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2000 - 49891 2000 02 25 (JP)

(73) 가 가

1 1 1

(72) 가 1 - 9 - 2가 가
가 1 - 9 - 2가 가

(74)

:

(54)

(51) 가 TFT(18) (52) (53) ,
, 2 , 1 (53a) ,
2 (53c) ,

53b - - - 53c - - - 2
 60 - - - () 61 - - -
 62 - - - 63 - - -
 64 - - - (TFT68) 65 - - - (TFT71)
 66 - - - 67 - - -
 68 - - - TFT() 69 - - - (TFT68)
 70 - - - (TFT68) 71 - - - TFT()
 72 - - - (TFT71) 73 - - - (TFT71)
 74a - - - N LDD(TFT18) 74b - - - N LDD(TFT18)
 74c - - - N LDD(TFT68) 74d - - - N LDD(TFT68)
 75 - - - 76 - - -
 77 - - - 78 - - - ()
 79 - - - 80 - - - ()
 81 - - - 82 - - - ()
 84 - - - () 85 - - -
 88 - - - () 89 - - - ()
 90 - - - 92 - - - ()
 94 - - - ()

가 , 가 (cross talk)가 ,
 가 , 가 ,
 가 ,

(, TFT)

TFT

가

(開口率)
가 가

가

가

가

가

TFT

TFT

가

가

가

2 4 μ m
(点缺陷 良)

가

가

1 2

1

가

2

1

2

1 2

1

가

2

1

2

1

가

가가

가

1 2

1

가

1 2

2 (50) 2 (62) ITO (Indium Tin Oxide)
 (51) , (51) TFT(18) (50) (62)
 1 .
 , (12) (20)가 , (2)
 2)가 . (50) (12) (12) , (20)
 . , (62) (12) (22) .
 , , 2 3 (50)
 (62) 가 가 (52) 가 (62) , (51)
 (51) 1 가 (50) (50) (W1) ,
 . (12) 2 (62) (52)
 (52) (62) , (12) (52)
 (50) (53) .
 (53) (52) (62)
 , 1 (53) (52) (50) 1 (53a)
 , 1 (53b) , (53b)
 2 (53c) .
 , 1 (53a) 2 (50) (偏心) , 1
 (51) (W2) (50) (51)
 (50) , 2 (53c) 2 (50)
 , 1 (51) (W2) (50)
 (50)
 , (53) (51) 2 1
 (53a) (L1) 2 (53c) (L2)가 ,
 (51) TFT(18)가 (50), , TFT가 (51)
 (50), , 2
 2 4 , (51) (53) (W2) (51) (50)
 (W1) . , (12) (back
 light)가 , 4 ,
 (50) (51) , (12) 1
 , 가 (53) (51)
 가 2 ,
 가 .

(W1,W2) , 1 > 2 . (51) (50) (53)
 (51) , (53) (50) ()
 2)가 .
 (W2) , (51) (53) (W1) (51) (50)
 (2)가 , (53) () 가
 , .
 50) (51) , (53) 1 (53a) (51) (W2) , ()
 (W1) (W2 - W1) (75)
 , (10) .
 , (高歪点) (60) CVD a - Si 5
 0nm a - Si 450 1 (盧) , XeCl a -
 Si TFT () , Si TFT(68,71; , TFT () TFT(18; ,
 TFT () .
 , CVD (60) SiOx (61) 100nm .
 , (61) Ta, Cr, Al, Mo, W, Cu (單體) 400nm
 (52), TFT(18) (63), TFT(68,71) (64,65) , (62),
 (52) (52) (53) (20,22) .
 , (63,65)
 , TFT(18) (66), (67) N TFT(68) (69)
 (70) , 가 80keV 5 × 10¹⁵ atoms/cm² , P
 H₃/H₂ .
 , TFT(18) , N TFT(68)
 , P TFT(71) (64) 가 80keV 5 × 10¹⁵ atoms/cm²
 , B₂H₆/H₂ P TFT(71) (72) (73)
 , TFT(18) TFT(68) , N LDD(74a,74b,74c,74d; Lightly Doped Drain)
 , PECVD (60) SiO₂ (75) 500nm
 , TFT(18) (66) (76) , (67)
 (77) , TFT(68,71) (69,72) (70,73)

, Ta, Cr, Al, Mo, W, Cu (50), TFT(18) 500nm (66) (50) (67)
 (78) TFT(68,71)

, PECVD (60) SiNx (79)
 (78) (80) (81)
 3 μ m (78) (82)

(81) ITO 100nm (51)
 (51) (80,82) (51)
 (78) (10) (12)

(14) (84) (85)
 ITO (86)

(cure) (12) (51) (14) (86)
 0 (rubbing) (88,89) 9
 (Nematic) (90) (12) (14)
 (12,14) (60,84)
 (10)가

(12) 1 (53) (5)
 0) (50) (53) (50) 가 가

가 가 가
 (51) (53) (W2) (51) (50) (W1)
 가

5 2 (53) (50) 가
 W2 > W1 가 가

6 3 (53) (50) 가
 가

7 4 (52) 2 (62) 1 2 (53a,53c)
 (53) (52) 가

8 5 (53) (前段) (62)
 1 (53a), (53b), 2 (53c) 가

, 2 4 , 1 , ,

, 6 9 11
 , (10) (12) (14) (12,14)

(12) (14) (88,89) (90)

(12) (60) (50) (50)
 (62) (62) (75)

(62) (52) (60) 2 (62) (62)

2 (50) 2 (52) ITO (51)
 (51) TFT(18) (50) TFT(18) (62) (78)
 , 1 (81) (782) (67) (51)

, 1 가 (12) 가 ,
 가 (50) (12)

, (62) (12)

, (50)

(52) 1 , (52) (50)
 , (12) (53) (52) 1

2 (53a,53c)

1 (53a) 2 (53c) 9 (50)
 (50) (52), (53) 1 2 (53a,53c) (50a)
 , 1 2 (53a,53c)

, (51) 1 가 (52)
 , (51) (50) (1

) (W1) , (53)
 1 2 (53a,53c) , (50) (2) (W2)

, (51) 가 (50) (53)
 , 9 D (88) , (51) (50)
 (90) (NA) (51) (53)

(W2) (51) (50) (W1)

(53) 1 (53a) (L1) 2 (53c) (L2)
 가 (51) (51) TFT(18)가 (50), (50), TFT
 (51) (50) (52) (53) (82) (52)
 (50a) (81) (82) 가 (78) (82) (52)
 가 (82) 가
 (10)
 TFT a-Si 450 1 (盧) (60) CVD a-Si 50nm
 Si (15) TFT(18);
 CVD (60) SiOx (61) 100nm
 (61) Ta, Cr, Al, Mo, W, Cu (單體) 200
 400nm (52) (52) (53) (63)
 62), (52) (53)
 (62) (19)
 TFT(18) (66), (67) 가 80keV 5
 $\times 10^{15}$ atoms/cm² , PH₃/H₂ (60)
 TFT(18) N LDD(74a,74b)
 PECVD (60) SiO₂ (75) 500 700nm
 TFT(18) (66) (76)
 (67) (77)
 Ta, Cr, Al, Mo, W, Cu 500 700nm
 (50), (78), TFT(18) (66) (50)
 (67)
 PECVD (60) SiNx (79)
 (78) (80) (81) 2 4μm
 (78) (82)
 (81) ITO 100nm
 (51) (80,82) (51) (78)
 (10) (12)

(14) , (84) (85)
 , ITO (86)
 (12) (51) (14) (86)
 (cure) (88,89)
 90 (rubbing) (12) (14)
 (Nematic) (90) (12,14)
 60,84) (92,94) (10)가 .
 0) (12) 1 (53) (5
 (50) (53) , (50) 가 가
 , 가 가
 , (50) (52) (53) (82) (50a)
 , (81) (82) 가 (78) (82) (52)
 , 가
 12 7 (53) 1 (53a) (L1) 2 (53c)
 (L2) 1 (53a) (62) , 2 (53c) (62)
 (51) 2
 (53a,53c) , 6 가 , 가 (62) 1 2
 , 가 (62) (53), (52)
 , (12)
 , 13 8 (52) , 6 7
 (62) (62) (50)
 (53) (53) (62)
 1 2 (53a,53c) . 2 (53c) 1 (53a)
 (18) (78) (51) (8
 0,82) (62)
 , 6 ,
 , 8 가 ,
 ,

가

(57)

1.

1 2 ,

1

가

2 , 1 ,

2

2.

1 , 1

3.

1 , 2

4.

1 , 1

5.

1 , , 1 2

6.

1 , , 2 , ,

7.

1 , 2 , 1
2

8.

1 2 ,

1 , , 가

2 , 1 ,

2 ,

9.

8 , 1

10.

8 , 2

11.

1 2 ,

1 , , , 가

1 2

2 2 1 ,

1 2 2

2 1 ,

12.

11 ,

13.

11 , , ,

14.

11 , 1 2

15.

11 , 1 2

16.

1 2 ,

1

가

1 2

2

1

2

1

2

2

1

2

17.

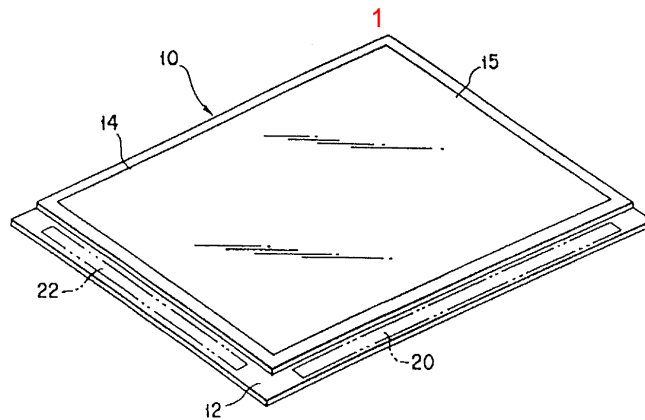
16

1

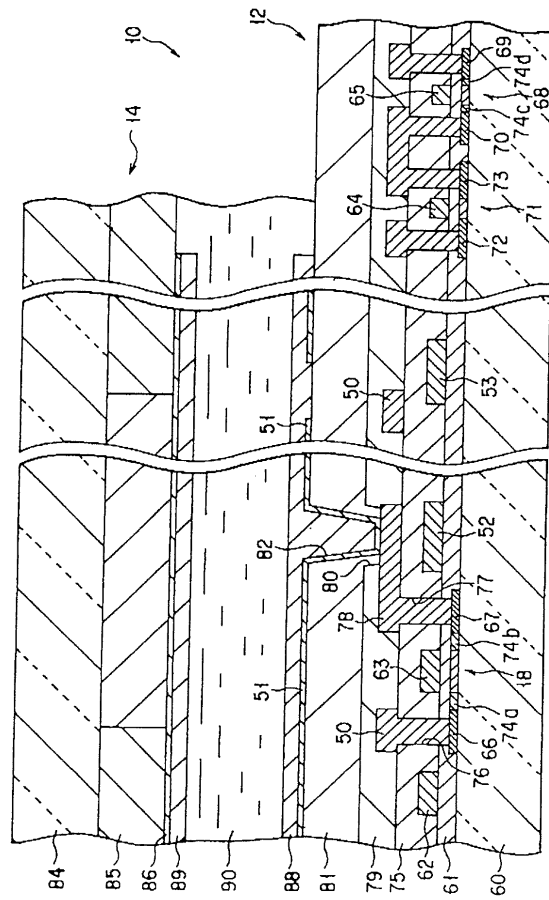
2

18.

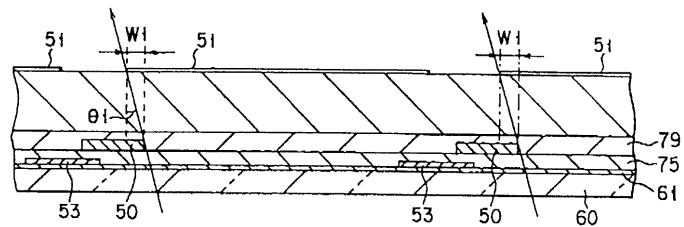
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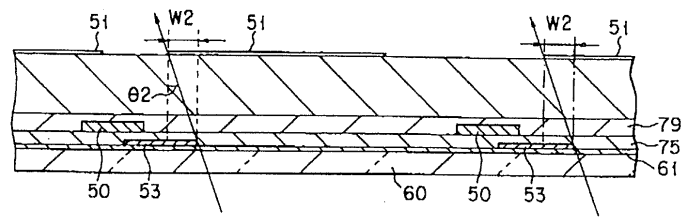
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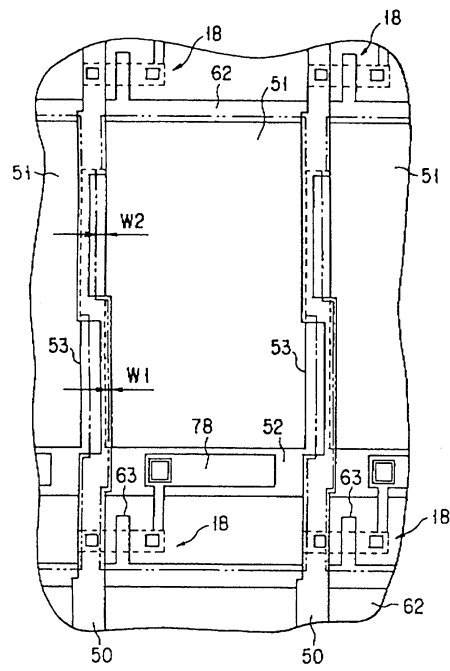
4a



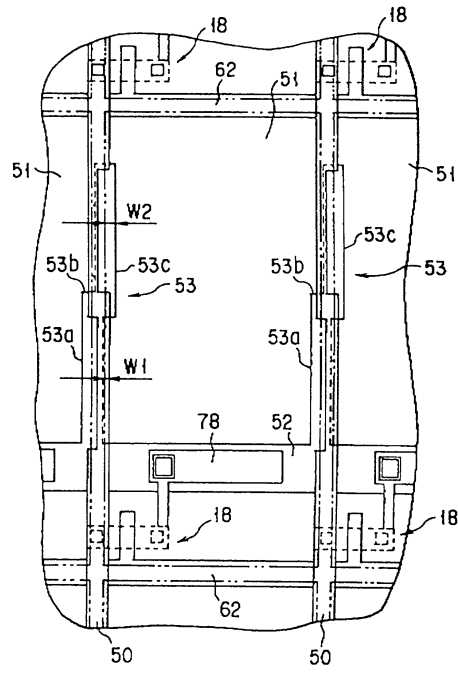
4b



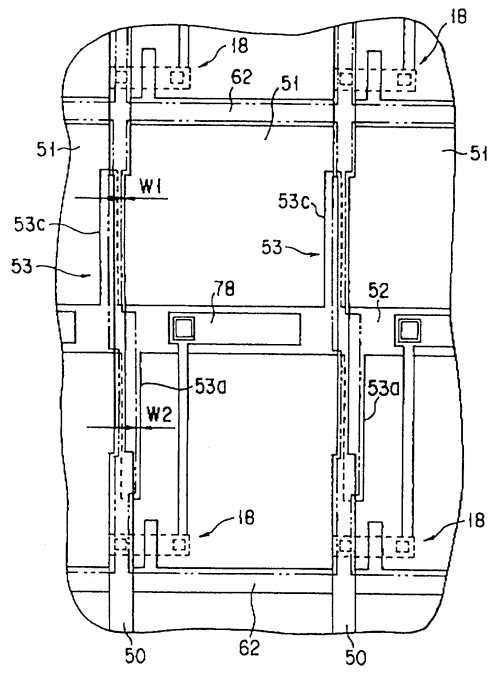
5



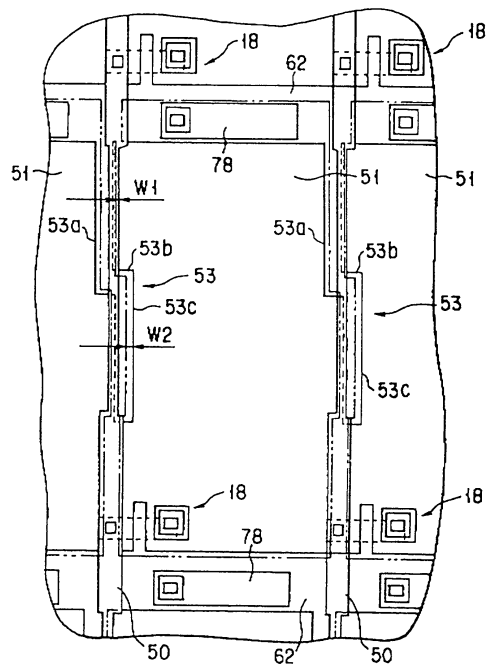
6



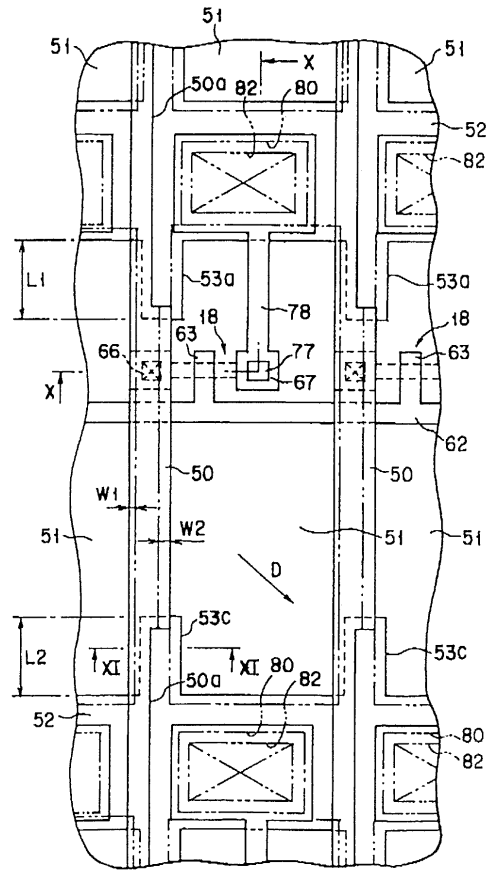
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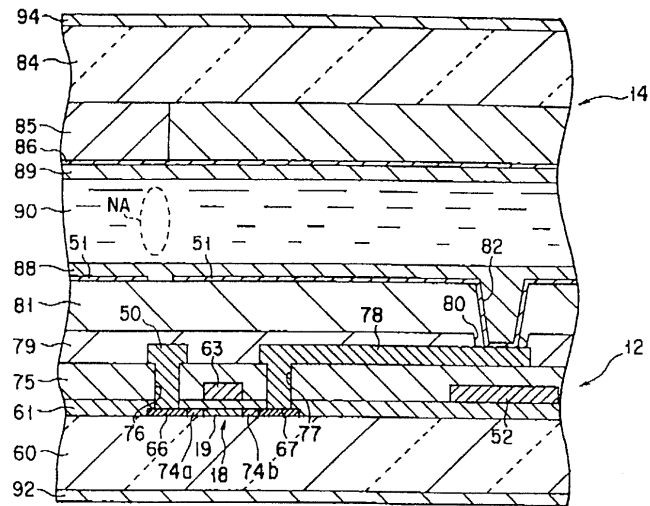
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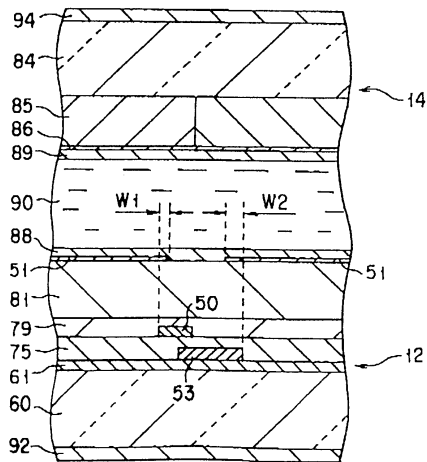
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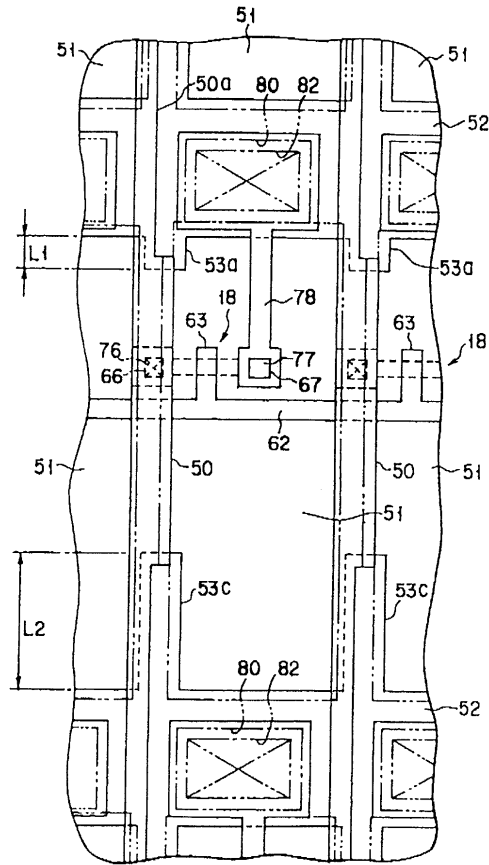
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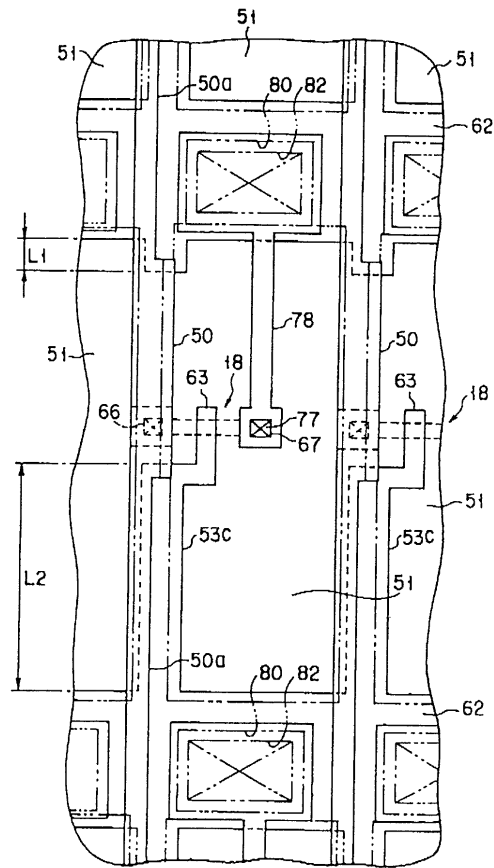
11



12



13



专利名称(译)	有源矩阵型液晶显示器		
公开(公告)号	KR100330363B1	公开(公告)日	2002-04-01
申请号	KR1020000013320	申请日	2000-03-16
[标]申请(专利权)人(译)	株式会社东芝		
申请(专利权)人(译)	Sikki东芝股份有限公司		
当前申请(专利权)人(译)	Sikki东芝股份有限公司		
[标]发明人	HANAZAWA YASUYUKI 하나자와야스유키 NAGAYAMA KOHEI 나가야마고헤이		
发明人	하나자와야스유키 나가야마고헤이		
IPC分类号	G02F1/133		
代理人(译)	KIM , YOON BAE		
优先权	1999073488 1999-03-18 JP 2000049891 2000-02-25 JP		
其他公开文献	KR1020000071449A		

摘要(译)

每个像素电极51的至少一部分与信号线重叠，并通过TFT 18连接到信号线和扫描线。具有静电屏蔽特性的多个屏蔽电极53从存储电容器线52延伸，该存储电容器线52垂直于信号线延伸并沿信号线延伸。每个屏蔽电极具有第一电极部分53a，该第一电极部分53a设置成仅与一个像素电极的侧边缘部分，信号线的侧边缘部分和一个像素电极侧的侧边缘部分重叠，并且，第二电极部分53c设置成仅在信号线的侧边缘部分中与另一像素电极的侧边缘和另一像素电极侧的侧边缘部分重叠。重叠宽度大于信号线和像素电极的重叠宽度。 2 - 1 -

