



4a 2

4b 4a IV-IV'

5a 3

5b 5a V-V'

\*\* \*\*

16,116,216,316 : 17,117,217,317 :

18,118,218,318 : 119,219,319 :

140,240,340 :

(Liquid Crystal Display; LCD)

Flat Panel Display; FPD)

hode Ray Tube)

(  
CRT(Cat

(color filter) (array)  
(liquid crystal material layer)

1  
(16) (10) (17), (16) (18), (10)  
(Thin Film Transistor; TFT)(20)  
(20) (16) (21), (17) (22)  
(18) (23) (22, 23) 1 (21) (20)  
(21) / (23) (conductive channel)  
(22) (23) 2 ( ) , 1 (24)  
(23) (18)  
(16) (17)  
(18) - - (Indium Tin Oxide : ITO)

가 가 , 가

e) 가 . (gray scale) (flicker) (afterimag  
 ack voltage) V 가 1 . (C<sub>gs</sub>) (level shift voltage) (kickb

$$\Delta V = (C_{gs} / (C_{gs} + C_{lc} + C_{st})) \times \Delta V_g$$

V V<sub>ghigh</sub> - V<sub>glow</sub>, C<sub>lc</sub>

C<sub>st</sub>

가

가

가

(flicker),

V

/

C<sub>st</sub>

V

가

n

(storage on common)

(storage on gate)

(previous gate)

16n-1  
(18)

(33)

(17)

(33)

/

(30)

2

(22, 23)

(30)가

2

(18)

(16)

(34)

가

가

가

가

SiN<sub>x</sub>, SiO<sub>x</sub>

3 5μm

가

가

(pitch)가 가

가

가

가

가

가

(disclination)

가

가

가

가

1

가

가

가

(back light)

가

가

가 가  
가

가  
가

가

2a 1 II-II' , 2b 2a

N M NxM 가

2a 6), 가 가 , (110) ( ) 가 가 (11  
 (120) (117), (120) (118)

22) (120) (118) (120) (116) (121), (117) (1  
 (120) (121) / (123) (122, 123) 1 , (121)  
 (123) 1 (122) (123) ( ) , 1 (124)  
 (123) (124) 2 (118)

1 (130) 2 (118) (116n-1) . 1  
 (133) 1 (134) (118)  
 (116n-1)

, (117) (119) (118) (118) 2 (119) .  
 (119) (119) (118) , (119) (118)

(119) (119) 가 , (119) (140) (140) (118)  
 (118)

, (140) (140) 3 (144) (118) . 2 ,  
 (140) (119) 2 2

, (117) (119) (140) ,  
 (119) (117) (119) 가 (117) ,

, / (on/off) 가 가  
 (118) 가 , (140) (1

17) (118) 가 , (140)

2b II-II'

(116n-1) , (119) , (110) (110) 1 가 (115a)  
 (Mo), (116n-1) , (Cu) (119) (sputtering) (Al),  
 (110)

1 (115a) (116n-1) (119) (SiN<sub>x</sub>)  
 (SiO<sub>x</sub>) (Chemical Vapour Deposition; CVD)

1 (115a) 가 (117), (140) 1 (140) 1  
 (133) (117), (140) (133) (118)  
 (110) 2 (115b)

(Mo), (117), (140) 1 (133) (Al),  
 (140) (117) (Cu)

2 (115b) (Teflon), BCB(benzocyclobutene), (cytop) PFCB  
 (perfluorocyclobutane) (acrylic) 가

2 (119) (118) (119) (118) (119)  
 (140) (140) 3 (144) (118)  
 (140) (119) (118)

(140) (140) (140) 2 (119)  
 가 (140) (118) 2

2 (140) (119)

$$C = \frac{A^2}{d}$$

C (140) (119) , A (overlap)  
 , d

(140) (119) 가  
 (permittivity; )

2 가 (118) (115a) 2 (115)  
 140) 가 1 (115a) 가 1 (115)

b) 가 1 (115a)

1

(shield)

가

가

(simulation)

3a 2a , 3b 3a III-III' 3b  
 2a , 2a ,  
 3b a, b, c d 2, 9, 3.5 4 $\mu$ m  
 3a ,  
 가  $\mu$ m  
 , 가 10 $\mu$ m 가 ) 가 3a  
 가 가 2 $\mu$ m 가 가 ,  
 , ) 가 가 ( , 가 가  
 4 2  
 2 2 1  
 , 2  
 , (240) (240) (219) (218) (219) (21  
 8) (240) (217)  
 (230) 1 (240) (216) , 1 (240) (218)  
 3 (240) (240) (216) 2 1  
 가 (240) (216) 2  
 5a 3 , 5b 5a  
 V-V'  
 5a 가 가 , (310) ( ) 가 가 (31  
 6), 20) 가 가 (317), (318) (31  
 1 (330) (318) 1 (335) (335)  
 1 (316) (318) 1 (330)  
 1 (330) 2 ( ) (344) (318)  
 1 (333) 1 ( ) 1 (318)

, (317) (319) 1  
 (335) (319) (318) (318) (318)  
 2 (319) (318)  
 , (319) (319) (340) (340) (318)  
 (319) 가 , (340) (340) 1  
 (318) (340) 1  
 (333)  
 3 1 1 (333) 1 (335)  
 1 (330) (340) (319) 2  
 , (340) (318) (344)  
 5b (310) (316), 1 (335)  
 (319) (310) 1 (315a) 1  
 (315a) (317), (340) 1 (333) (333)  
 (317), (340) 1 (333) (310) 2 2 (315b)  
 (344) (340) 1 (333) , 2 (315b)

(57)

1.

;

;

;

가

;

가

2.

1

3.

2

;

1 ;

1 ;

;

2

4.

3 ,

5.

3 , 1

6.

1 , 가

7.

6 ,

8.

1 , 가

9.

1 ,

10.

;

;

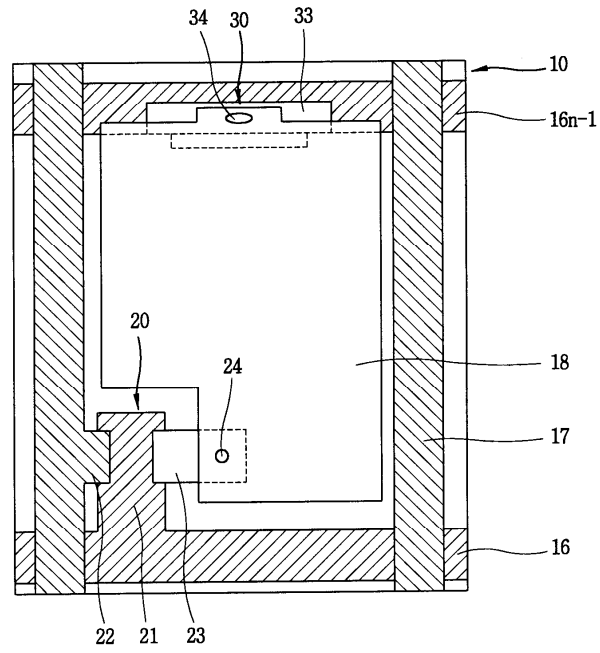
;

;

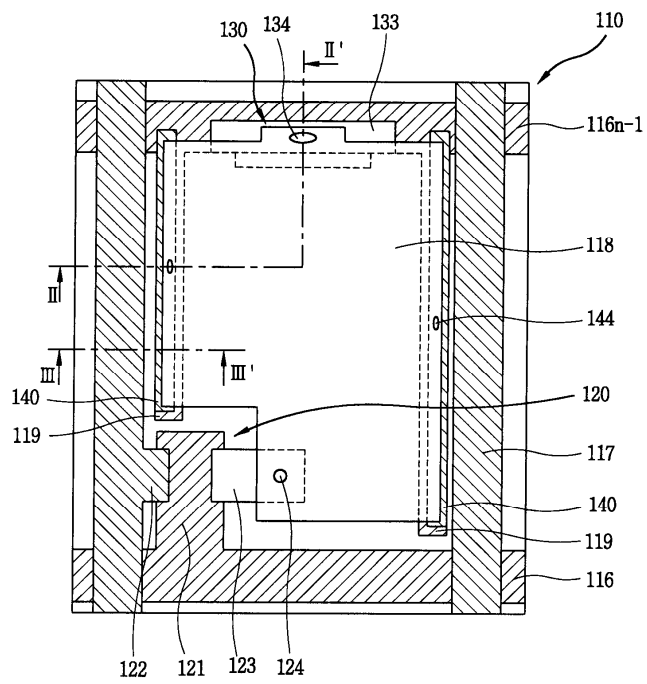
11.

10 , 가

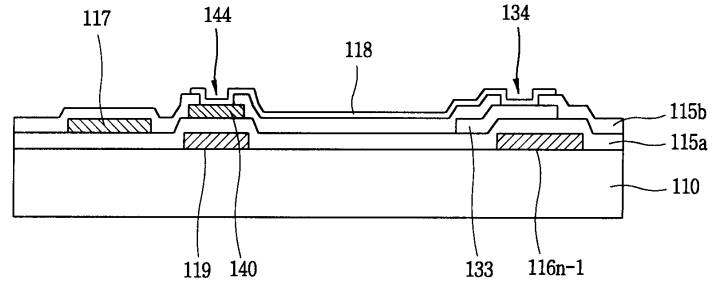
1



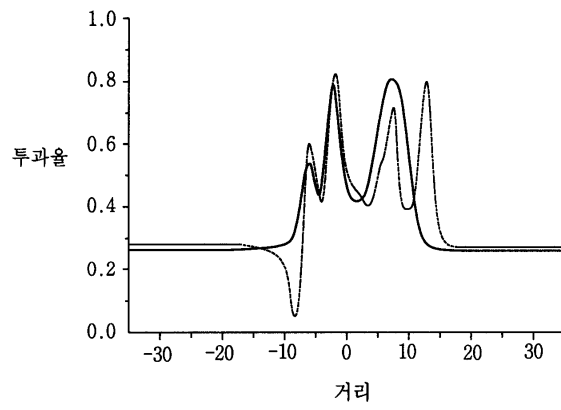
2a



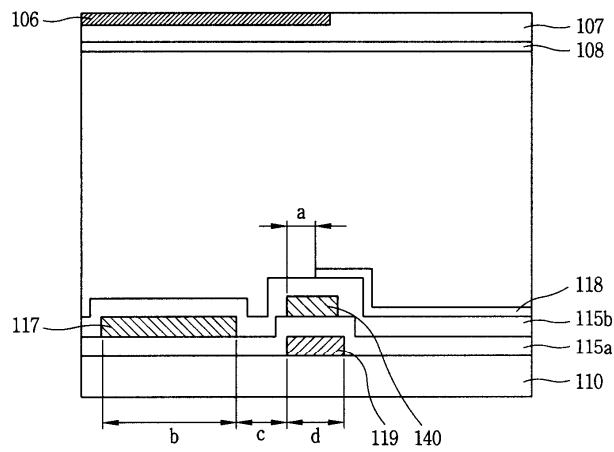
2b



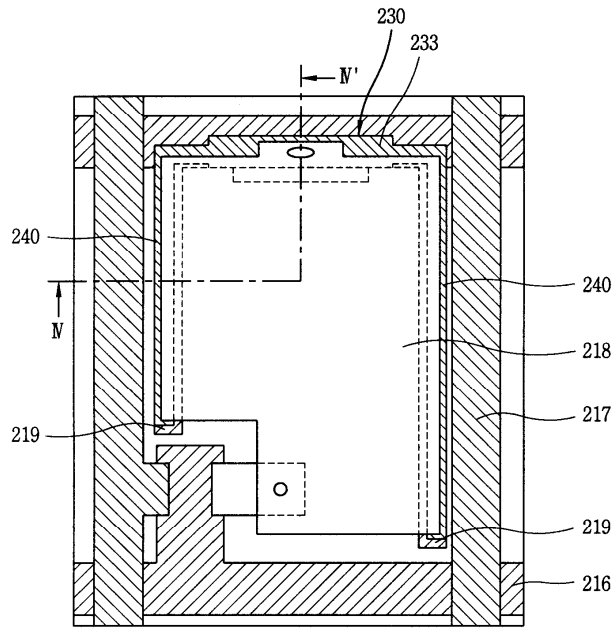
3a



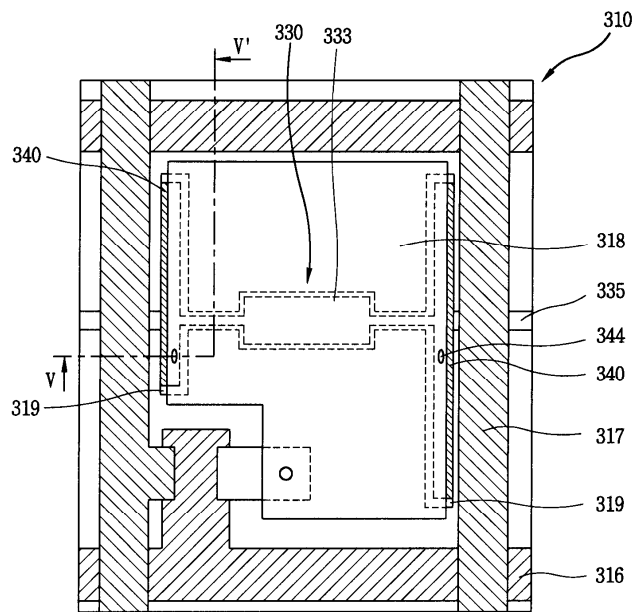
3b



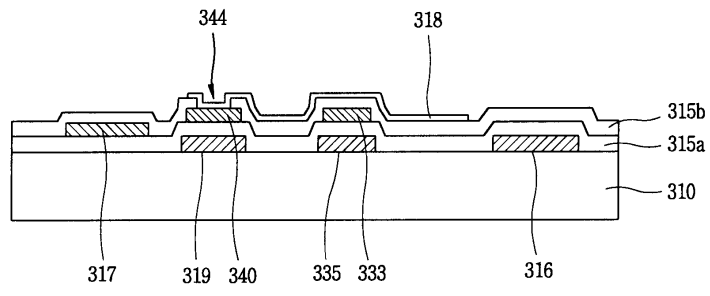
4



5a



5b



专利名称(译)	液晶显示装置防止漏光现象		
公开(公告)号	<a href="#">KR1020040110884A</a>	公开(公告)日	2004-12-31
申请号	KR1020030040368	申请日	2003-06-20
[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 KWANGMIN 김광민		
发明人	김광민		
IPC分类号	G02F1/1343 G02F1/1362		
CPC分类号	G02F1/1362 G02F1/136286 G02F1/136213 G02F2001/136218 G02F1/136209 G02F2201/40 G02F2001/13606		
代理人(译)	PARK , JANG WON		
其他公开文献	KR100532087B1		
外部链接	<a href="#">Espacenet</a>		

摘要(译)

本发明的液晶显示器配备有栅极虚拟线：其中部分重叠在数据线的交叉域中形成的开关元件的至少一侧；每条栅极线和数据线：像素电极形成在像素区域上的像素电极；限定多个像素区域的像素电极，用于改善图像质量，防止像素边缘的漏光现象，多条栅极线与像素电极一起沿数据线和数据虚拟线排列沿着栅极虚拟线布置在像素电极的至少一侧，并且其与像素电极电连接，并且其一部分与像素电极重叠。数据虚拟线，栅极虚拟线，存储电容器，漏光现象。

