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(71) 가 가
2 4 - 1(72) 가
가 3 3 - 5 가 가
가 3 3 - 5 가 가
가 3 3 - 5 가 가

(74)

:

(54) ,

(14a, 14b) (2a, 2b) , (2a, 2b) ((

3) , (2a) 1 1 (2b) (2b) (

14b) 2 , 1 2 (21) , (2a)

1 (19b) , (19b) (2b)

(23) .

3

1

2 1 II - II

3 1 III - III

4 1 VI TFD

5 1

6

7

8

9

10

11 10 XI - XI

12

1 :

2a, 2b :

2c :

3 :

4a, 4b : IC()

9a, 9b :

10 :

11 :

11a : ()

12 :

12a : ()

13 :

14a :

14b : 2

19a, 19b :

21 :

23 :

32 :

33 : TFD

40 : ()

L :

V :

W :

W1 :

W2 :

, , (象) . ,

, , 가 . , , , .

, 가 . , ,

, TFT(Thin Film Transistor) 3 , TFD(Thin Fil
m Diode) 2 .

, 10 (51) , (52)
 (53a) 53b) 가 , 11
 (L) 1 (53a) 2 (53b)
 (67)

10 , 1 (53a) (L) (56)
 , (56) TFD (57) (54)
 (56) (54) 1 (53a) , 11 (58a)

, 10 , (54) TFD (57) ,

1 (53a) 2 (53b) (59a) , (59a)
 IC(61a)가 ACF(Anisotropic Conductive Film)(65) , COG(Chip On Glass)
 (56) (52)
 IC(61a) , ()

2 (53b) (L) (62)
 (62) , 1 (53a) (56) ,
 (54)

2 (53b) 1 (53a) (59b) 가 , (59b)
 IC(61b)가 ACF(65) , COG(Chip On Glass)
 , (62) (52) , IC(61b) , , ()

11 , 2 (53b) (L) (63) ,
 (64) , (66) (62) (66)
 , (62) (58b)

1 (53a) (68a) , (69a) , 2
 (53b) (68b) , (69b) , (63)
 2 (53b) (71)가

10 , (54) (62)
 11 (64) , R, G, B 1 가 , R, G, B 3
 가 가

10 , IC(61a) 61b) (54) (62)
 , IC(61a) 61b) (54) (62)
 ,

11 , (51) 가 , 1 (53a)
 (63) (L) (51) 가 , (71)가
 , (63) (L) (L)
 , 1 (53a)

10 (V) , (象) (54) (V) , (V)
(W2) (W1) , (W1)

(W1) , (54)
ITO(Indium Tin Oxide) 가 ,
(W1)

(W2) , , TFD (57) , Ta() ,
(W1, W2) (V) (52) (W1, W2)
(V) (W1, W2) (V)

10 (51) IC(61a) (59a)
IC(61b) (59b)가 , (51)
(V) (51)
가 .

12 1 (53a) (59) ,
1 (53a) IC(61a) 2 (53b) IC(61b) (59)
59 (59) (81) IC(61a) 61b)
(81) (V)

b) (81) (52) (72)가 , 가 2 (53)
IC(61b) , () , 가 (52)
(72) (73) 1 (53a) (56)
2 (53b) (62) 2 (52) (72)
, 1 (53a) (73) 2 (53b) (62) (72)

12 (81) , (V)
10 (51) , (V)
, TFD (54) 1 (53a) (V)
(W1) (W2) , 12 (81) 1 (53a)
(V) (W1) (W2) , (V)

12 (81) , TFD (57) (54) 1 (53a)
(V) (52) (73) , (W1)
(W2) , 가 .

- (1) , , 1 , 2 , 1 2 , 1 , .
- 12 (81) (73) (V) (52) (73) (V) (52) , .
- (2) , , , .
- (3) , , , .
- (4) , , , .
- 가
- (5) , , 1 , 1 2 , 2 1 , 1 2 , 5 , , 3 2 .
- (6) , , 1 2 , .

(7) , , , , COG(Chip On Glass) , IC , , , , 가

(8) $\begin{matrix} \text{IC} & \text{IC} \\ \text{가} & \text{IC가} \\ \text{가} & \text{가} \end{matrix}$

(9) , , 1
1 ,
2 , 1 2 , 1 2
 , 1
2 , 1 .

Figure 1. Schematic representation of the experimental design. The subjects were divided into two groups: TFD (Tactile Feedback Device) and TFT (Tactile Feedback Tool). The TFD group used a device that provided tactile feedback during the task, while the TFT group used a tool that provided tactile feedback. The subjects performed the task for 10 minutes, and the results were compared between the two groups.

(13) , , 1 1
2 , 1 ,
, 2 1 , 1 2
. ,
, 5 , , , 3 2
.

(14) , , 1 2

(15) , , 1 , , COG(Chip On Glass) , IC , , , 가

(16) , , , IC , , IC , , , IC , , IC , , 가 , IC , , IC , , 가 , 가 , , 가 , , ,

(17) , , TFD

(18) , , ,

(象) , , 가 , ,

(19) , ,

(20) , , (視認)

(1)

TFD COG (1) , 1 1 (2a) , 2 (2b) (3) ,

(3), 1 (2a) 2 (2b) 가 , (3a)가 , (3a)가 , 2 1 (3a) (3) , (1) , (2) (2b) II - II (2) (1) , (7) (8) (10)가

1 , 1 (2a) 2 (2b) (2c) 가 , (2c)

IC(4a 4b)가 , ACF(Anisotropic Conductive Film)(6) 가
 IC(4a) , IC(4b) ,
 IC , 1 (2a) 2 (2b) , ,
 , IC .

2 , 1 (2a) (9a) 가 , (9a) , (L)
 (14a) , 1 (2a) ,
 (32) , (32) TFD (33)가
 , TFD (33) (14a) , (14a),
 TFD (33) (32) , 2 (16a) , (9a)
 (17a) , (18a) .

1 2 IV 1 TFD , 4 4
 , - - (Back - to - Back) TFD , 4 (32)
 , TaW() 1 (32a) , Ta₂O₅()
 2 (32b) , Cr 3 (32c) 3 .

TFD (33) , 1 TFD (33a) 2 TFD (33b) 1 TFD
 (33a) 2 TFD (33b) , TaW 1 (36) , Ta₂O₅
 (37) , (32) 3 (32c) Cr 2 (38) 3 .

1 TFD (33a) , (32) 가 2 (38)→ (37)→ 1 (36)
 → (37)→ 2 (38) , 2 TFD (33b) , (32) 가 1 (36)
 , TFD (33a 33b)
 , TFD
 가 (14a) 2 TFD (33b) 2 (38) , IT
 O .

2 , 2 (2b) (9b) 가 , (9b) , (L)
 (11) , (12) , (13) , 2
 (14b)가 , (16b) , (9b) , (17b)
 , (18b) .

2 (14b) 1 (32)
 , 1 , 2
 (14b) , 2 (14b) (14a)

(14a) 2 (14b) ,
 , 2 (12) , (12) ,
 , R(), G(), B() 3 1 , 가

(9a, 9b) , , , (11) , , ,
Al() , , , 가
가 , (11)
. (12) , , , , (13)
, , , .
(14a, 14b) , , ITO(Indium Tin Oxide) , , ,
, (16a, 16b) , ,
, .
1 , 1 (2a) (2c) , (32) (19a) ,
(21)(2) 2 (2b) 2 (14b) (19b)
. , (2c) (22)가 . , (19a) 2 (14b) (2
1)
2 , (1) , (21)
, , (21) , (3)
. , (21) (3)
. (1) , (1)
2 (11) , 2 (2a)
(L) , (L) 가
(L) , (L)
(18a) , 1 (2a) .
, (1) (10) (7) . (7)
(8a) (8) , (8)
(8b) (L) .
(L)
, , (14)
a) (14b) , ,
(V), (V) .
TFD (33)가 2 , 1 III - III 3 ,
(12a) (2a) 2 (2b) (V)
(11) (11a) (12)
(23) .
(23) , 2 3 (V)
(3) (3) , 2 (2b)
, 1 , (V) (3) (W) (23)
.

(11) (V) (W) (23) , (1)가 , (W)
 (11a) (10) (V) (W)
 (12) (12a) , (23) , (1)가 ,
 (V) (W)
 (V) (W)
 (V)

(1) , 1 3 1 (2a) ((W)
 (19b) 10 11
 , TFD (33) (14a) 1 (2a) (W)
 (23) 가 , 3 , (W)
 2 (2b) (23) , (19b)
 (23)

(V) (11) , , (23) (11a)
 (11)

(11a) (10) (V)
 (11a) (V) (W) (11)
 (V) (W)

(V) (12) , , R(), G(), B() 3 , C(Cyan),
 M(Magenta), Y(Yellow) 3

(23) (12a) , 3 ,
 5 R, G, B C, M, Y 2
 (, 5)

(V) (12) , ,
 (23) (12a) , (12a)
 (12a) (12a)
 (12) (12a)

2 3 (11) (11a) (12) (12a)
 (23) , (11) (11a)
 (12) (12a) (23)

(1) (23) (11) (1
 2) 가 가

, 2 3 (23) (11) (11a)
 (12) (12a) (3) 2 (2b)
 (11a) (12a) 6
 (3) 7 (3)
 가 .

(2)

8 .
 (40) , (41), (42), (43), (44)
 (46) (46) (50)
 (47) .

(50) (46) ,
 (50) 1 (1) (視界) (48)가 (50) ,

8 (40) , (43) (44) , (41)
 (47) .
 (50) , (41)

9 8 , (90), (91), (92), (93),
 (94) , (94) (95) (96) .
 (94) , 1 (1) .

(90) , ROM(Read Only Memory), RAM(Random Access Memory) ,

, (93)
 , (91) .

(91) , - , (rotation) , (CLK)
 , (86) (96) ,
 (92) .

()

, 가 .

, TFD
 , TFT(Thin Film Transistor) 3

, 8 ,

(57)

1.

1

2

1

2

1

2.

1

3.

1

4.

1

5.

3

4

, 1 1 2 , 1
 , , 2
 1 , 1 2
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 6.
 5 ,
 1 2 ,
 .
 7.
 1 4 ,
 ,
 .
 8.
 7 ,
 IC .
 9.
 , 1 1 ,
 2 2 ,
 1 2 ,
 1 2 ,
 1 , 1 ,
 2 .
 10.
 9 ,
 .
 11.
 9 ,
 .

12.

9 ,

13.

11 12 ,

, 1 1 2 , 1

1 , 1 2

14.

13 ,

1 2 ,

15.

9 12 ,

1 ,

16.

15 ,

IC .

17.

9 12 ,

TFD .

18.

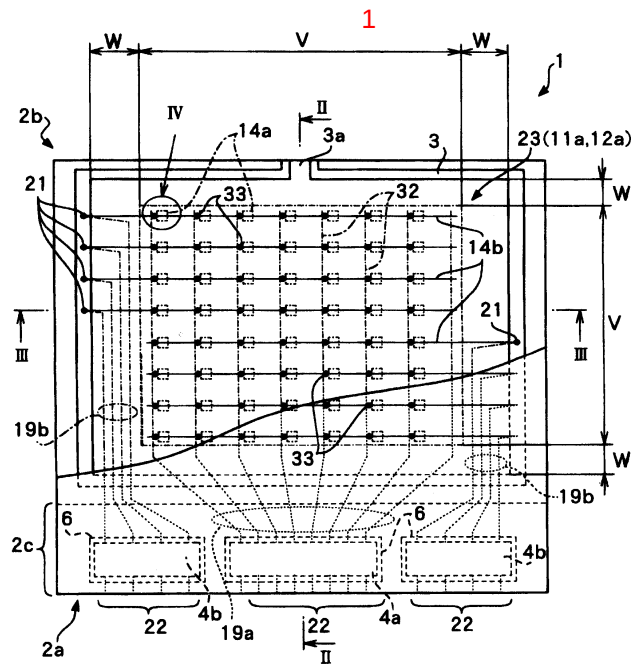
1 4 9 12 ,

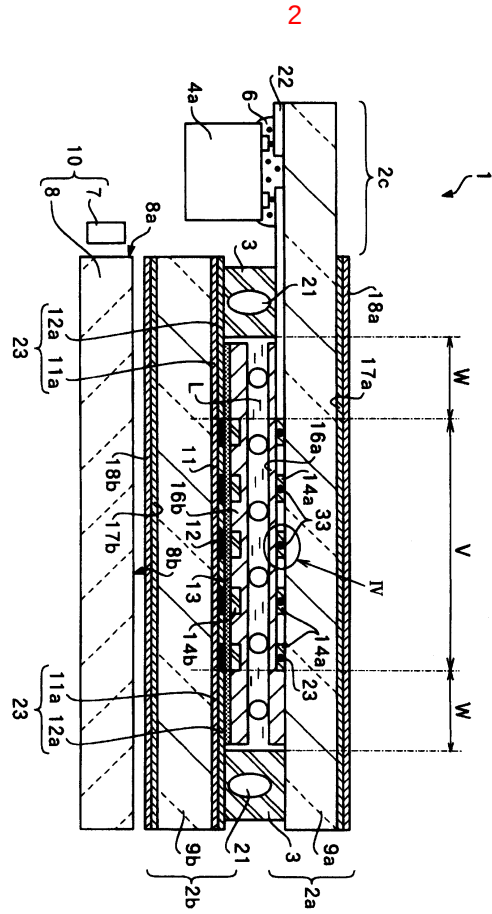
19.

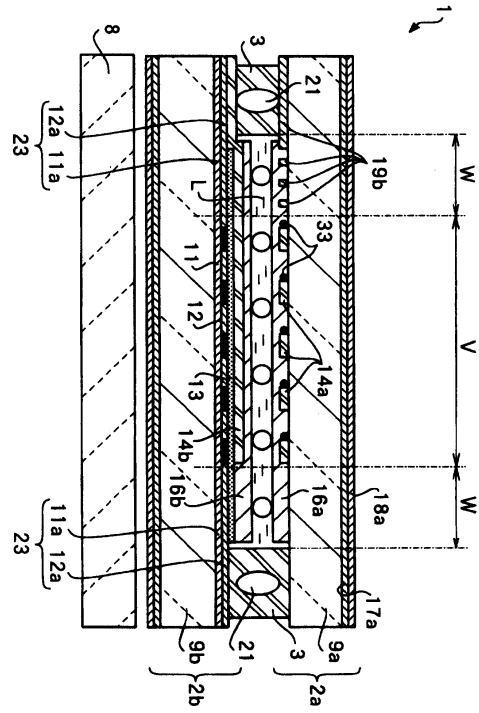
1 4 9 12 .

20.

19

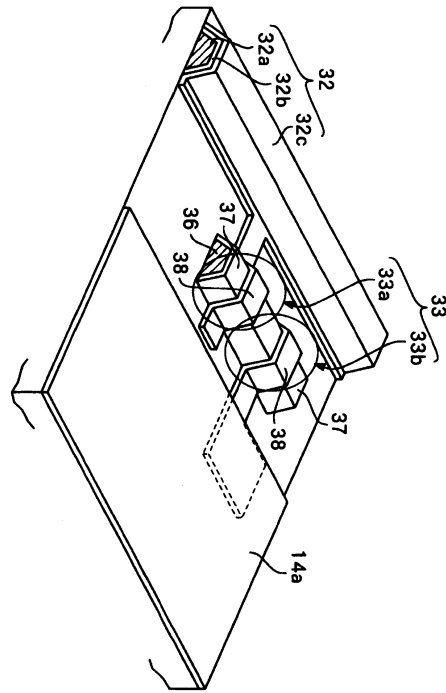






3

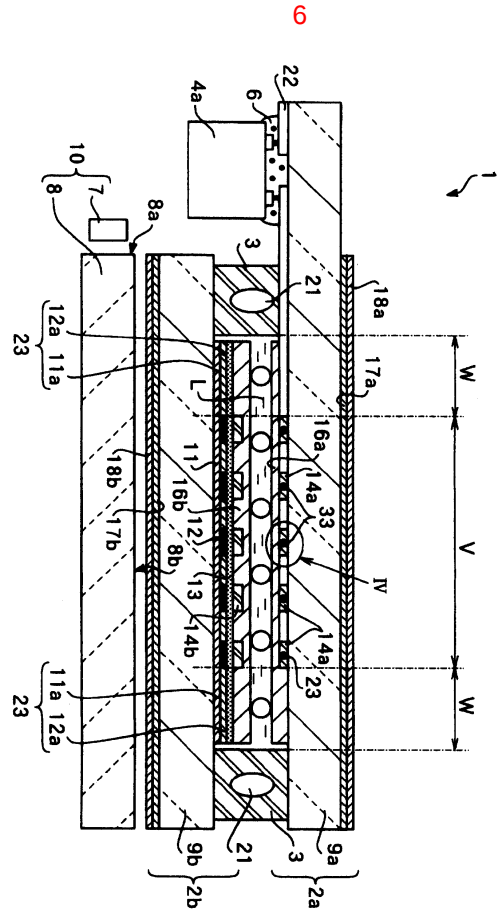
4

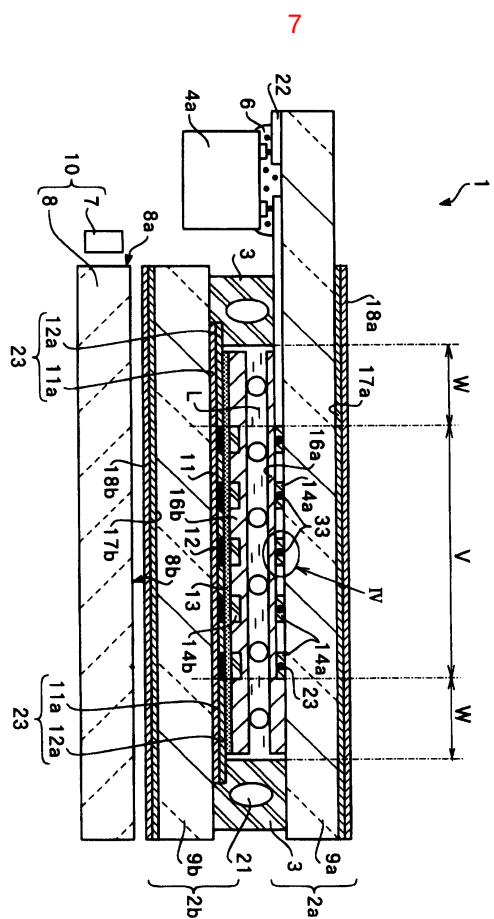


5

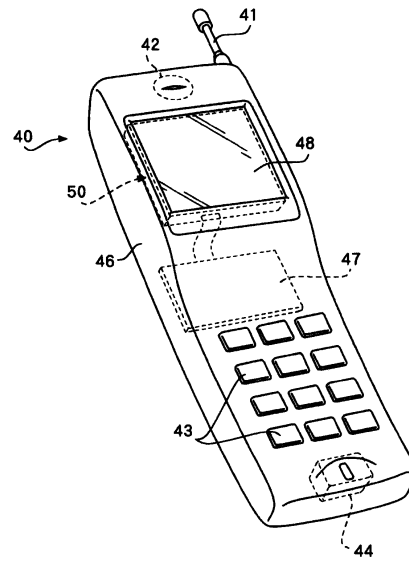
12a

R	G	R	G	R	G
G	B	G	B	G	B

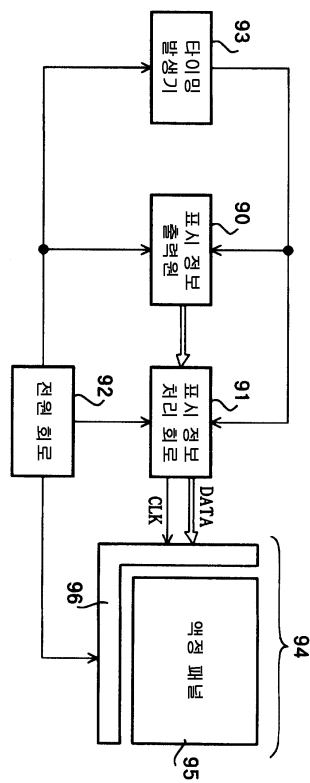




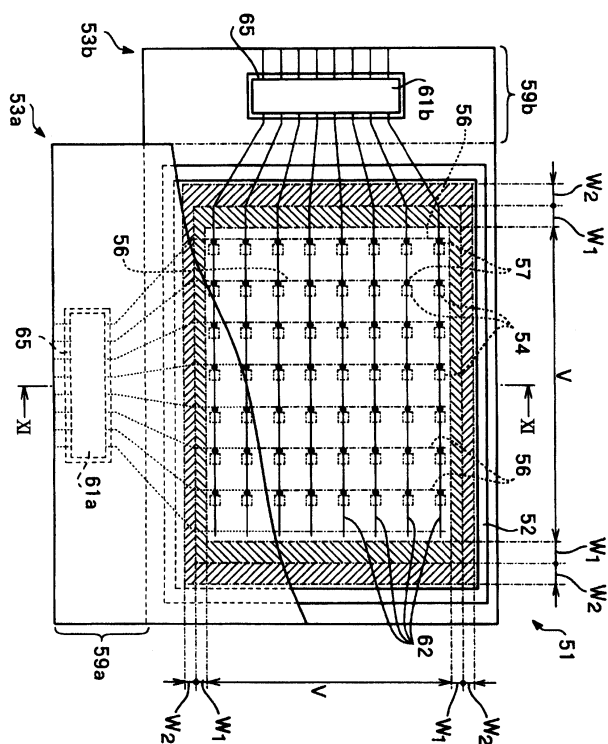
8



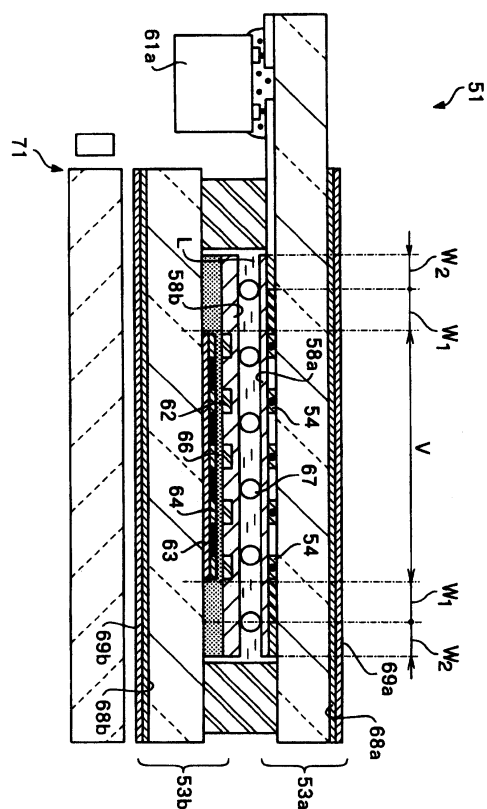
9



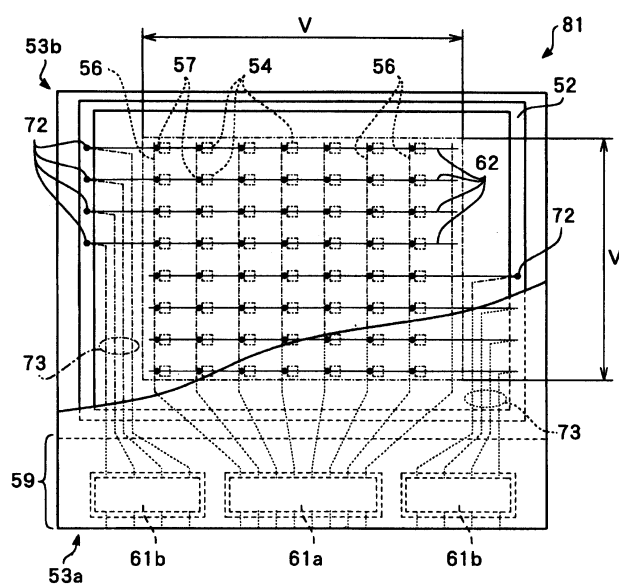
10



11



12



专利名称(译)	液晶面板，液晶设备和电子设备		
公开(公告)号	KR1020030014630A	公开(公告)日	2003-02-19
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CPC分类号	G02F2001/13456 G02F1/133555 G02F2001/133388 G02F1/133512 G02F1/1345		
代理人(译)	KIM, CHANG SE		
优先权	2001243027 2001-08-09 JP		
其他公开文献	KR100477778B1		
外部链接	Espacenet		

摘要(译)

根据本发明，提供了一种能够在液晶面板中的有效显示区域周围形成遮光区域的结构，该液晶面板具有形成导电材料和布线的结构。 本发明的液晶面板包括一对基板2a和2b，每个基板具有电极14a和14b，用于粘合基板2a和2b的密封材料3，第二端子设置在另一基板2b上并连接到基板2b上的电极14b，以及导电构件21，用于连接第一端子和第二端子设置在基板2a上并连接到第一端子的布线19b和设置在另一个基板2b上与布线19b对应的区域的至少一部分上的遮光膜23，它包括。

- 1 - 3

