

(19)  
(12)

(KR)  
(A)

(51) 。 Int. Cl. 7  
G02F 1/1343

(11)  
(43)

2003 - 0009581  
2003 02 05

(21) 10 - 2001 - 0041671  
(22) 2001 07 11

(71) . 20

(72) 915 3 105 702

(74)

:

(54)

Vp

1 가 ,

1

2

가 ,

1

2

3

, , , , ,

- 1 .
- 2 가 .
- 3 1 .
- 4 2 .
- 5 3 .
- 6 4 .
- 7 5 .
- 8 6 .

\*

21 : 21a :

23 : 24 :

24a : 24b :

24c : 27,28 : 1, 2

29 : 55,75 :

(LCD ; Liquid Crystal Display Device) ,

, 가 , (contrast) 가  
가 , CRT(cathode ray tube)

, - (Level - shift)

가 ,

,  
가 ,

(storage capacitor)

(storage on common) 가 (storage on gate) (n - 1)

n

가

(dot - inversion), - (column - inversion)

1 2 가

(11) (14) (14) (11)

(14c) ( ) ITO 1, 2 (17,18) (19)

(14c) (11)

2 (G) / (S/D) (capacitance) Cgs가 (voltage offset), Vp (flicker), (image sticking), Cst

Vp

가

Cgs가 Vp /

2 Clc D.L (Vcom) 가 , G.L 가 가 (Vst) , Cst

(11) (11a) (11)

(13) (13) (11a) (14a/14b) (11)

(13) (a - Si;TFT)가 .

ITO R,G,B(red, green, blue)  $\mu\text{m}$

Vp CD(critical dimension) (mis - align) 가

Vp가 가

(self - compensation) 가

가 1 1

가 2 가 1 2

(capacitance) (storage capa

3, 4, 5, 6, 7 8 1, 2, 3, 4, 5 6

1 R,G,B(red, green, blue) ITO (21) (2

1) (SiNx) 가 (SiOx) (24) 2 가

( ) (21)

(21) (24c) ,  
 BCB, ( ) ,  
 2 (27,28) (24c) ITO(Indium Tin  
 Oxide) (29) .  
 (Ta), Al (21) (24) (Al), (Cu), (W), (Mo), (Ti),  
 (sputtering) (24c) (24) (photolithography)  
 , " I" (21) (21a) ,  
 (21) ( ) , (21a) (21a)  
 / (23) , (23) 가 (21a)  
 (24a/24b) (24a/24b) (21a) /  
 , (21) (24c) ,  
 , 가 (21a) / (24a/24b) 가  
 , Vp  
 1, 2 가 1 , 1 가 2 , 2 ,  
 1 가 , 1, 2  
 가 , 가 (21) 가 (24c) (22)  
 가 (21) 가 (24) (24c)  
 , (Cgs) 1 ( Vp) 가 ,  
 가

1

$$\Delta V_P = \frac{C_{gs}}{C_{gs} + C_{st} + C_{lc}} \Delta V_g$$

Vp가 Vp

가 가

2

2

$$\Delta V_p = \frac{C_{gs} + C_{gs}}{(C_{gs} + C_{gs}) + (C_{st} + C_{st}) + C_{lc}} \Delta V_g$$

n gate) , 가 (storage o

" I" / , 가 (shift)

(24c) (24) (29)

가 (39a) ITO (39)

(31) , 1 가 1 가 (39a) , (31) (39a) )

Vp

가 1 가 , 2 1

5 3 3 4 가 (55)

" L" , " U" TFT " I" TFT " L" , " U" TFT 가 , " U" TFT Vp

Vp

TFT TFT (channel)

" L" TFT 6 , (41) 1 , 1 (44c) 2 1

가 / (44a/44b) Cgs가 가 Cst가 가

" U" TFT 1 U , 2

7, 45. 가 " U" TFT / (74a/74b)  
 Cgs 45. 45. (75)

가 45. 가 " U" TFT 0. , 90. 가 " U" TFT  
 가 가 ,  
 가 .

8 , (81) , (81)  
 1 가 (81c) , (81)  
 (84) , (81c)  
 2 가 (84c) , (81) (84)  
 ( ) ,  
 1 , 2 (87,88) (84c)  
 (89)

(84) (81c) (81) (84c)  
 (Al), (Cu), (W), (Mo), (Ti), Al  
 (sputtering) (photolithography)

(81c) (84c)  
 가 , (81c,84c) 1 ,  
 2 Vp ,

b) (81a), ( ) , (83), / (84a/84  
 (81a) / (84a/84b)  
 " I" TFT, " L" TFT, " U" TFT TFT TFT

가 .

Vp

가 .

L TFT, U TFT

(57)



10.

1 , 가 " U" , 1, 2 " U"

11.

1 ;  
1 가 ;  
2 가 ;  
;  
;

1 2

12.

11 , .

13.

11 , .

14.

11 , .

15.

11 , " I" , " L" " U" .

16.

11 , 1, 2 가 .

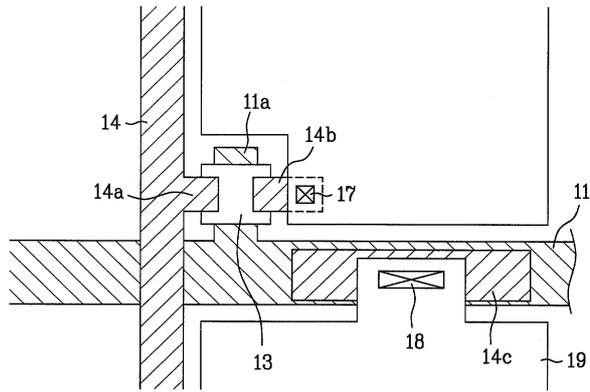
17.

11 , 1, 2 " U" .

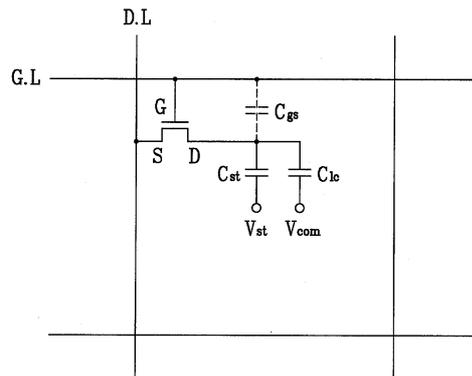
18.

11 , 1 2 .

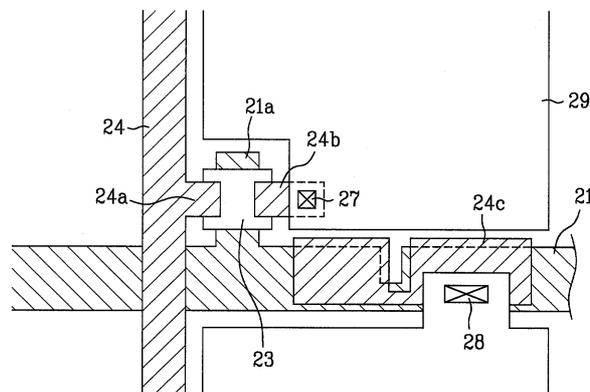
1



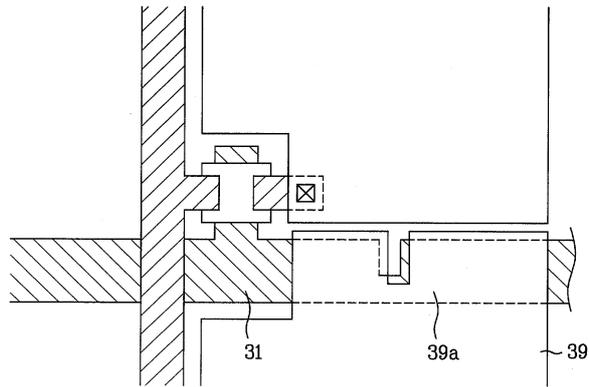
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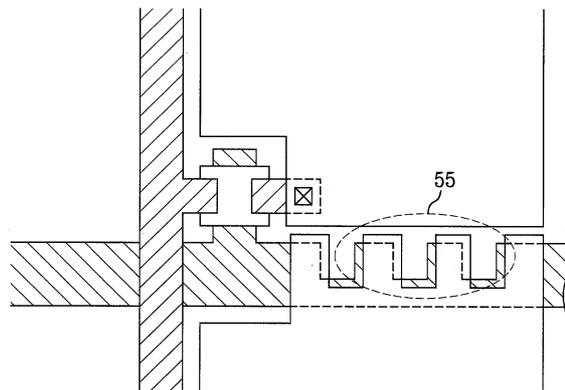
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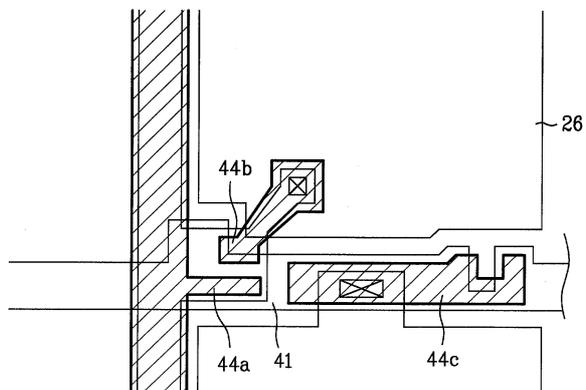
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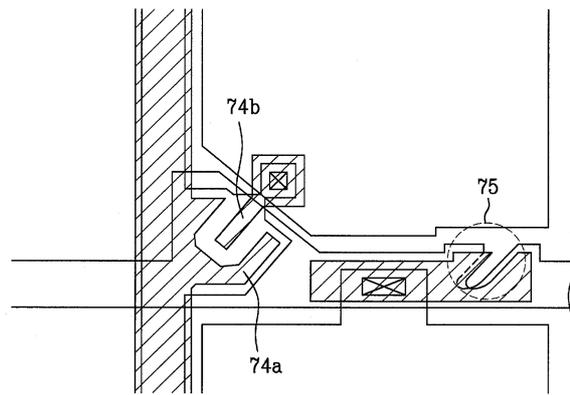
5



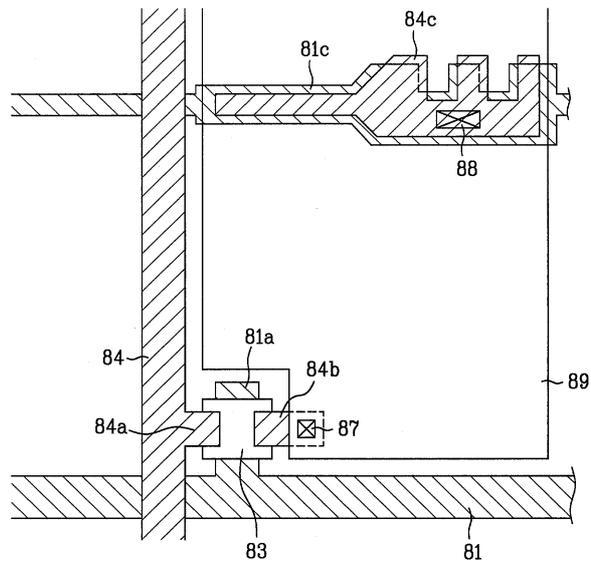
6



7



8



专利名称(译)	液晶显示元件		
公开(公告)号	<a href="#">KR1020030009581A</a>	公开(公告)日	2003-02-05
申请号	KR1020010041671	申请日	2001-07-11
[标]申请(专利权)人(译)	乐金显示有限公司		
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IPC分类号	G02F1/1343 G02F1/1362 H01L29/786 G02F1/1368		
CPC分类号	G02F1/136213		
代理人(译)	金勇 新昌		
其他公开文献	KR100469342B1		
外部链接	<a href="#">Espacenet</a>		

摘要(译)

本发明涉及一种液晶显示装置，它通过设计存储电容器在像素内均匀地进行 $\Delta V_p$ ，以补偿寄生电容的变化并改善图像质量。特别地，它包括液晶层，该液晶层形成在第一基板上并且形成有至少一个第一补偿图案，作为具有至少一个第二补偿图案的电容器电极，其形成在指定区域中。多个栅极布线，具有数据线，其与布线的栅极布线和栅极上部交叉布置，并且像素电极连接到形成在栅极布线和数据线的交叉点处的薄膜晶体管，并且连接到薄膜晶体管和面对第一衬底的第二衬底。高分辨率，闪烁，余像，寄生电容，奖励架构，存储电容。

