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G02F 1/1335(11)  
(43)2002 - 0061524  
2002 07 24(21) 10 - 2002 - 0002044  
(22) 2002 01 14

(30) JP - P - 2001 - 00006063 2001 01 15 (JP)

(71) 가 가  
1 1 1(72) 1 9 2 가 가  
1 9 2 가 가  
가 50 가 가

(74)

:

(54)

1 2 1 2 1 (51) , 2  
(52) 가

.

1a

1a 1 ,

1b 1c 1a ,

2a 1a ,

2b 1a ,

3a 3b ,

4a 4b ,

5 1 ,

6 1 ,

7a 2 ,

7b 2 .

1 - - - , 2 - - - ,

3 - - - , 21 - - - ,

22 - - - , 23 - - - ,

24 - - - , 25 - - - ,

26 - - - , 26a - - - ,

27 - - - , 27a - - - ,

27b - - - , 28 - - - ,

31 - - - , 32 - - - ,

33 - - - , 34 - - - ,

51 - - - , 52 - - - . ,

100 - - - , 110 - - - ,

111 - - - ( ), 112 - - - ,

113 - - - , 115 - - - ,

115a - - - , 115b - - - ,

116 - - - ( ), 117 - - - ,

120 - - - , 121 - - - ( ),

122 - - - , 123 - - - ( ),

124 - - - , 125 - - - ( ),

130 - - - , 150 - - - TFT,

200 - - - , 300 - - - ,

310 - - - , 410 - - -  $1/4 \lambda$  ( ),

411 - - - ( $1/4 \lambda$  (410)), 420 - - -  $1/4 \lambda$  ( ),

421 - - - ( $1/4 \lambda$  (420)), 510 - - - ( ),

511 - - - ( (510)), 520 - - - ( ),

521 - - - ( (520)), 600 - - - ,

700 - - - TCP.

,

, (pocket bell), (character)

, IT (Information Technology)

, (高精細)

가

, 가

, (視認)

, (front light)

, 11 - 316382 가

light) (back

(process)

가

가

가

(area)

(介在)

가

가

가

가

( /

) ( . ) .

1 3 , 1 1  
 , 2 2 .

1 2 , 1 1  
 , 2 2 .

1 1 , 1 , 2  
 1 가 . , 1 가 2  
 . , 1 2 .

1 , 1 2 . ,  
 1 1 1 .

1 3 , 1 2 .

1 3 , 1 2  
 . , 1 1 2  
 2 2 .

( )

, . ,  
 , .

1a 1 , 1b 1c 1a  
 . , 2a 1a , 2b  
 1a .

1 (1) , 가 10cm VGA  
 (1) , (51) ,  
 (52) . 1b 1a (1)  
 (51) , 1c 1a (1) (52)

(1) , (100) , (100) (200), (100)  
 (52) (52) (300) .  
 (100) (110) , (120) , (110, 120) (1  
 30) , (300) (100)  
 (200) 가 ( ) IC TCP(700; Tape Carrier Package)  
 . TCP(700) (折曲) , TCP(700) 가  
 (200) (100) , (110)  
 (120) ,  $1/4 \lambda$  (410, 420) (510, 520) (遅相軸)

(110) (glass) (111) , (111)  
 (112), (112) (114), (112) (114)  
 (113), (112) (114)  
 TFT(150; Thin Film Transistor) , TFT(150) (115a, 115b)  
 (110) (115a, 115b) (116)

(110) (115a, 115b) , Al(Aluminium) (51)  
 (115a) , (patterning) , (115b) ,  
 52) (115b) , 1 40 $\mu$ m  $\times$  120 $\mu$ m ,  
 52) (115b) 4 $\mu$ m 15 ,  
 5% ,

(120) (121) , (122), (123; ), (124),  
 (125) (124) (51) (5  
 2) , (124) 51, 52

(110) (116) (120) (125) , (130) 가  
 70° (twist) , (130) 1/4  
 $\lambda$  (420) (421) , 45°

(110) (120) , ( )  
 , (中空) , (100)  
 $\Delta n$  0.08  $\varepsilon / \varepsilon_0$  +8 (Nematic)

(130) (1) , (115a) (124)  
 15b) (124) 가 (matrix) (51) , (1  
 (52) , (51) , ( )  
 (52)

(51) (52) ,

(1)

3a 3b (暗) , 4a 4b (明)

3a 4a (51)  
 3b 4b ,

3a 4a , (51) (520),  $1/4 \lambda$  (420), (130),  
 (115a) (normally white) 가 . . (52)  
 , 3b 4b (51) 가 가  
 , (520),  $1/4 \lambda$  (420), (130),  $1/4 \lambda$  (410), (510)  
 가 가 .  
 , (115a, 115b) (124) 가 ,  
 , , . (130)  
 , (130) . , (51) 3a  
 , (600) (520) ,  $1/4 \lambda$  (420)  
 . (130)  
 (115a) (左回) , (逆回) . ( (520)  
 右回) (130) ,  $1/4 \lambda$  (420) , (51)  
 (521) . (520) .  
 (52) , 가 .  
 , (115b) (124) 가 , (52)  
 , 3b (300) (310) (510)  
 ,  $1/4 \lambda$  (410) . (115b)  
 (130) . (130) 1/  
 4  $\lambda$  (420) 2  $1/4 \lambda$  (520) .  
 (520) (521) 가 .  
 (52) ,  
 , 가 , (130) . (130)  
 ,  $1/4 \lambda$  . (51) , 4a  
 (600) (520)  $1/4 \lambda$  (420) (130)  
 (130) . (115a) , (130)  
 ,  $1/4 \lambda$  (420) , (520) (521)  
 . (520) . (51) (52) ,  
 가 .  
 , 가 , . (52) , 4b (300) (310) ,  
 (510)  $1/4 \lambda$  (410) (130) , (130)  
 . ,  $1/4$  (420) , (520)  
 . (52) , 가 .  
 , , .  
 , (300) . (52) (51) . (52)  
 , .

, (51) . (52) , 가 , (51)  
 가 . (1) 가 가 (52)  
 , 가 (51) , 가 가  
 , 가 .  
 , (300) . (52) , (1) (300)  
 0) . (52) , (1)  
 가 가 .  
 , (300) . (52) , (200)  
 가 (300)가 , (51) (300)  
 , (300)  
 , (51) . (52) (300)  
 , , 가 ,  
 , (51) . (52) ,  
 .  
 , (51) . (52) ,  
 , (51) . (52) (52) (51) ,  
 . (52) , (52) (51)  
 . (300) .  
 , (52) ,  
 . , (30)  
 , , 1b 1c (115a, 115b) TFT(150)  
 가 , (112)  
 가 .  
 , (520)  $1/4 \lambda$  (420) , (510)  
 $1/4 \lambda$  (410) , (510) (511)  $1/4 \lambda$  (410) (510, 520)  
 $1/4 \lambda$  (410, 420) , (510) (511) (411)  $80^\circ$   
 , (520) (521)  $1/4 \lambda$  (420) (411)  $80^\circ$  ,  
 (520) (521) (510) (511) ,  
 , (1) , (normally black)  
 , ,  $1/4 \lambda$  (410) (510) , (110)  
 , (51) .  
 ,  $1/4 \lambda$  (410, 420) ,  $1/4 \lambda$   $1/2 \lambda$   
 ,  $1/4 \lambda$  (410, 420)  
 가 .

(1)

5, 1 (1)

5 (2), PDA(personal data/digital assistants) PDA(2) (1)  
(21), (300) ON/OFF (22),  
(23), (24) (25)

PDA(2) (26) (27) (26)  
(1) (52) (27) (51) (300)  
(52) (1) (20)  
0) (51) 가

5 (52) (26) (27) (26)  
(改) (26a) (51) (27) ,  
(28) (27a) (27b) 가  
5 PDA(2) (27)  
가 (27)

PDA(2) (300)  
가 (22) (300)  
(22) , PDA(2) 가  
(22) (300) (2)  
1) OFF (300)가

(26) (300)  
가 (300) / 가  
(27) , (26)  
가 가 (27) 가 가

51) 가 PDA(2) (300)가 (300)  
(52)

300) PDA(2) (22) (52)

가 (22) (300) (26)

5 PDA(2) 가 가 (26)

6 1 (3) (3) (3)

가

(3) (1) (31), (32), (33),  
/ (34) (34)

(34) (3) (34)

(3) (1) ( , e - mail )

가

(3) (300)

(3)

(34) (300)

가

가 가 (34) (3) 가

가 (34)

(300) 가 (300)

가 (300)

가

가 가

(300) /

가 .

7a 2 2 7b  
2 . 2  
1 2  
1 .

7a (17) ITO 7b (112) (115) (延在) (117) (115)  
(300) (130)  
1 .

가 .

(57)

1.  
1 2 ,  
1 2 1 1 ,  
1 2 1 2 2 ,  
2 1 1 ,  
2 1 2 ,  
1 1 2 2  
1 1 2 2  
1 1 2 2

2.

1 , 2

.

3.

1 , 1 , 2  
 1 가 .

4.

3 , 1 2 , 1  
 2 .

5.

1 , 1 2 , 1  
 1 .

6.

1 , 1 2  
 .

7.

1 , 1 2

.

8.

7 , 1 2 2  
 .

9.

1 2 ,

1 2 1 1 ,

1 2 1 2 2 ,

2 1 1 ,

2 1 2 ,

1 1 2 2  
 ,

1 , 2 1 가

.

10.

9 , 1 2 , 1  
2 .

11.

9 , 1 2  
.

12.

9 , 1 2  
.

13.

12 , 1 2 2  
.

14.

1 2 ,  
1 2 1 1 ,  
1 1 ,  
1 2 1 2 2 ,  
2 1 1 ,  
2 1 2 ,  
1 1 2 2  
 ,  
1 2

15.

14 , 1 2 , 1  
2 .

16.

14 , 1 2  
.

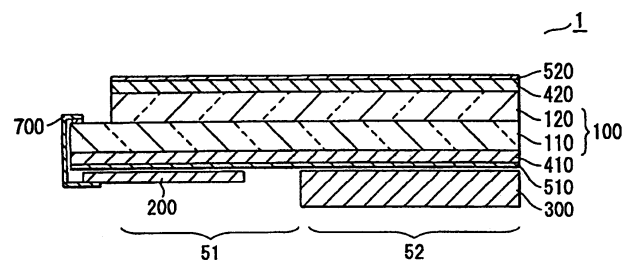
17.

14 , 1 2

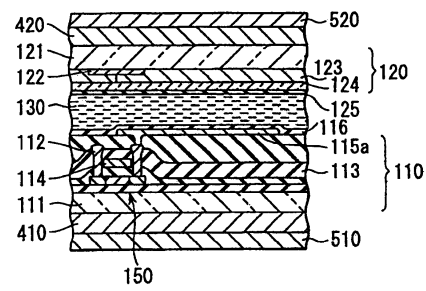
18.

17 , 1 2 2

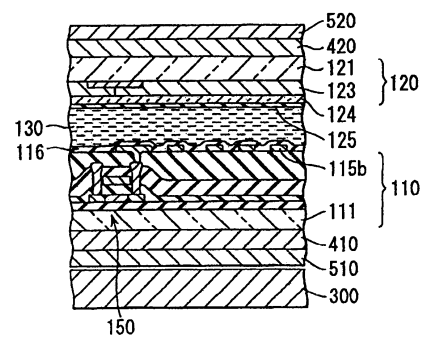
1a



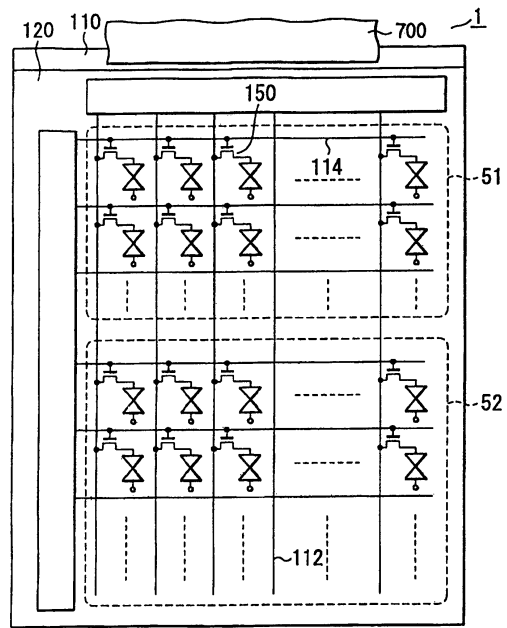
1b



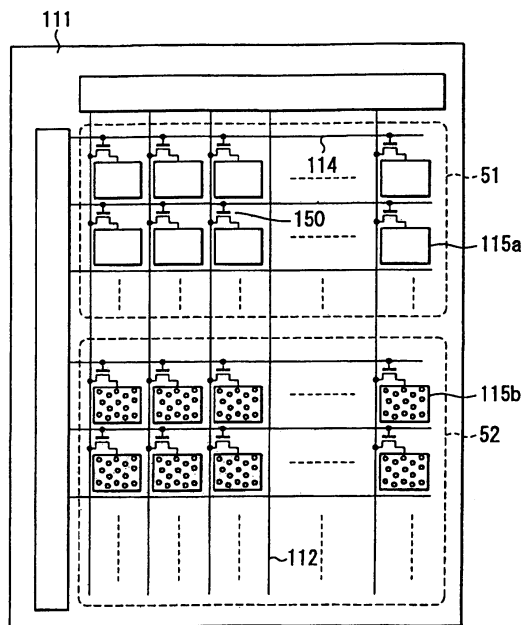
1c



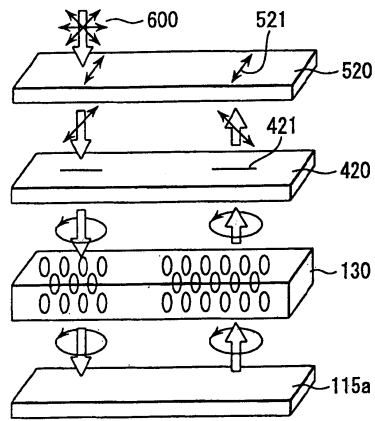
2a



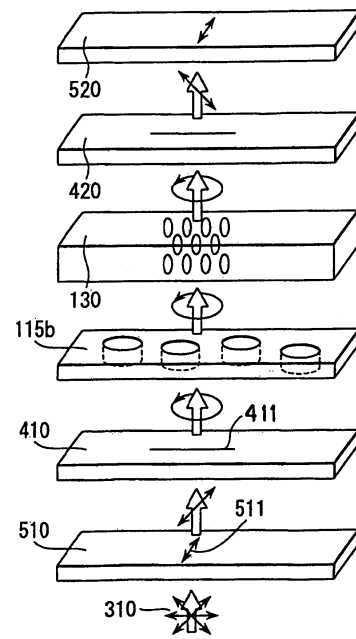
2b



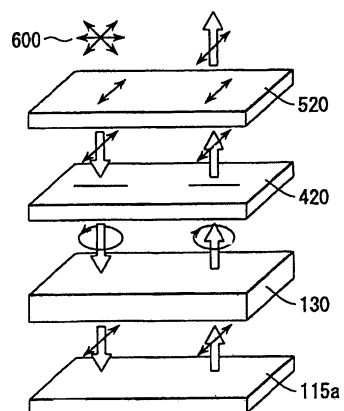
3a



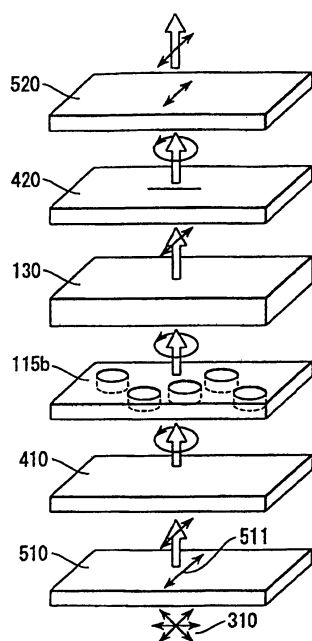
3b



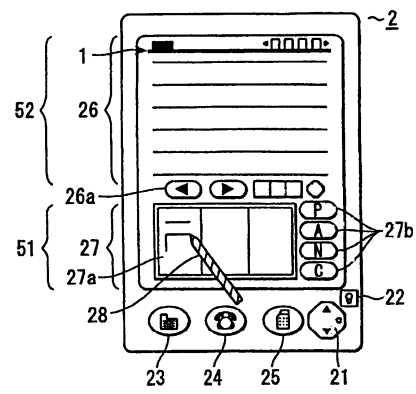
4a



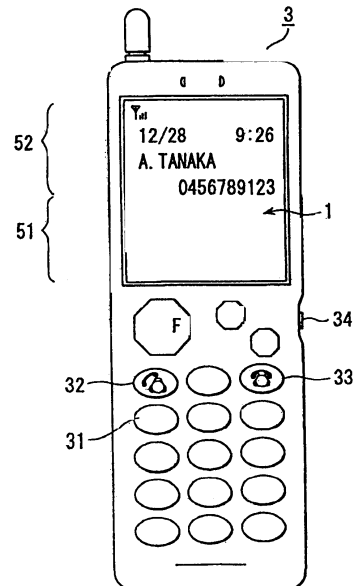
4b



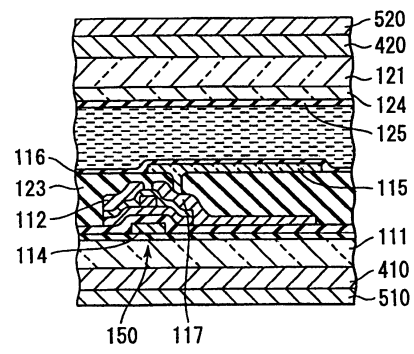
5



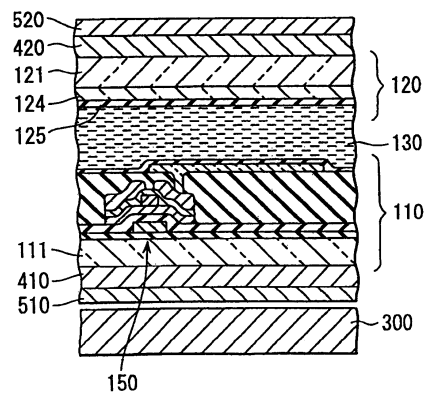
6



7a



7b



|                |                                                                                       |         |            |
|----------------|---------------------------------------------------------------------------------------|---------|------------|
| 专利名称(译)        | 液晶显示器                                                                                 |         |            |
| 公开(公告)号        | <a href="#">KR1020020061524A</a>                                                      | 公开(公告)日 | 2002-07-24 |
| 申请号            | KR1020020002044                                                                       | 申请日     | 2002-01-14 |
| [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         | SEIKI MASAHIRO<br>세이키마사히로<br>WATANABE RYOICHI<br>와타나베료이치<br>TOYAMA AKIMASA<br>도야마아키마사 |         |            |
| 发明人            | 세이키마사히로<br>와타나베료이치<br>도야마아키마사                                                         |         |            |
| IPC分类号         | G02F1/1335 G02F1/13363                                                                |         |            |
| CPC分类号         | G02F1/133553 G02F2001/133638 G02F1/133555                                             |         |            |
| 代理人(译)         | KIM , YOON BAE                                                                        |         |            |
| 优先权            | 2001006063 2001-01-15 JP                                                              |         |            |
| 其他公开文献         | KR100453088B1                                                                         |         |            |
| 外部链接           | <a href="#">Espacenet</a>                                                             |         |            |

# 摘要(译)

对应于设置有多数第一像素电极的第一区域的第一显示区域51通过光反射方法显示图像，并且对应于设置有多数第二像素电极的第二区域的第二显示区域51 ( 52 ) 具有能够通过光透射法显示图像的液晶显示装置。  
图1a

