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(43)

10-2004-0024666
2004 03 22

(21)

10-2002-0056070

(22)

2002 09 16

(71)

416

(72)

1304 3 3 332 1205

() 511 1302

(74)

:

(54)

가

가

1

2

1

1

2 TFT

3 2

4 3 A-A`

5 3 B-B`

6a 6e 5 TFT

7 TFT .

8 7

<
>

100 : TFT 110 : 1

120 : 2 130 :

150 : 200 : C/F

300 : 400 :

GL : DL :

GW :

가

가

가
가 ,
$$, \quad \begin{matrix} 1 & 2 \end{matrix}, \quad \begin{matrix} 1 & 2 \end{matrix}$$

(Tape Carrier Package; , TCP) .

. , TCP , TCP TCP

[illegible]

가 .

2 , 1 가 .
가 2 .

1 .
2 .

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

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

1
1 (100) , (400) (Thin Film Transistor; , TFT) (100), TFT
C/F (200), TFT (100) C/F (200) (300)
(D) (D) 1 2
(S1, S2) .

, TFT (100) 1 (110) (D) () ,
() , TFT(120), TFT(120) (140)

, TFT (100) 1 (S1)
가 (GW) . (GW) TFT(120)
1 (GW1) , (GW) 2
(GW2) (W) , (GW)

, C/F (200) 2 (210) (D) (220), TFT (100)
 1 2 (S1, S2) 가 (230),
 (220) (230) (240) .

, (240) (140) TFT (100) C/F (200) (350)
 TFT (100) C/F (200) , TFT (100) C/F (200)
 (300) , (400)가 .

2 TFT , 3 2 TFT .

2 3 , TFT (100) (D) (D) 1 2 (S1, S
 2) (DL), (DL) (GL), 1 2 (126)
 (140) (GL) , 1 (DL) TFT(120), TFT(120)
 (S2) (GL) 가 (S1) (DL) 가 , 2

(D) TFT(120) (121), (125) (126) . ,
 (121) (122) (125) (126)
 (122) (121) 가 (125) (125)
 가 (123) (124) . (124) (126)

(125, 126) .

, TFT(120) (126) (126) (131) (130) .
 (131) (126) (130) (140)

, 1 (S1) (GL) TFT(120)
 , (DL) TFT(120) (140) 가
 (150) .

3 5 , 2 (S2)
 (GL) (GW) (GL) m , (GW)
 m (GW) (121) 1 (GW)
 1) , (125, 126) 2 (GW2) . , 1
 (GW1) 2 (122) , 1
 (GW1) , 2 (GW2)

, 2 (GW2) 1 (GW1) 1
 (GW1) , 2 (GW2) 1 (GW1)
 1 2 (GW1, GW2) 1 (GW1)
 (d) 2 (GW2) (w) 2 , 1 (11
 0) , 1 (110) .

가 1 (GW1) , 2
 (GW2) , 1 2 (Gw1, GW2) .
 , 1 (GW1) , 2 (GW2)
 (400) 2 (S2) 1 2 (GW1, GW2)
 (GW1, GW2)

, 2 (GW2) (122) 2 (GW2)
 (123) . (127) TFT(120) (123) (124)
 , (122) 2 (GW2) (130)

3 5 , 1 (GW1) (121) (GL)
 (GL) , 2 (GW2)
 (125, 126) (GL) (127a)

(GL) (127a) 2 (GW2) (127)
 (122) (GL) (127) (GW2) (127a)
 6a 6e 5 TFT
 6a (MoW) 1 (110) (Al), (Cr)
 (D) 1 (GL), (GL) (12
 1) 2 (S2) (GL)
 1 (GW1)
 6b (GL), (121) 1 (GW1) 1 (110)
 (plasma-enhanced chemical vapor deposition; PECVD)
 (122)
 6c (122) () , n +
 () , n +
 (in-situ) ,
 (121) (122) (123) n +
 (124)
 , 1 (GW1) (122) (123) (124)
 (127) (127) 1 (GW1)
 (GW1, GW2) 2 (GW2) 1 (GW1)
 , 2 (127) (GL) (127a)
 2 (GW2) (GL) (127a)
 (127)
 6d (122) (127) 1 (110) (Cr)
 2 () , 2 (D) 1
 (DL), (DL) (125)
 (126) 2 (S2) (GL)
 2 (GW2) (GW2) 2 (GW2) (127)
 , 2 (GL) (127a)
 on etching; RIE) (125) (126) (124) (reactive i
 TFT(120) (125, 126)
 (126) (D) TFT(120)가 (121), (123), (124), (125)
 , 2 (S2) 1 2 (GW1, GW2)
 (GW2) 1 (GW1) 1
 (GW1, GW2) 1 (GW1) 2
 (d) 2 (GW2) (w) 2 (400) 2 (S2) (110)
 (GW)
 6e , 1 (110) (D) 2 (S2)
 (126) (131) (130) TFT(120)

5 (Indium Tin Oxide; ITO) (130) (131) (Indium Zinc Oxide; IZO) (126)

(140) (140) (131) TFT(120)

(126)

7 TFT 8 7

7 8 , TFT (100) (D) (D) 1 3 (S1,
S2, S3) (DL), (GL) 1 (DL) (GL), 1 2 (S1,
126) (140) TFT(120), TFT(120) (

가 1 (S1) (DL) 가 2 (S2) (GL) 1
가 3 (S3) (GL) 2 가

1 (S1) TFT(120) 1
1 2 (DL) TFT(120) 2 (140) 가
2 TFT(120)
(160)

2 (S2) 1 (LGW) 1 (LGW) (121)
1 (LGW1) , (125, 126) 2 (122)
(LGW2) 1 (LGW1) 2 (LGW2) (LGW2)

3 (S3) 2 (RGW) 1 (RGW) 1 (LGW1)
3 (RGW1) , 2 (LGW2) 4 (RGW1, RGW2)

RGW2) 3 4

2 (LGW2) 1 (LGW1) 1 (LGW1)
(LGW1) 2 (LGW1, LGW2) 1 (LGW2) 1 (LGW1)
2 (RGW1) 2 (LGW2) 2 (LGW1)
1) 4 (RGW2) 3 (TGW)

1 (100) (LGW) 2 (S2) (RGW1)
3 (S3) (400)

7 8 1 2 가 m (GL) m/2
(GL) 2 (GL) (GL) (GL)
1 (GL) 2 (RGW) (GL) 2

, 1 2 가 1 2 가 가

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(57)

1.

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1 , 1 2 가 ,

1 2

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가 1 , 2

1 1 ;

1

가

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2.

1 , 1

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6.

4 , ,

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7.

1 , 2 가 , 3 2 2

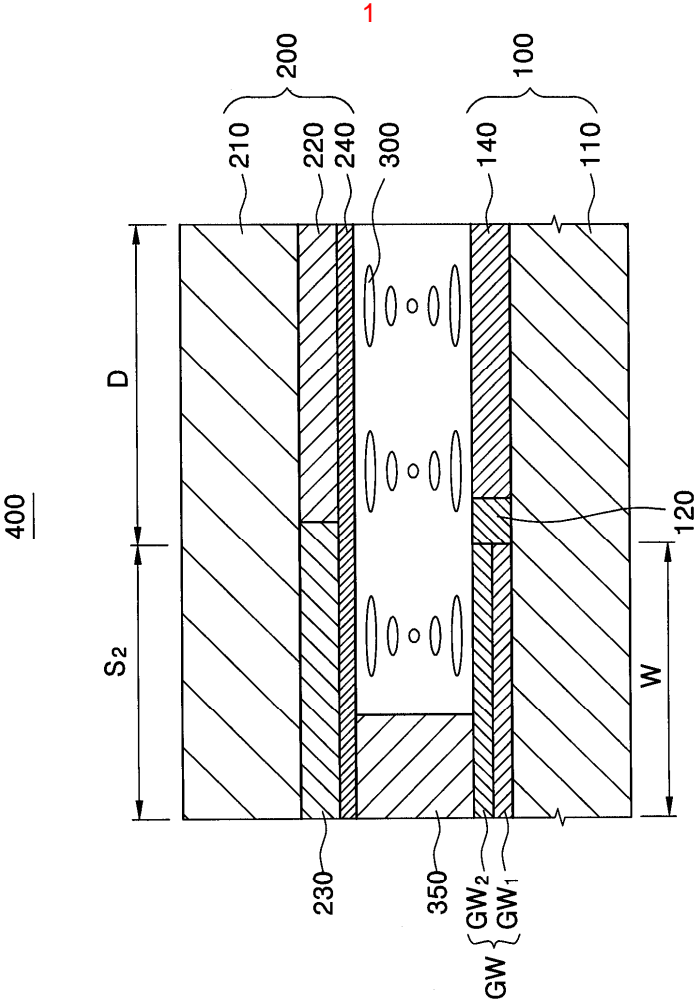
2

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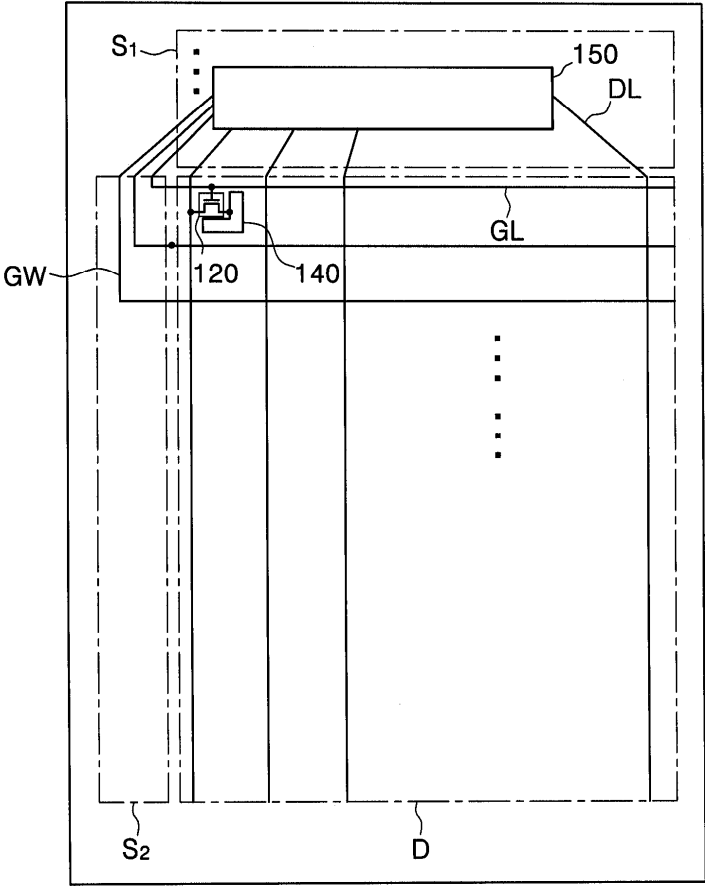
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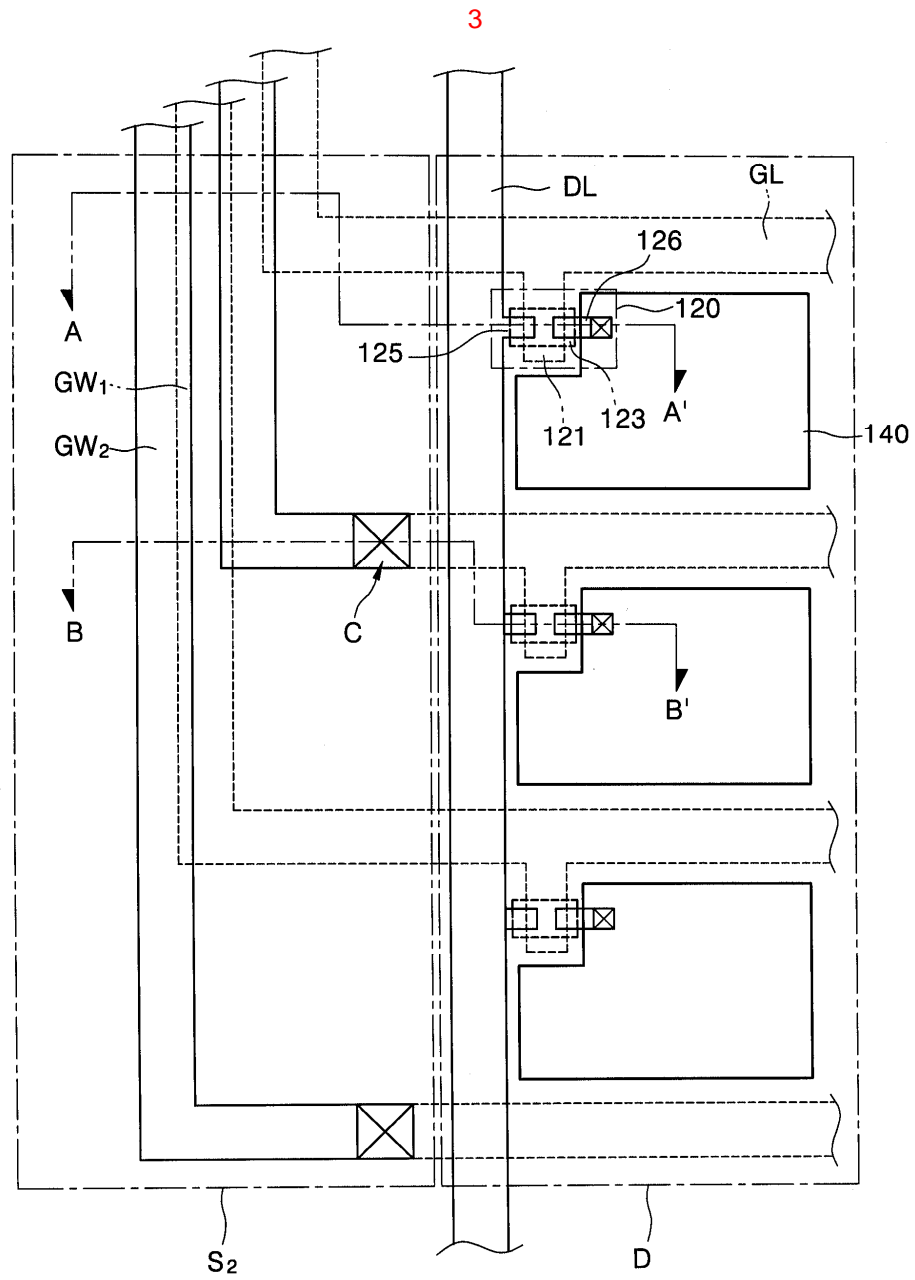
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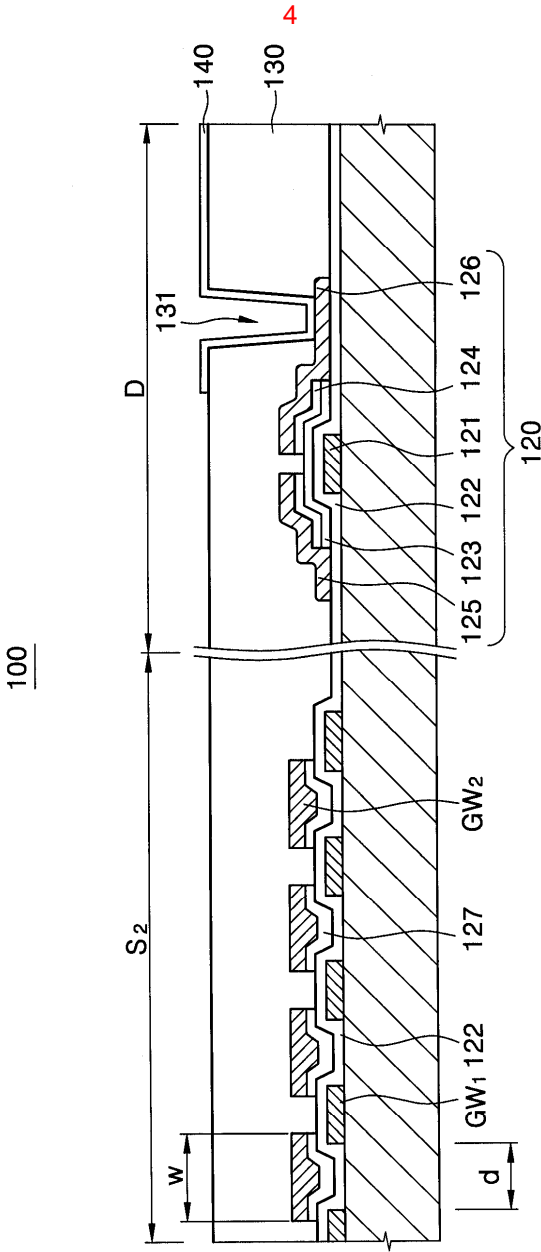
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9.
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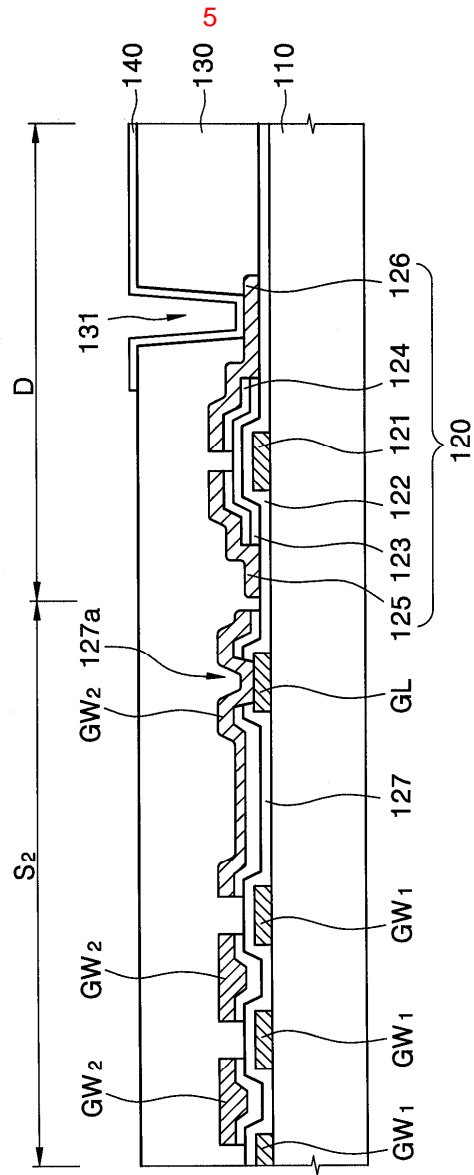
2
100

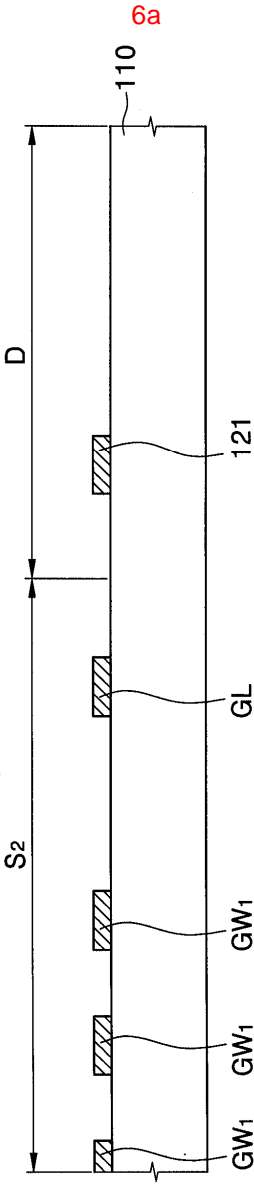




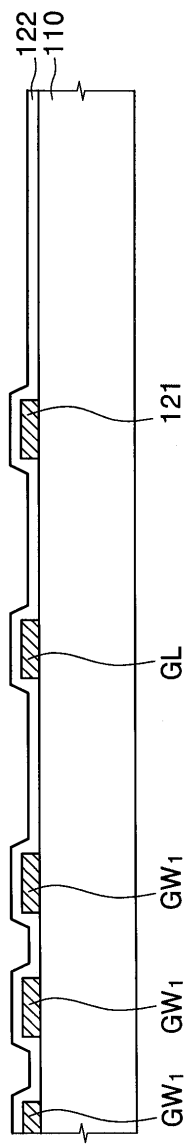


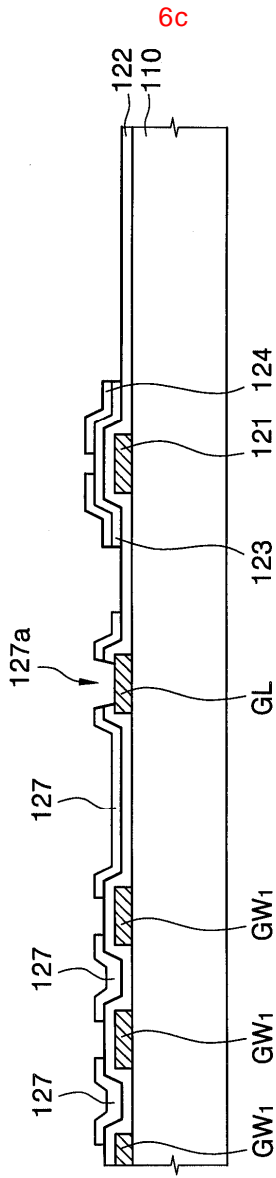
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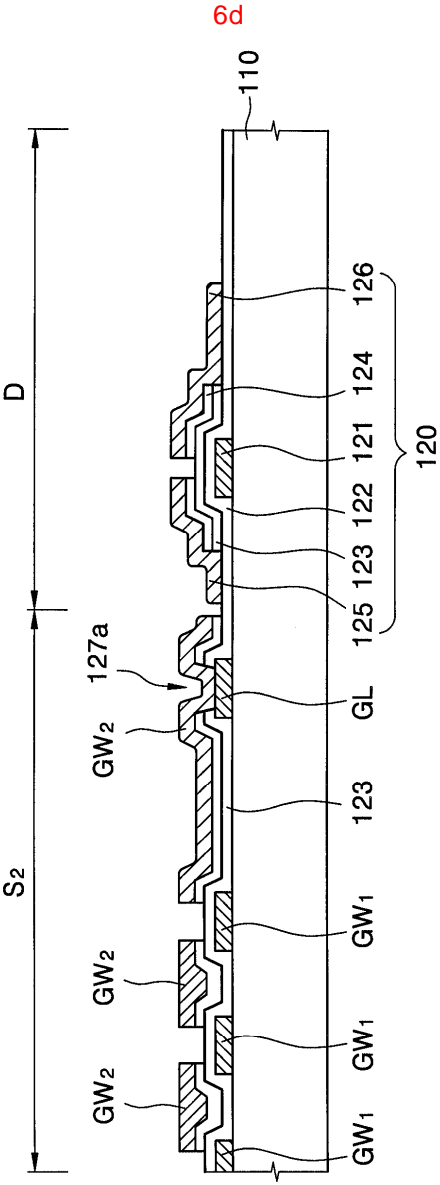


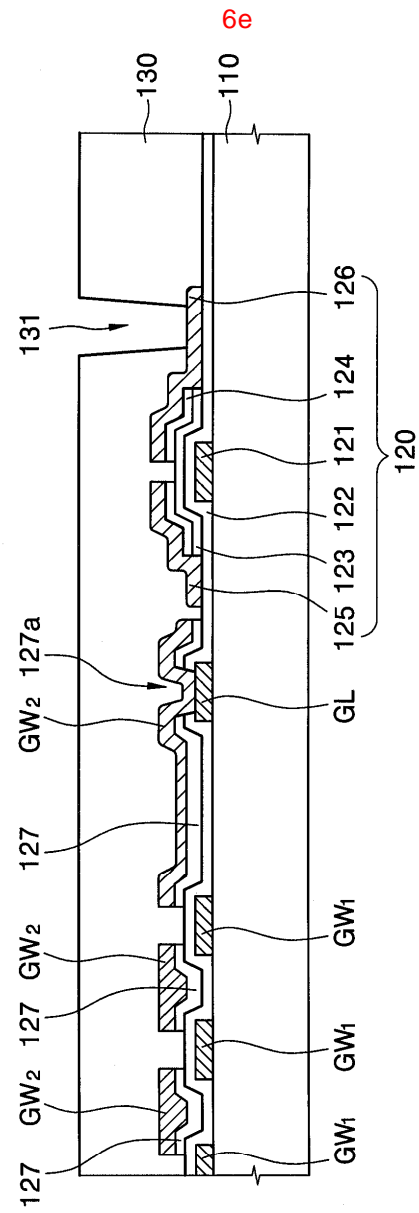


6b



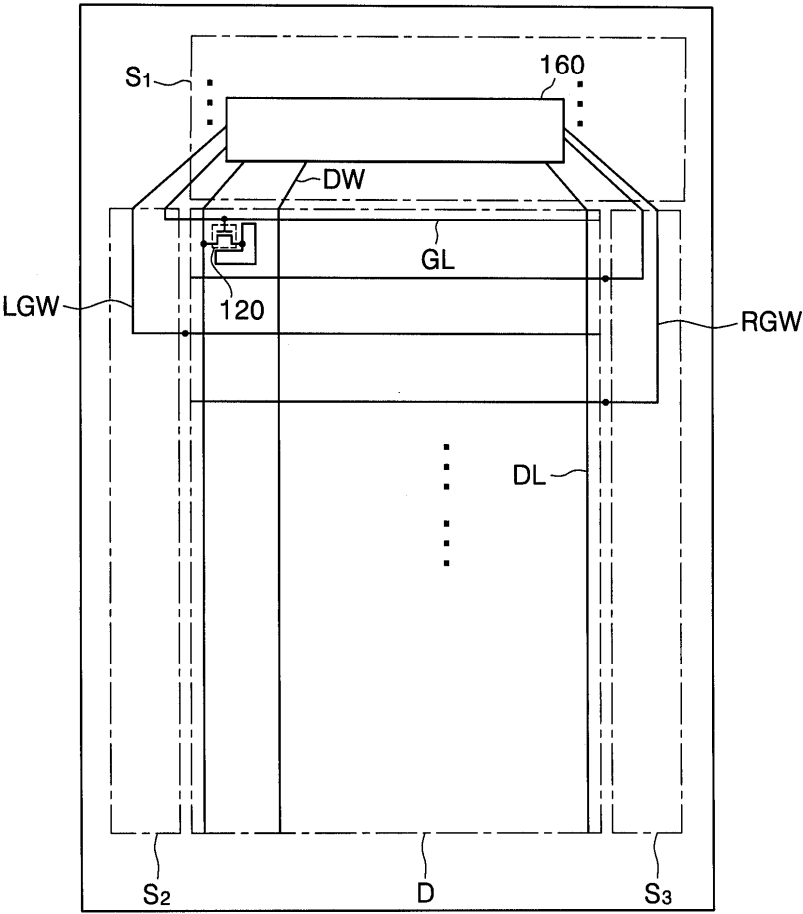


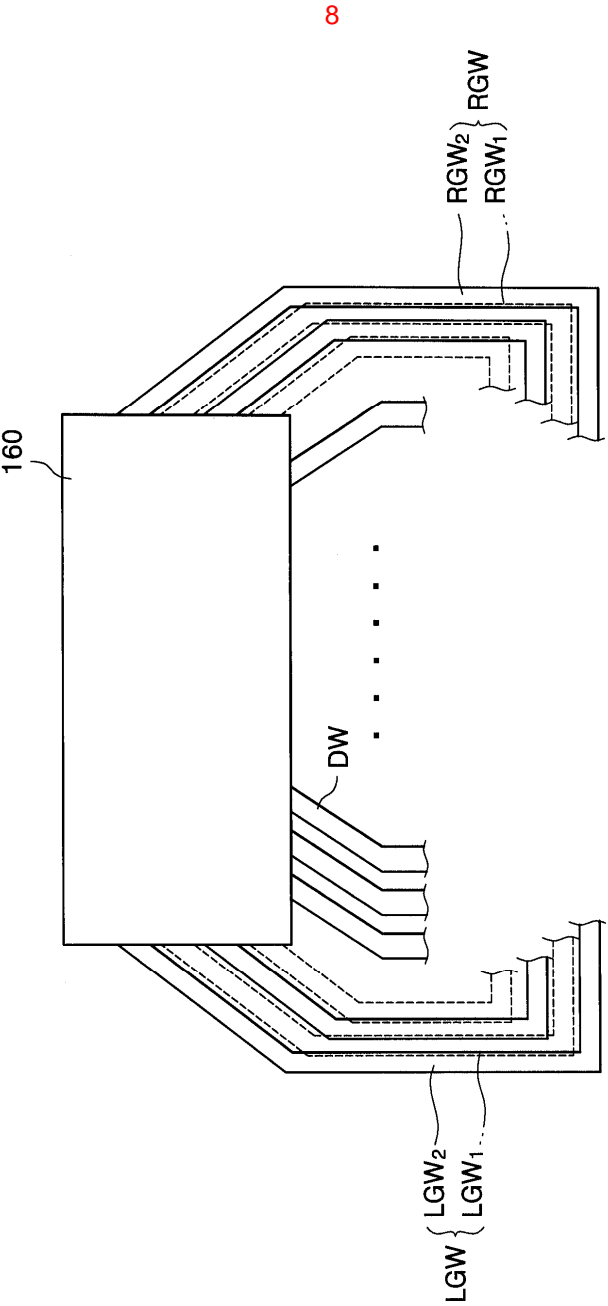




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100





专利名称(译)	液晶显示装置及其制造方法		
公开(公告)号	KR1020040024666A	公开(公告)日	2004-03-22
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[标]申请(专利权)人(译)	三星电子株式会社		
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	JUNG YOUNGBAE 정영배 LEE WONKYU 이원규		
发明人	정영배 이원규		
IPC分类号	G02F1/1343 G02F1/1333 G02F1/1368 G02F1/1345 G09F9/30 G09F9/35		
CPC分类号	G02F2001/13456 G02F1/1345		
代理人(译)	PARK , YOUNG WOO		
其他公开文献	KR100923056B1		
外部链接	Espacenet		

摘要(译)

公开了重量减小的整体尺寸和液晶显示器及其制造方法。栅极驱动信号在形成于显示区域的多条栅极线中被授权，栅极布线形成在液晶面板的外围区域中。栅极布线包括形成在显示区域上的栅极线，形成在同一层上的第一栅极布线，以及形成在诸如数据线的层中的第二栅极布线。因此，通过减小栅极布线占据的面积并且可以减小液晶显示器的整体重量。

