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11 1651 - 3 103

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101 - 2 104

(74)

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(54) -

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6 7 -

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9a 9f 8 TFT

10a 9a TFT

10b 9c TFT

10c 9d TFT

10d 9f TFT

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2 가
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 , 가
 , 1 2
 , 1 2
 1 , 1 ,
 , RGB RGB
 1 (50) (Thin Film Transistor;
 TFT) (40) TFT(20) (10) TFT (40)
 (32) (31)
 (21) TFT(20) (21), (22) (23) ,
 (32) (31) (23) (22)
 (10) 1 (12)
 - 2 (11)
 , TFT(20) (23) (11) , (11)
 (13) (12)
 , 1 (12) 1
 , 1 (13) (11)
 2
 , (50) 1 (12) 3 (13)
 (11) 2 , 2
 , 1 2
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 , 3 가 2 ,
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가 . 2 가 ,

(12)

(13)
TFT

(11)

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(12)

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1 1, 1 1

1 1 1 2

1 2 2 1 2 2

1 1 2

1 2

1 2

2 2 (170) 1 (140) 2 (170) 1 (140), 1 (140) (160)

1 (140) (114), 1 (111) (114) 2 (112) (120), (115), 1 (116) (120) (114) (113) 1 (111), (111)

0) (121), (122) 1 (140) (122) (123) (120)가 (121) (12) (121) 가 (123) (122) (120) (123) 가

(120) (121) (120) (120) 1 (140) (120) (column) 가 (turn-on) (turn-off)

(122) (120) (122) (120) (low) 가 (120) 가 가

, (120) (122) 가
 , - 가 (120) (123) (122) (120) (123) 가
 , (120) (123) (160) 가
 (110) (120) (123) (123) (111) (112) (122)
 , (123) (111) (112)
 (120) 1 (114) 1
 (114)
 , 1 (140) 1 (114) (120)
 (123) (115) (115) (115)
 1 (114) (Indum Tin Oxide; , ITO)
 (Indum Zinc Oxide; , IZO) (111)
 , (111) 2 (116) 2 (116)
 (116) (111) (115) (115)
 116) (123)
 (115) (112) (111) (113) 2 (116)
 , 1 2 (114, 116)
 , 2 (116) (113) (112)
 (112) 2 (116)
 , 2 (170) 1 (140) (180) 2 (170)
 (140) (160)
 , (111) 2 (112) 3 (113)
 2 가 3 1
 , 2 가 (112) 가 가
 (112) 2 3 가
 (112) 2 3 가
 3 -

3 (120) , (150) 1 (140) (120) (120) (121) 1 (140)
 (110) . (122) 1 (140)
 (132) . , (123) (110) .

112) (110) 1 (116) ITO (111),
 (111) (112) . , (111) (
 (113) (113) (111)

3 (110) " 1 " (113) " 2 " ,
 (112) 1 2 " 3 " . , 2
 , 2 3 (112)

1 3 .
 , 1 , (10) 1 " 3A" , (12) 3 " 2A" ,
 (13) (11) 2 " A" .

, 3 (111) (113) 2 .

(113) , (110) 1 " 3A" , (112) 3 " A" ,
 (111) 2 " 2A" .

4 (R1, T1) , 5
 (R2, T2) .

4 5 (112) 30% , 2"
 - (200) . , x (,) (lux)
 , y - (200) (cd/m²) .

4 (11) , - (12) (13)
 15cd/m² ,
 10,000lux ,
 10cd/m² , 50,000lux , 40cd/m² .

4 , - 가 15cd/m²
 , 가 15cd/m² , .

가 (12) (13) 가 . (11) 가
 가 .

11) 5, 2, 3, 2, 가, 가, (112) 3, (200), (113), 5, (12)

(113) 2, 2, 가, 30cd/m², (112) 3, 1/2, 가, 10,000lux, 20cd/m², 5cd/m², 50,000lux

5, 가 30cd/m², 가 30cd/m², (200)

(113), (111) 2, 가, 가, (112) 3, 가

(112) 가, (113), (111) 3

(112) 3, 2, (170)

가

3, (111), (113), (110), (113), (112)

(113) 2, 3

6, 7, (112), (113a, 113b), (113a, 113b), (112), (113) 가, (110)

(112)

8, -

8, (260), TFT, (250), (200) TFT, (250), TFT, (250), (270)

TFT (250), (227), (221a), (227) (220), (226a), (226a) (220), 가 1 (270), (240), 2 (260) 2 (261) RGB (262) RGB (262) (160) (261) 2 (263) TFT (250) (263) (240) TFT (250) (260) (270), (200)가 TFT (250) (260) 9a 10d TFT 9a 9f 8 TFT 10a 9a TFT 10b 9c TFT 10c 9d TFT 10d 9f TFT 9a 10a - 9c 10b - 9d 10c - 9f 10d - 9a 10a 1 (210) 1 (210) (220) (Al), (Mo), (Cr), (Ta), (Ti), (Cu) (W) 1 (210) 1 (220) 1 (220) (221) (GL) (227) (221) (221) (221a) (GL) (221a) (Al - Cu) (Al - Si - Cu) 9b (221) (GL) (221a) 1 (210) (Si_xN_y) (222) (222) 9c 10b (222) (in - situ) n⁺ n⁺ 2 () (222) (221) (223) (224) (223)

Ag) , 9d 10c , 1 (210) (Al) (

() 2 (GL) 2 3 (

(225) (226) (DL), (DL)

(222) (227) , 1

(226a)

, 1 (210) (221), (223), (224),

(225) (226) (220)가 .

, (226a) (Al) (Ag)

(250) - 1 (200) (260) , TFT

(260)

9d , - (200) (221a), (

226a) (221a) (226a) (222)

(227)

, (227) (221) (221a)

(225, 226) (226a) (226a)

(227) (221a) (226a) (d)가

(227) 가 .

9e , (220) (227)가 1 (210)

(226) (230) , (220)

(230) (231) 4 () (220)

(231)

(230) BCB(bisbenzocyclobutene) PFCB(perfluorocyclobutene)

, (SiO₂) (SiN_x)

9f 10d , (230) (220) 가

(260) (263) (270)

(240) . (240) ITO IZO ,

(231) (226) (220)

가 .

10d , (226a) 4 (E) (240) 5

, 6 (F) 4 (E) 4 (E) 6 (F)

. , 6 (F) 6 (F) 2 .

, (226a) 4 (E) 2 6 (F) ,
1

, (226a) 가 (226a) 4 (E) (226a) 4 (E) ,
, (240) 5 1/3 가 .

, (226a) 4 (E) 6 (F) ,
1 (260)

- , , , 1
2

, 1
2

1 , - ,

(57)

1.

1 , 2 , ,
1 ;

1 2 ;

1 2 ,

2 1 - .

2.

1 , 2 가 -

3.

1 , . -

4.

1 1 , 1 , 1 1 2 1 1
, , 1 1 2 2 가 , 2
, 1 2 가 1 2 가
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; , 2
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5.

4 , 2 1 3 - .

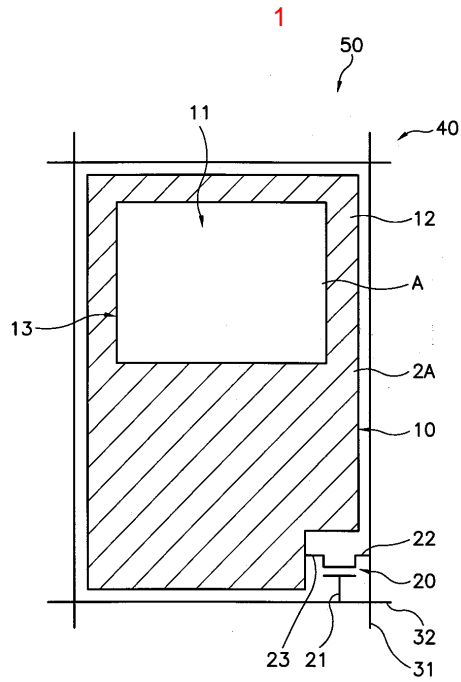
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1 1 ;
1 1 ;
1 1 ;
1 1 , 1 , 1
1 1 , 2 ;
1 1 , 1 2 ;
1 2 2 1 2
, 2 .

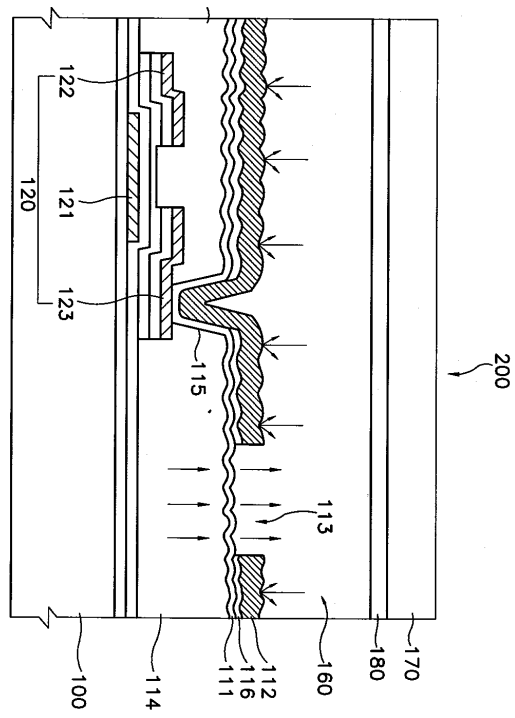
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6

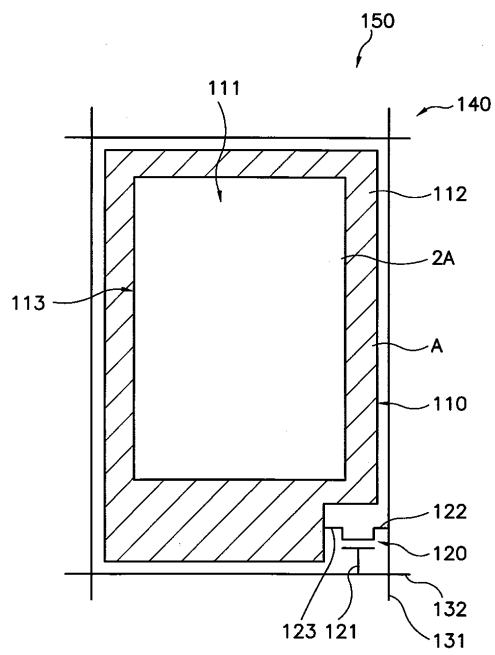
(Al), (Ag),



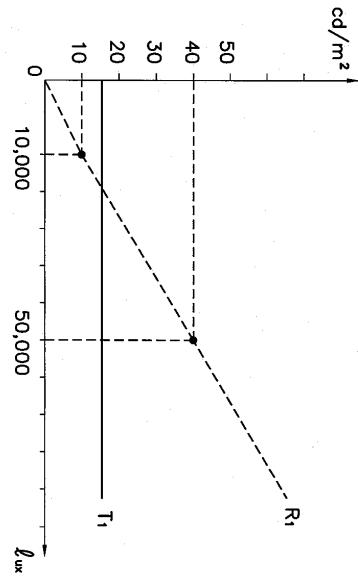
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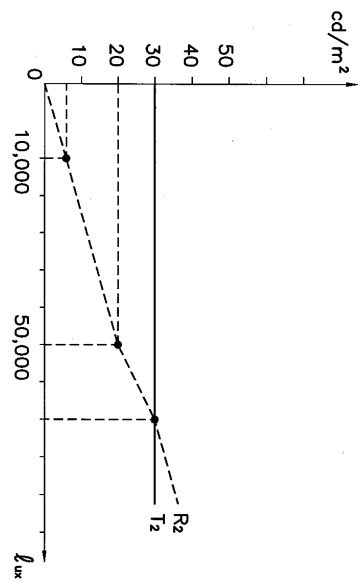
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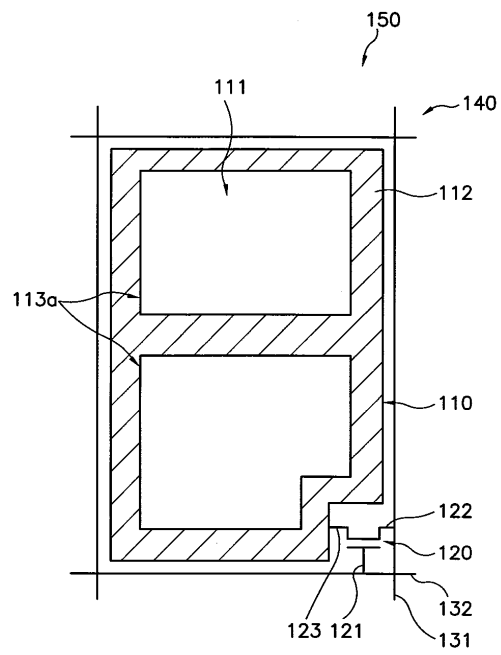
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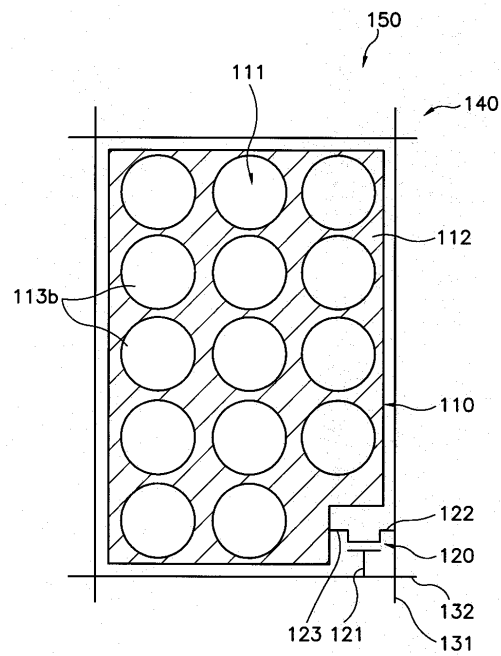
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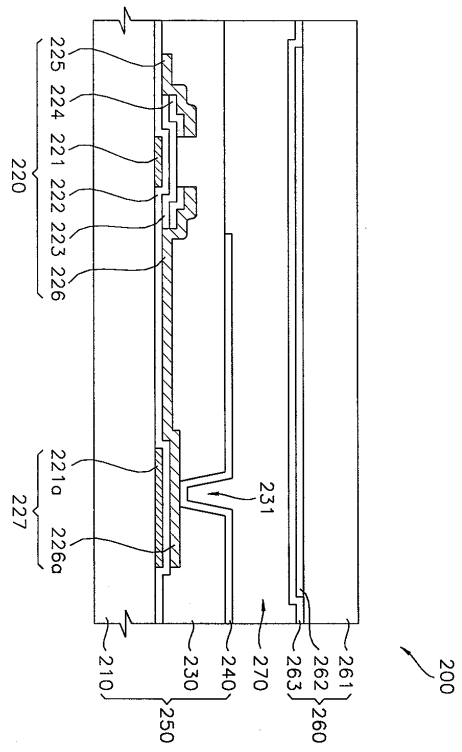
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7



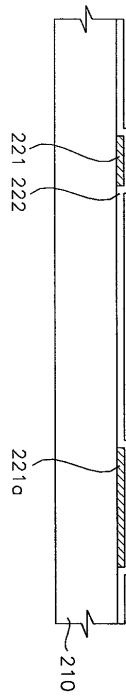
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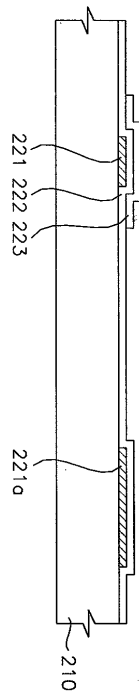
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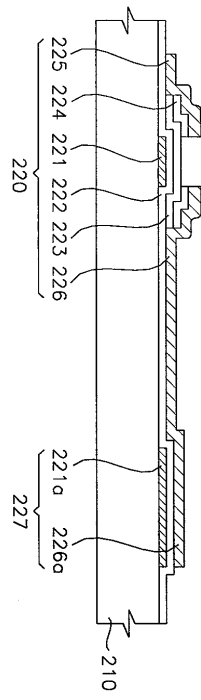
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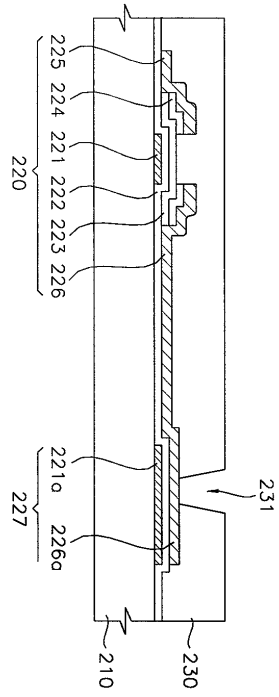
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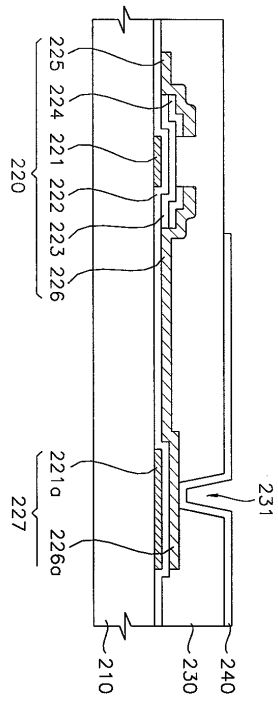
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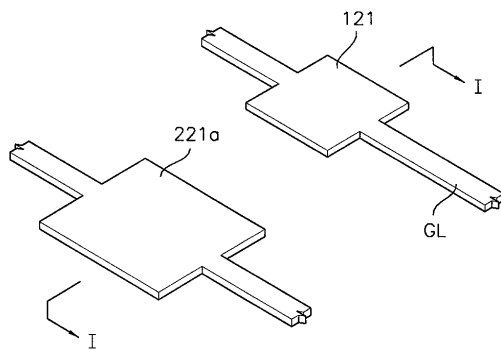
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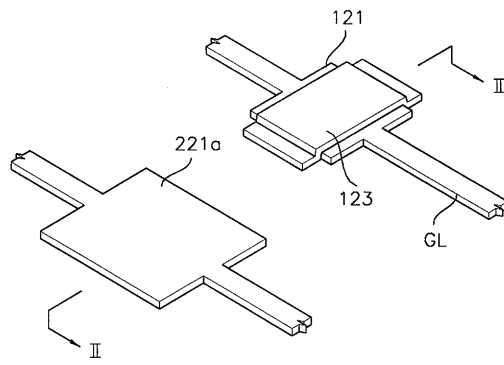
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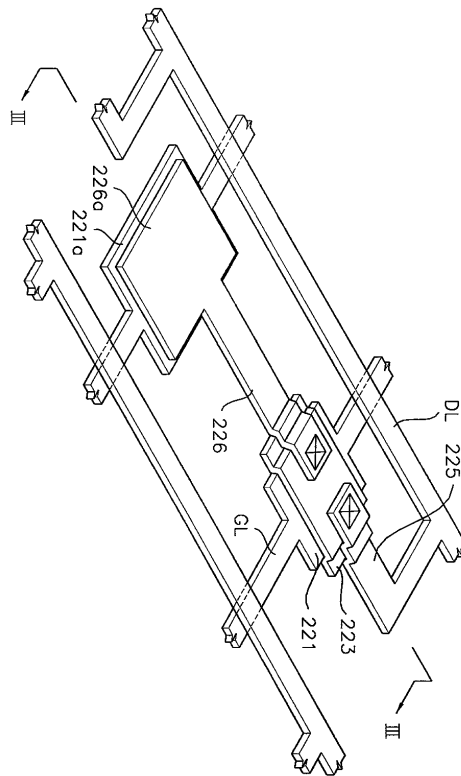
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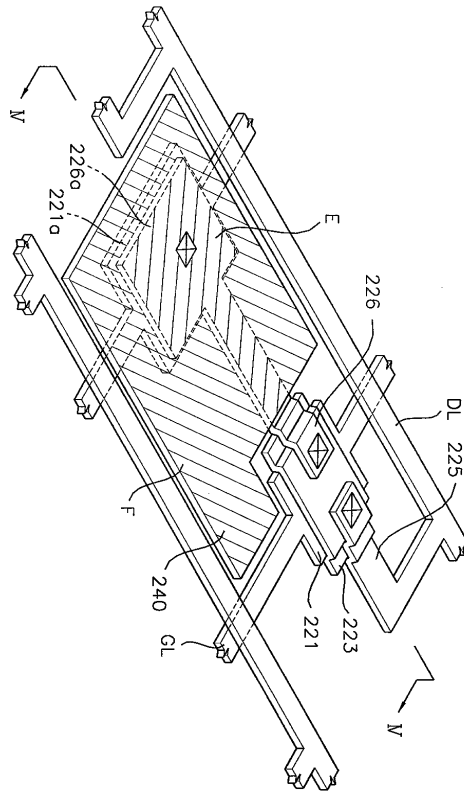
10b



10c



10d



| | | | |
|----------------|--|---------|------------|
| 专利名称(译) | 反射型透射型液晶显示装置及薄膜晶体管基板的制造方法 | | |
| 公开(公告)号 | KR1020030012792A | 公开(公告)日 | 2003-02-12 |
| 申请号 | KR1020020001803 | 申请日 | 2002-01-11 |
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| 申请(专利权)人(译) | 三星电子有限公司 | | |
| 当前申请(专利权)人(译) | 三星电子有限公司 | | |
| [标]发明人 | MOON KOOKCHUL 문국철 YOON JOOSUN 윤주선 CHOI PILMO 최필모 YANG YONGHO 양용호 AHN YANGSUK 안양석 KIM HONGGYUN 김홍균 | | |
| 发明人 | 문국철 윤주선 최필모 양용호 안양석 김홍균 | | |
| IPC分类号 | G02F1/1368 G02F1/1335 G02F1/1343 | | |
| CPC分类号 | G02F1/133555 | | |
| 代理人(译) | PARK , YOUNG WOO | | |
| 优先权 | 1020010046648 2001-08-01 KR | | |
| 其他公开文献 | KR100787914B1 | | |
| 外部链接 | Espacenet | | |

摘要(译)

公开了透射反射型LCD，其最小化了反射模式和透明模式之间的不同视点。在基板上形成与薄膜晶体管的漏电极和薄膜晶体管接触的像素电极。像素电极包括反射电极和传输电极，反射电极用于利用反转舵从外部产生的第一光，传输电极用于传输为其自身产生的第二光。此时，反射电极的面积形成得小于反射电极彼此不对应的透射电极的面积。因此，可以最小化使用第二光指示图像的透明模式和使用第一光指示图像的反射模式之间的不同视点。而且，由于在诸如薄膜晶体管的源极和漏极之类的工艺上形成反射电极，所以可以减少透射反射型LCD的制造工艺。透射反射型LCD的厚度可以最小化。

