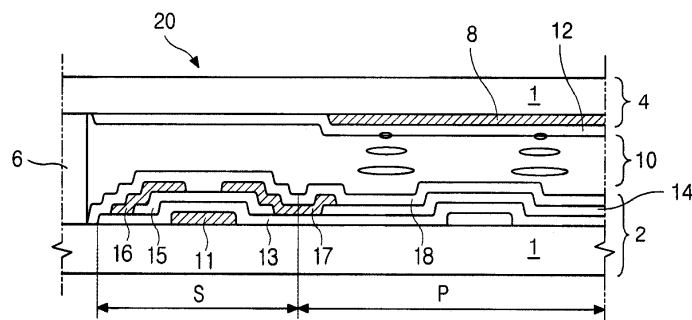
6.

4

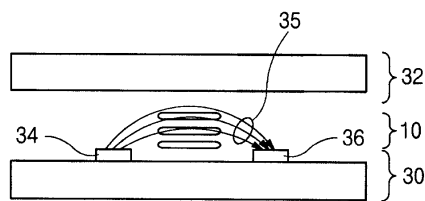
,

(Al), (Cr), (Mo) (W)

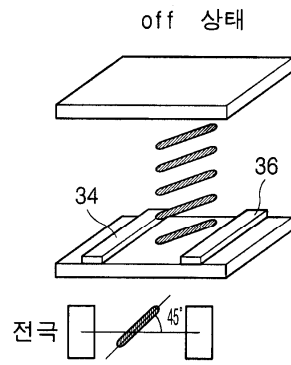
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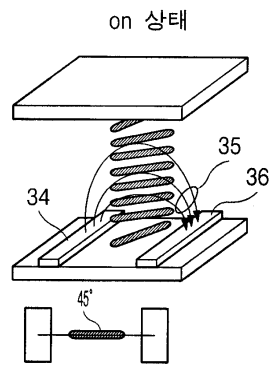
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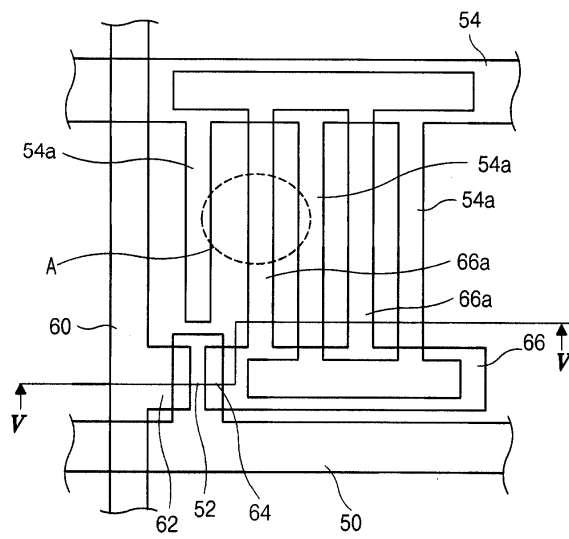
3a



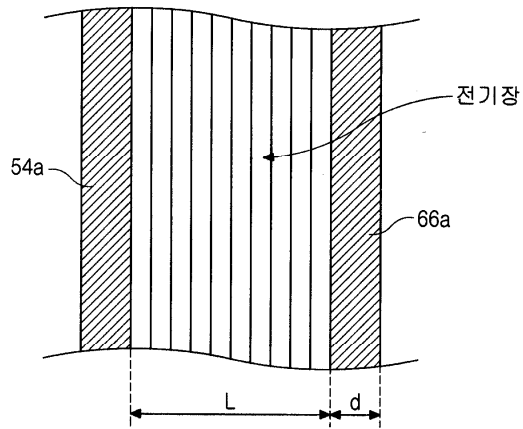
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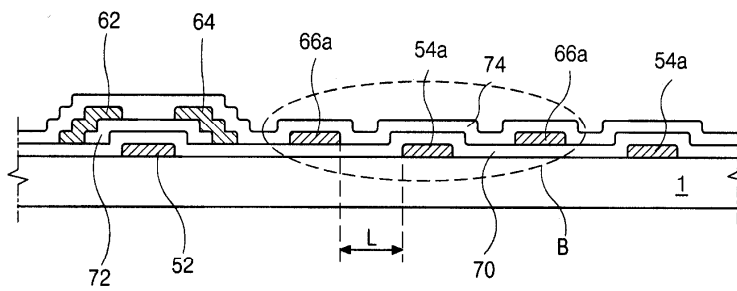
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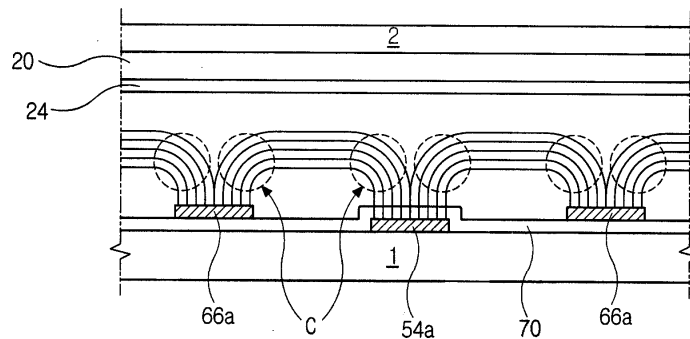
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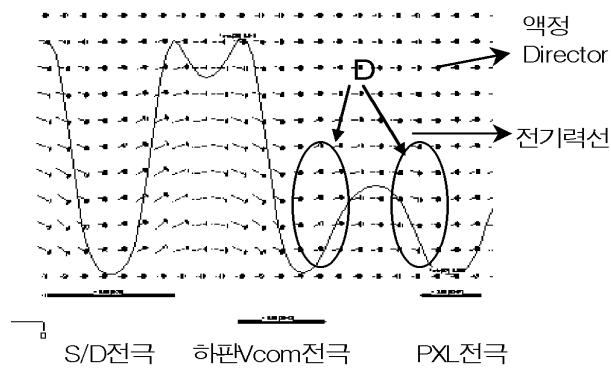
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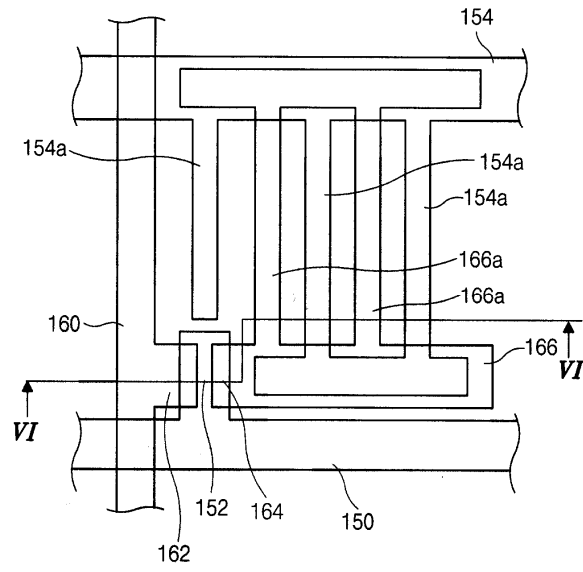
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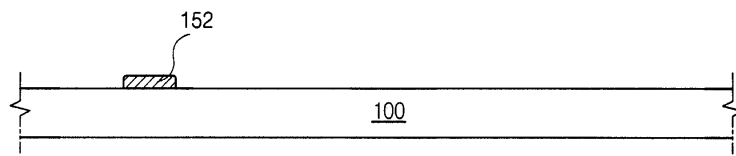
8



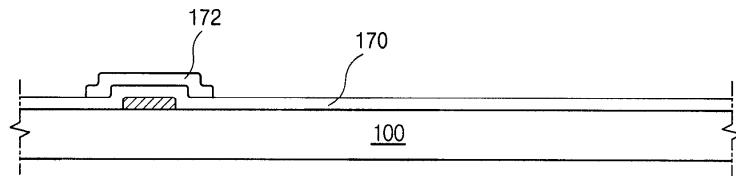
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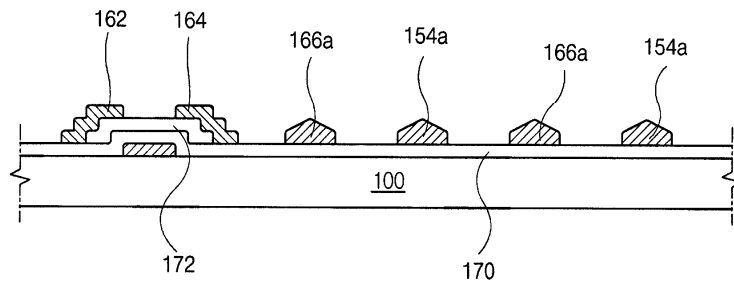
10a



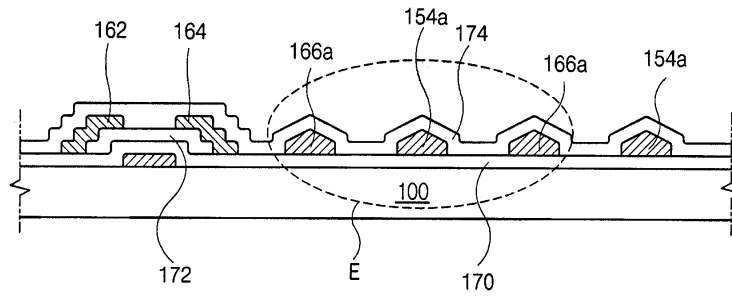
10b



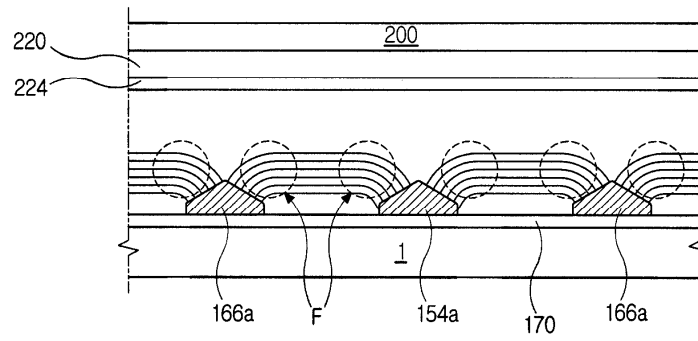
10c



10d



11



专利名称(译)	横向电场型液晶显示装置及其制造方法		
公开(公告)号	KR1020040060600A	公开(公告)日	2004-07-06
申请号	KR1020020087407	申请日	2002-12-30
[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 KIDUK 김기덕		
发明人	김기덕		
IPC分类号	G02F1/1343		
代理人(译)	贞媛KI		
外部链接	Espacenet		

摘要(译)

本发明尤其涉及一种ips模式液晶显示器及其制造方法，作为液晶显示器。面内切换模式是用于确保宽视角的液晶模式。并且公共电极和像素电极布置为平面，并且孔径比变小，因此难以实现高亮度。而且，需要高驱动电压以进行平面切换。因此，在本发明中，为了补充这种问题并使场失真和驱动电压降低并且开口率使得倾斜为具有0度的电极几何水平的形式的三角柱形状。可以扩大。公共电极，像素电极，平面切换，场失真，阈值电压，驱动电压。

