

(19) (KR)
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(22) 2002 12 20

(71) . 20

(72) 808-5110/4

190-15

1 550-90

111 803

(74)

:

(54)

,

.

가 , 가 ,

가

, 가

1					
2		LOG			
3	1	LOG	(A)		
4					
5	4	B-B'	C-C'		
6		1			
7a	6			가	
7b	6			가	
8		2			
9	8	TCP			
10	8	TCP			
11	8	TCP			

1a, 101a : 1b, 101b :
2, 102, 302 : 4, 104 : PCB
6 : PCB 8, 108, 308 : IC
10, 110 : TCP 12, 112, 312 : IC
14, 114 : TCP 18, 118, 318 :
106, 306 : PCB 120, 320 :
214 : 310 : TCP
340 :

가 .

가 N N 가 N 가
 N+1 , N+1
 N+1
 1 m/2
 , m/2+1 m

가 .

가 .

4 10

4 5 , (DL) 가 (DL) 가 (GL) (230)
 (GL) (214) , (DL) 가 (252)

(210) (210) (GL) (SiNx) (SiOx) (250) (250)
 (210) 1 (270) (210) 1 (270) (214)
) (210) (226) (230) (214)
) (230) (DL) (DL) (230)
 (DL)

(SiOx) (214) 2 (226) (272) 가 (210) (SiNx)

251) , 2 (270) (250) (251) , (251)
) (250) (276) (276) N P

2 (272) (276) Mo, Cr (256) (252)
 (DL) (256) (224) (DL) (256)
 (270, 272) (214) (252) 1 2
 (276) (256) (256)

(210) (SiNx) (SiOx) (274) (254) (252) (224)

(220, 220) (230) (254) (220) (222)

(Indium Tin Oxide) (Indium Tin Oxide) (228)가 (229)가

(226) (Indium Tin Oxide)

(Cst) (GL) (230) (GL) (230)

(Cst) (GL) (230) (272) (G)

(240) (DL) (230) (252, 256) 2

(272)

(214) (DL) (101b) (GL) (2

28) (229)가 (GL)

(Liquid Crystal Display :

'LCD') 6 (102) (DL) (GSL)

IC(108) , (102) IC(112)

(102) 4 5 (DL) 가 가 가

(DL) (GL) (GSL)

(DL) (DL) (GSL)

(102) (DL) (GSL)

IC(108) (Tape Carrier Package, 'TCP')(110)

(102) (DL) PCB(106) (118)가 (Printed Circuit Board; 'PCB'

(118) IC(108)

IC(112)

IC(108) PCB(106) (118) (R), (G) (B) (R

(Dclk) (R, G, B)

(DL) IC(108) 1

IC(112) 6 TCP(114) (102)

IC(112) PCB(106) (120) (GSL) (118)

TCP(114) TCP(110) (102)

(DL) (GSL)

TCP(114) N N (GSL)

N N+1 N N (GSL) N

N+1 N 7a

(GSL) N (GSL) N+1 1 (GSL) (270) 가 N
 (GSL) N (GSL) 가 N+1 (GSL) 7b (GSL) 1 가
 (GSL) 가 N+1 (GSL) 가 (GSL)
 , 1 LCD (102)
 IC(112) (102) PCB(106) (102) LOG 가
 (GSL) 가 (GL) 가
 2 LCD 8 (302) (DL) IC(308) , (302) I
 302) (GL) (GSL) IC(312)가 TCP(310)
 C(312) IC(308) IC(312)가
 (302) 4 5 가 가 ,
 (302) (DL) 가 (GL) 가 ,
) 가 , (302) (DL) (GSL) 가
 가 (GSL)
 TCP(310) IC(308) IC(312) TCP(310) IC(308)
 IC(312)가 , IC(308)가
 IC(308) (302) (DL) PCB(306)
 . PCB(306) (318)가
 (318) IC(112) IC(308)
 IC(308) PCB(306) (318) (R), (G) (B) (R)
 (Dclk) , IC(308) (R, G, B) (Dclk)
 (G) (B) IC(308) 1
 (DL)
 IC(312) (302) IC(312) PCB(306)
 (320) (GSL) (318)
 IC(312) (318) (GSP)
 () , IC(112)
 TFT (DL) 가 (Clc)
 , IC(308) IC(312)가 TCP(310) 1 N/2
 (DL) (DL) N IC(308)
 (GSL) , N/2+1 IC(312)
 (GSL)
 , 2 LCD IC(308)

IC(312) TCP(310) TCP가
가 (302) , (302) IC(312) PCB(306)
(302) LOG 가 (302) 가 (GSL) , 가
가 가 (GL) 가
. ,
, IC(312) 2 LCD TCP(310) IC(308)
9 (340) TCP(310)
. ,
, TCP(310) (302) (340) (DL)
(GSL) 9 가 . , TCP(310) 1 N
/2 (GSL) (DL) , N/2+1 N
(340) (GSL) TCP(310) (340)
(D1 Dn) , (10) (G1 Gn)
. ,
(340) TCP(310) (302)
(GSL) (302)
. ,
(340) TCP(310) 11 (D1, D
2) (G1, G2) . (340) TCP(310)
(302) TCP(310)
. ,
(340) TCP(310)
15 가 1024 × 768
1024×3 , 768
(302) 가 , (340) TCP(310)
TCP(310)

LOG
, ,
가 , 가
. ,
가
. ,
가

(57)

1.

가 ,

가 ,

가 .

2. 1 ,

3. 1 ,

N 가 N ,

N+1 가 N 가 N+1 .

4. 1 ,

가 .

5. 가 ,

가 ,

가 ,

가 .

6. 5 ,

가 .

7. 5 ,

가 .

8.
5 ,

.
9.
5 ,

.
10.
5 ,

N 가 N ,
N+1 가 N 가 N+1 .
11. 가 ,
가 ,

 ,

 ,

가 .
12.
11 ,

 ,

가 .
13.
11 ,

 ,

가 .
14.
11 ,

.
15.
11 ,

N 가 N ,

$$N+1$$

가

N

가

$$N+1$$

16.

11

,

1 $m/2$

;

$$m/2+1 \quad m$$

17.

11

,

18.

17

,

가

19.

17

,

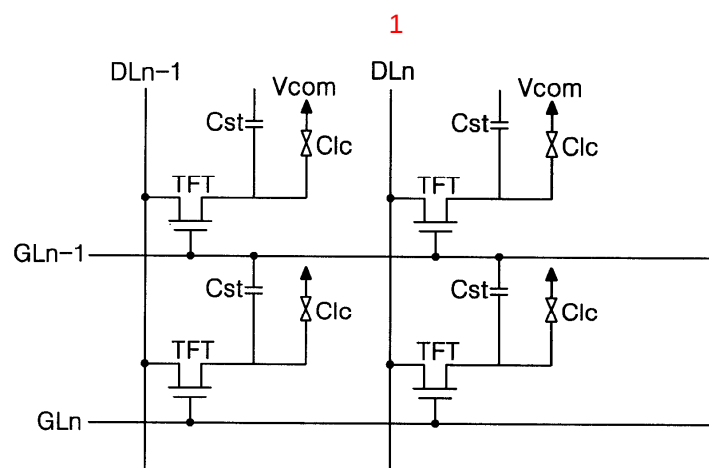
가

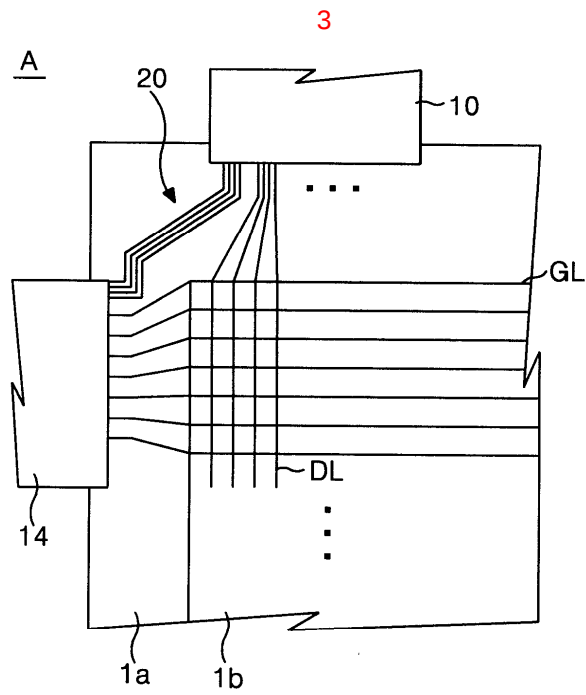
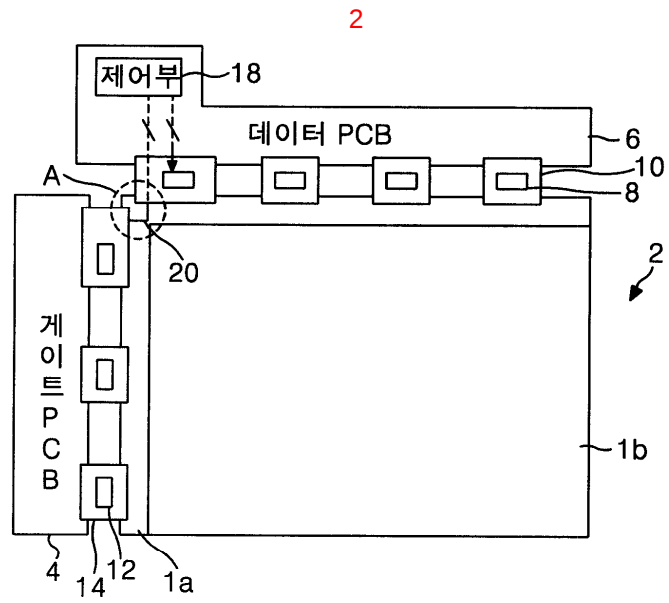
20.

17

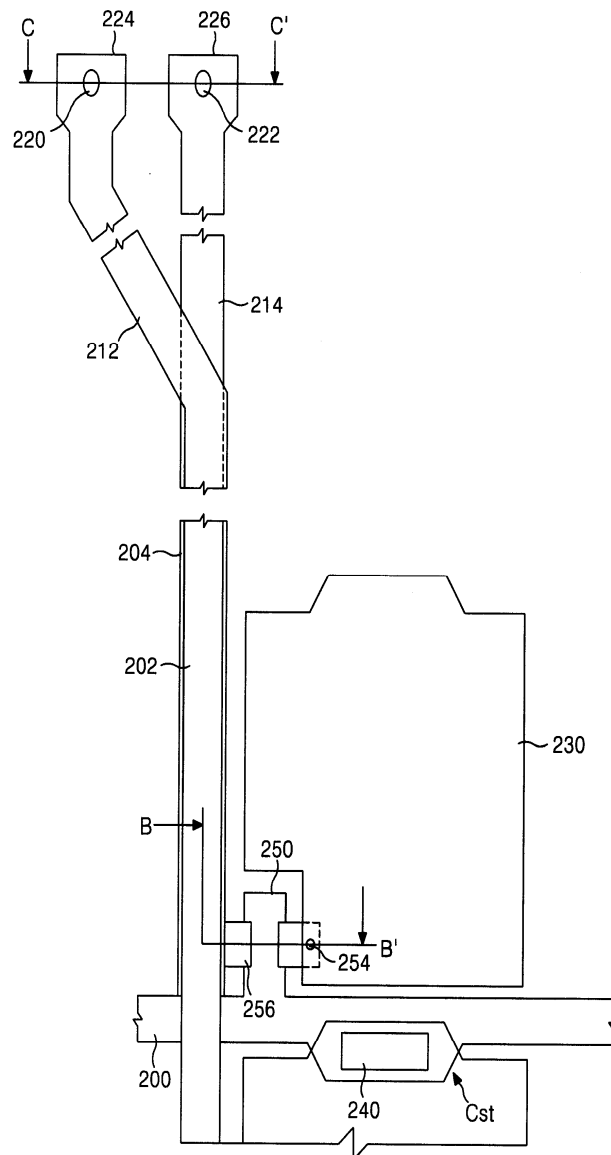
,

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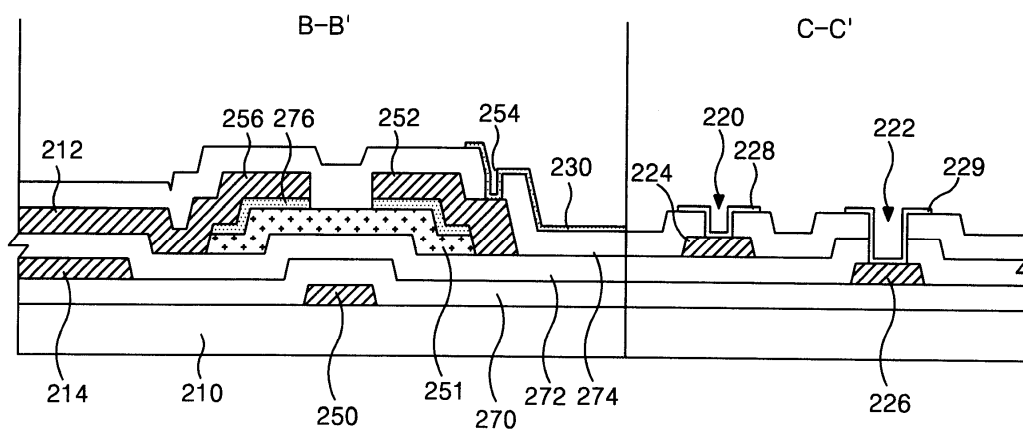




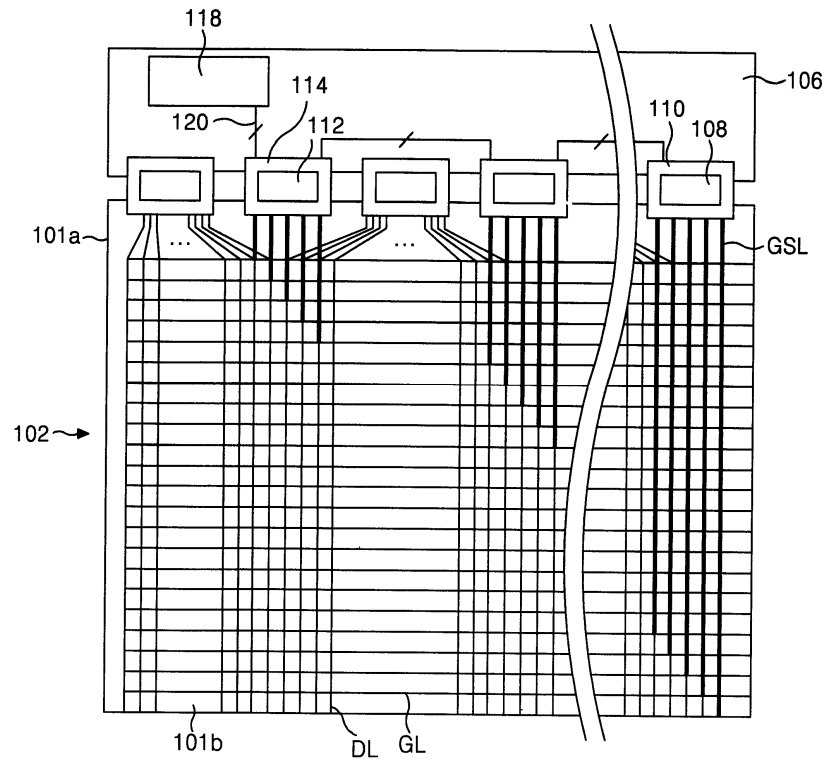
4



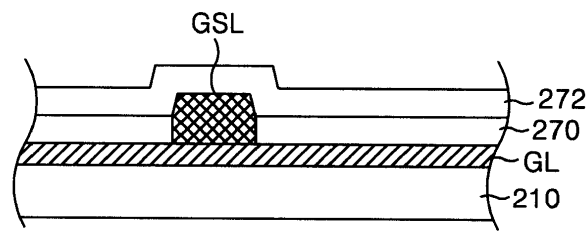
5



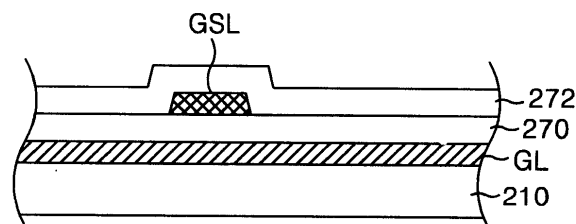
6



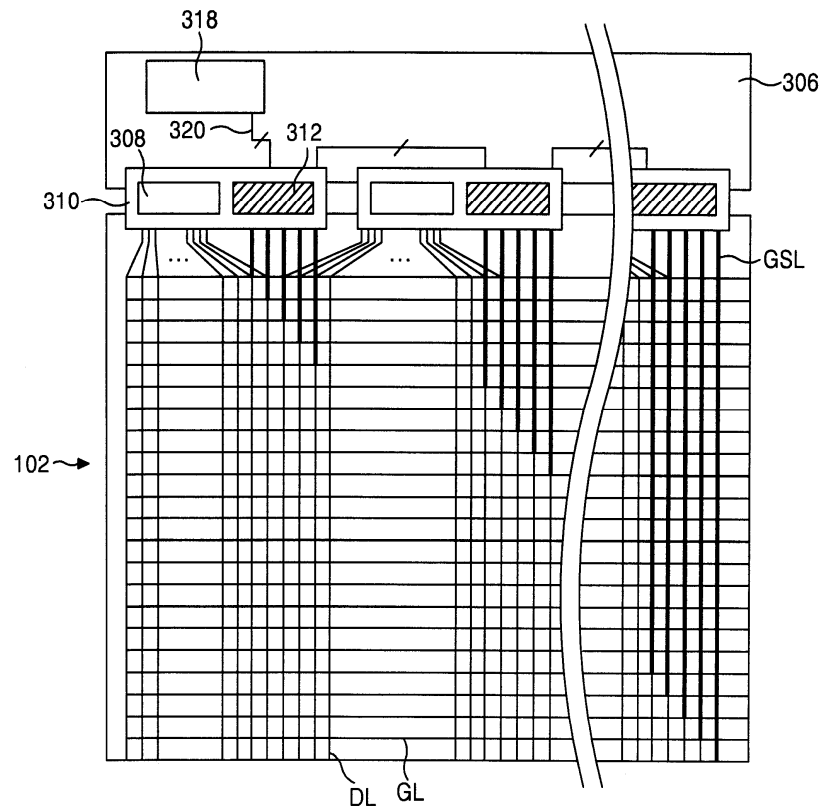
7a



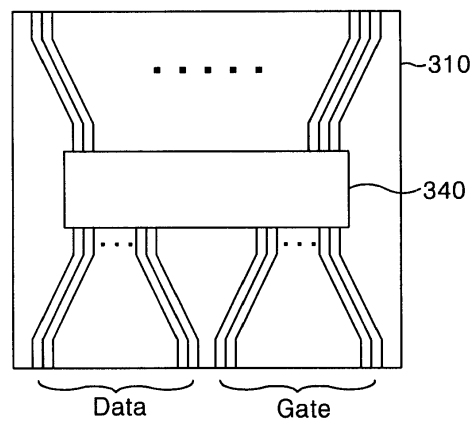
7b



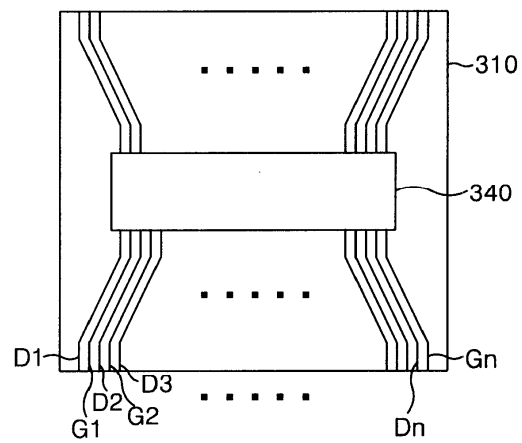
8

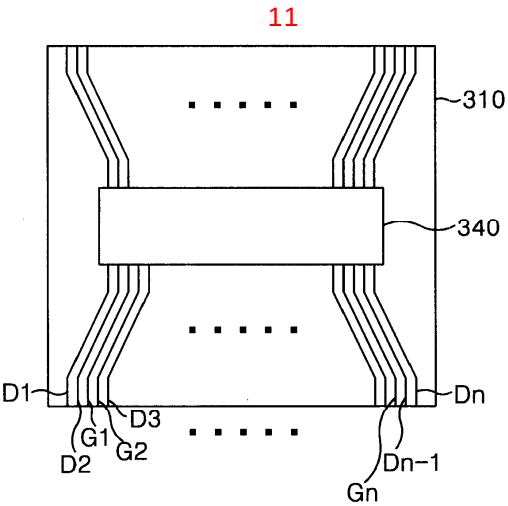


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专利名称(译)	薄膜晶体管基板和和使用其的液晶显示装置		
公开(公告)号	KR1020040055188A	公开(公告)日	2004-06-26
申请号	KR1020020081811	申请日	2002-12-20
[标]申请(专利权)人(译)	乐金显示有限公司		
申请(专利权)人(译)	LG显示器有限公司		
当前申请(专利权)人(译)	LG显示器有限公司		
[标]发明人	RYU JEPHIL 류제필 KIM SEUNGHAK 김승학 KIM DOYOUNG 김도영 KIM PANYOUL 김판열		
发明人	류제필 김승학 김도영 김판열		
IPC分类号	G02F1/136		
其他公开文献	KR100914782B1		
外部链接	Espacenet		

摘要(译)

薄膜晶体管基板技术领域本发明涉及一种薄膜晶体管基板，其与液晶面板上的栅极线交叉的栅极信号传输线与数据线对齐，并且可以通过去除非栅极焊盘来减小液晶面板的尺寸。 - 栅极印刷电路板和液晶面板的显示区域，并防止玻璃栅极信号延迟来自线路和使用其的液晶显示器。根据本发明的薄膜晶体管基板包括在基板和基板上形成的数据线上的数据线和在该方向的栅极线的栅极线的交叉域上形成的薄膜晶体管的栅极信号传输线。数据线和交叉方向交叉形成，并且纵向形成为与基板上的数据线重叠并连接到横向的栅极线。通过这种配置，本发明可以减小液晶面板的尺寸。并且可以减小栅极驱动信号由横向栅极线的线电阻引起的信号延迟。

