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(30) JP-P-2002-00220605 2002 07 30 (JP)

(71) 가 가
3300

(72) 1-7-18

가 가
5-2-11

4-28-2

(74) :
:

(54)

LC SUB1 , DL , 가
IN1 DL 가 SLD , PX , SLD DL 가
SLD 2 , PX SLD DL BL
.

1		1	.
2	1 A-A'	.	
3		2	.
4	3 B-B'	.	
5		3	.
6	가	.	
7	가	.	
8	가	.	
9	가	.	
10		4 TFT	.
11		5	.
12		6	.
13	12 C-C'	.	
14	12 D-D'	.	
15	1	.	
16	15 E-E'	.	
17	2	.	
<		>	

LC :

SUB1 :

SUB2 :

DL :

PX :

IN1, IN2 :

SLD :

BL :

STL : ()

GT :

가 1 DL SLD가 STL 2 SLD . ,

1 2 가 .

1 1 SLD가 SLD가 , DL SLD SLD

DL , 가 가 , 가 가 PX

2 SLD가 DL STL 1 IN1 , 1 SLD가 가

DL , 가, 가 .

가

(1) 가 , ,

가

(2) (1) ,

2

(3) (1) (2) , 1

(4) (1) (2) 2

(5) , , ,

가 ,

가 ,

		2		가	,	가	,
(6) (5)						1	
(7) (5)						2	
(8) (5)	(7)		,				
(9) (5)	(8)		,				
2							
(10) (5)	(9)		,				
(11) (5)	(10)		,				
(12) (5)	(11)		,				
(13) (5)	(12)		,			2	
(14) (5)	(13)		,				
(15) (5)	(13)		,				
(16) (5)	(13)		,				
				가	가	2	
(17) (16)		2					
(18) (16)	(17)			가			
(19) (5)	(18)		,				
(20) (5)	(19)						
							가
[1]							
1		1				2	1
A-A'							

1 2 , LC DL 가
SUB1 , DL , SUB1
PX . SUB1
SUB2 가 . ,
PX , ITO(Indium Tin Oxide)
DL 가 IN1
SLD
SLD
SLD DL
DL 가 IN1 DL
(SLD) , (SLD) DL 2 D
L
가 가
IN1 CH1
SLD 1
SLD GL GT GL
가
SLD STL Cstg STL 가
가 Cadd STL 가 Cstg STL GL
SLD, GL, STL 3
SLD GL 2 STL
DL 가 GL PX
(TFT: Thin Film Transistor)
DL W1 DL 2
PX L1 PX DL PX 2
IN2 가 PX 2
SLD W2 DL W1 BL L1 , 2 L2 DL
2 2 PX PX SLD
SLD DL DL IN1 SUB1 PX
가 SLD DL PX DL 가
PX SUB1 DL PX
DL SUB1 PX 가

[2]

3 2 4 3
 B-B'

 1 1 ()

 PXR 가 , SUB2 PXR ,
 OP1 가 2 PXT가 , SUB1
 BL .
 4 2 IN2 , PXT , 3 IN3 ,
 PXR 3 LC IN3 dt OP2 LC dr

 , 2 PXT SLD 4 L3

 1 PX 1 PXR , PXT
 , 1 PX
 , 4 SUB2 . SUB2 FIL,
 OC, CT가 CT Vcom 1
 가 ,
 , .

[3]

5 3

 1 2 , DL (DL SLD) 2 SLD
 가 CH1 가 . , 가
 , SLD 5
 , 2 3 . , 2 .

[]

6 가 7 가 8
 가 9 가

 6 AR1, AR3 , AR2 , AR2
 () AR3 AR1, AR3

 7 가 GL
 PX TFT CT 가 DL Cstg가 LC Clc PX PX 가
 STL ,

, PX DL Cds가 .
 8 , t V V , 1 F
 L AR3 Vcom , 가
 가 CT , Vcom 가 VGL 1 FL
 , VDL TFT가 가 , TFT가
 가 VPX VDL , 가
 , 가 AR2 , VDL
 , , Cds VPX
 , 가
 , 9 VPX , AR1 1 FL ,
 , , ΔV , VPX VDL Vt
 ,

$$\Delta V = Cds / (Cstg + Clc + Cds) \times Vt$$

, ΔV Cds (Cstg + Clc)
 , 가 , 가 , Cstg Clc
 Cds
 TFT 가 가 ,

[4]

10 4 TFT
 LC SUB1 , GL , GL
 DL , AR STL , Vcom 가
 Cstg
 DL GL 가 가 GDR
 TFT GDR, DDR
 SUB1 TFT 가 SUB1
 SUB1 , (FPC) , (TCP)

[5]

11 5
 11 SUB1 SUB2 LC SL , SU
 B1 LC BL ()

가 , SUB2 .

[6]

12 6 13
12 C-C' 14 12 D-D' .

12 DL SLD
CH1 DL .

DL PX(PXR) Cds가 가 ,
, 1 .

Cds PX(SLD PX(PXR)가
DL PX(PXR)가 .

SLD가 DL (PXR)

TFT TFT .

GI GT가 .

PSC GT SD1 SD2가 L
DD(Lightly Doped Drain) LDD가 .

CH2 CH3 DL SD4가 IN1 SD1 SD2
CH3 PXT가 SD3 IN2가 .

3 IN3 OP2 PXT SD4 CH4 PXR SD4 PXR 3 IN
3 PXT SD4 .

14 STL PSE SD4 PXT
Cstg SD2 Cstg PSE 가 ,
가 .

1 6 1

가 .

(57)

1.

(挾持)

가

가

- 2.
- 1 ,
- 2
- 3.
- 1 2 ,
- 1
- 4.
- 1 2 ,
- 2
- 5.
- ,
- ,
- ,
- ,
- 가
- ,
- 가
- ,
- ,
- 2 가 ,
- 가
- 6.
- 5 ,
- 1
- 7.
- 5 ,
- 2
- 8.
- 5 7 ,
- 9.
- 5 7 ,

2

10.

5 7

11.

5 7

12.

5 7

13.

5 7

2

14.

5 7

15.

5 7

16.

5 7

가 가 2

17.

16 ,

2

18.

16 ,

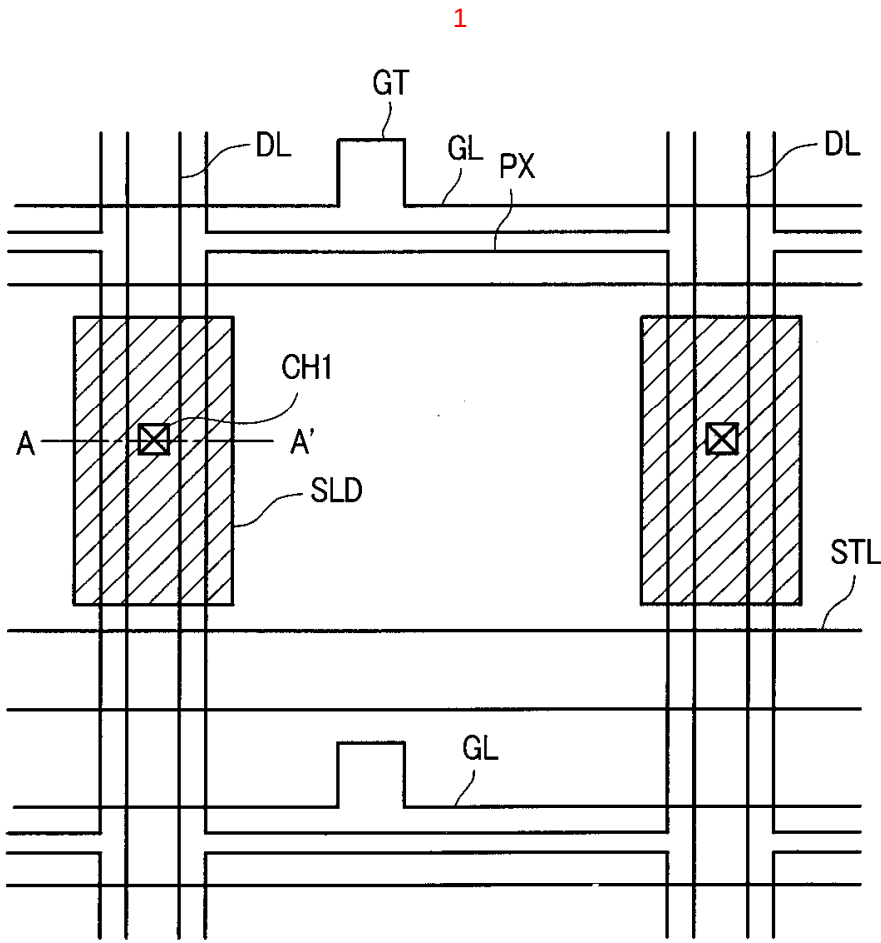
가

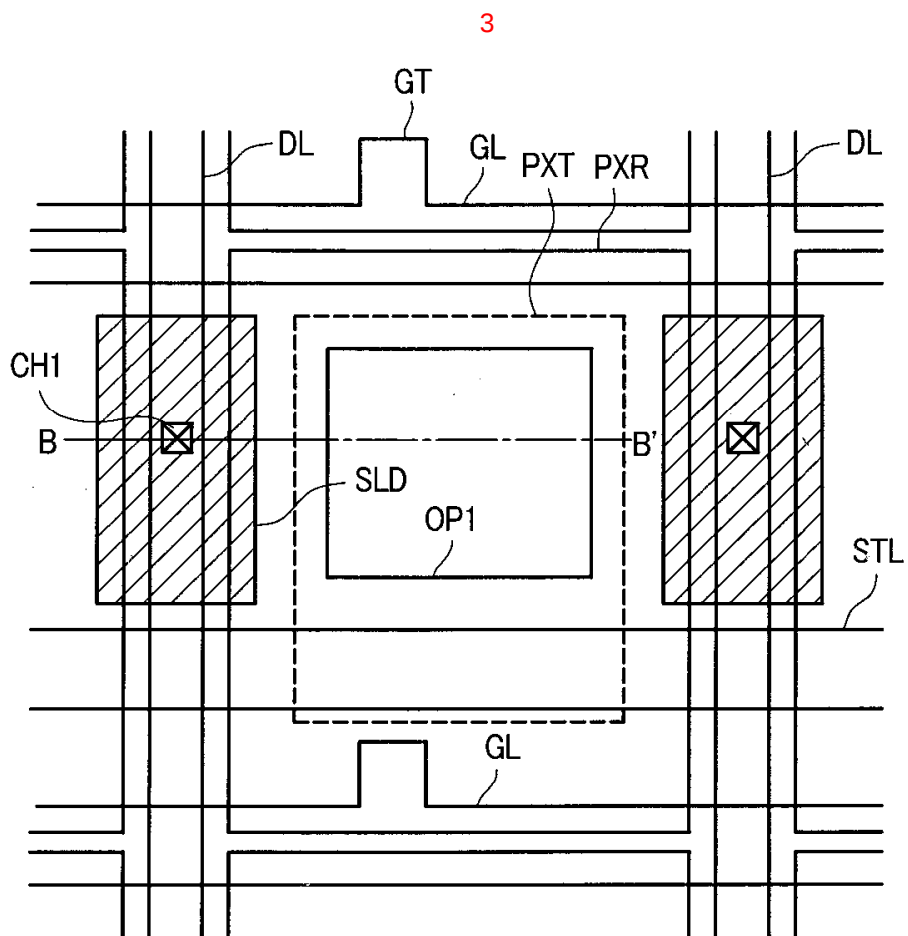
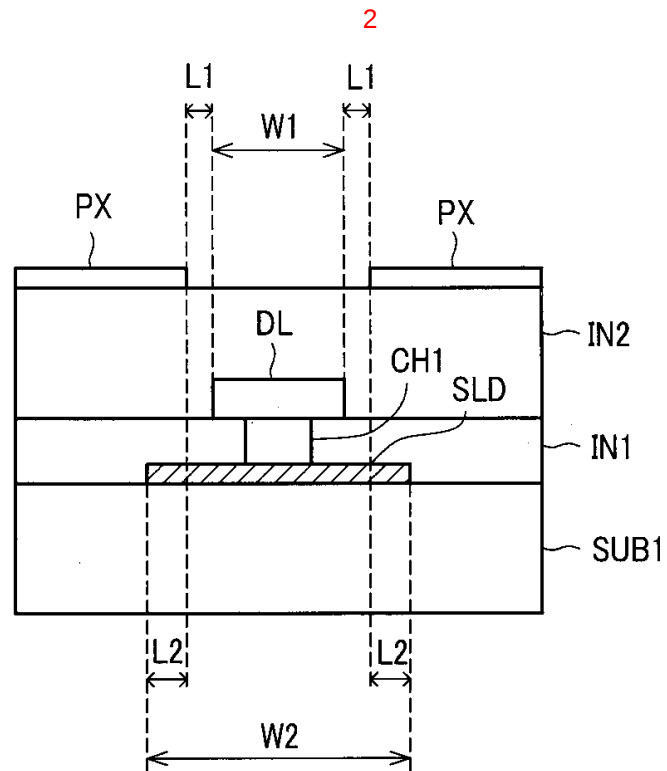
19.

5 7

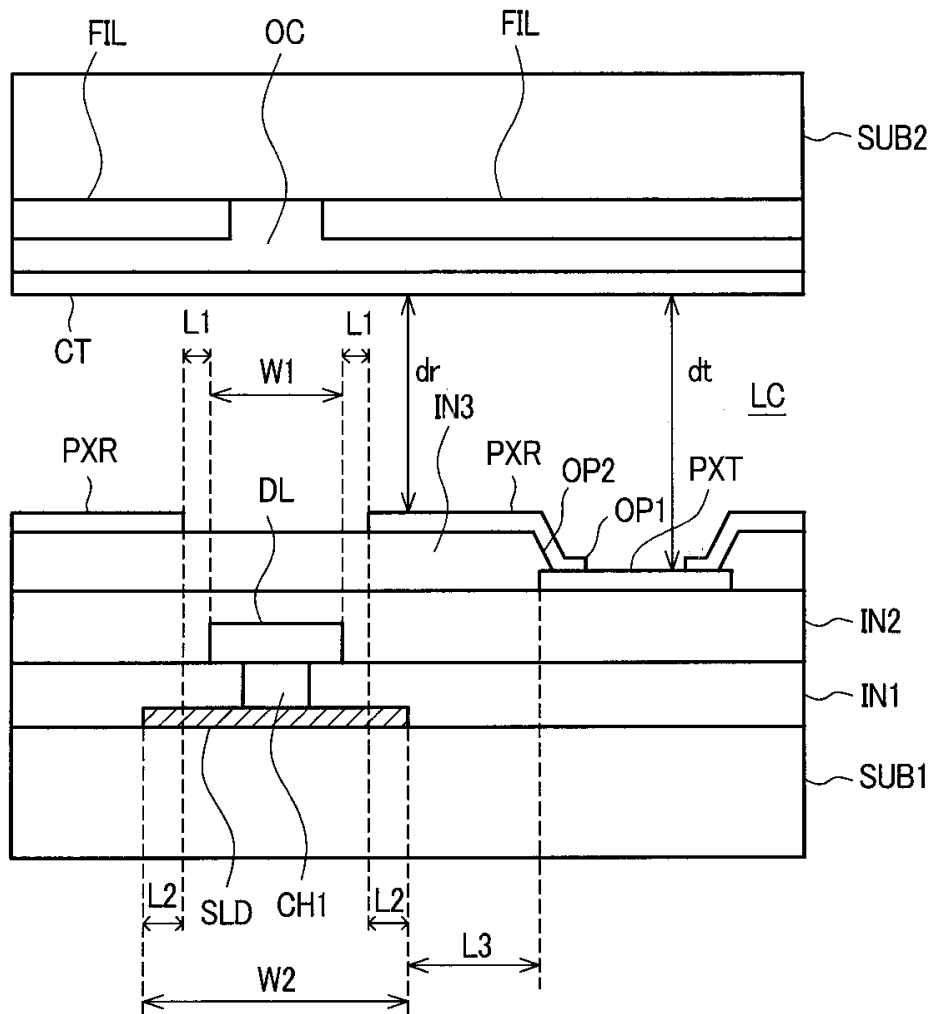
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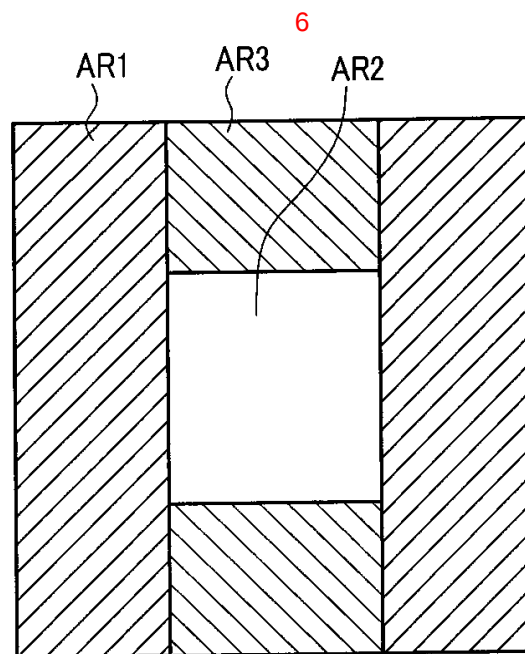
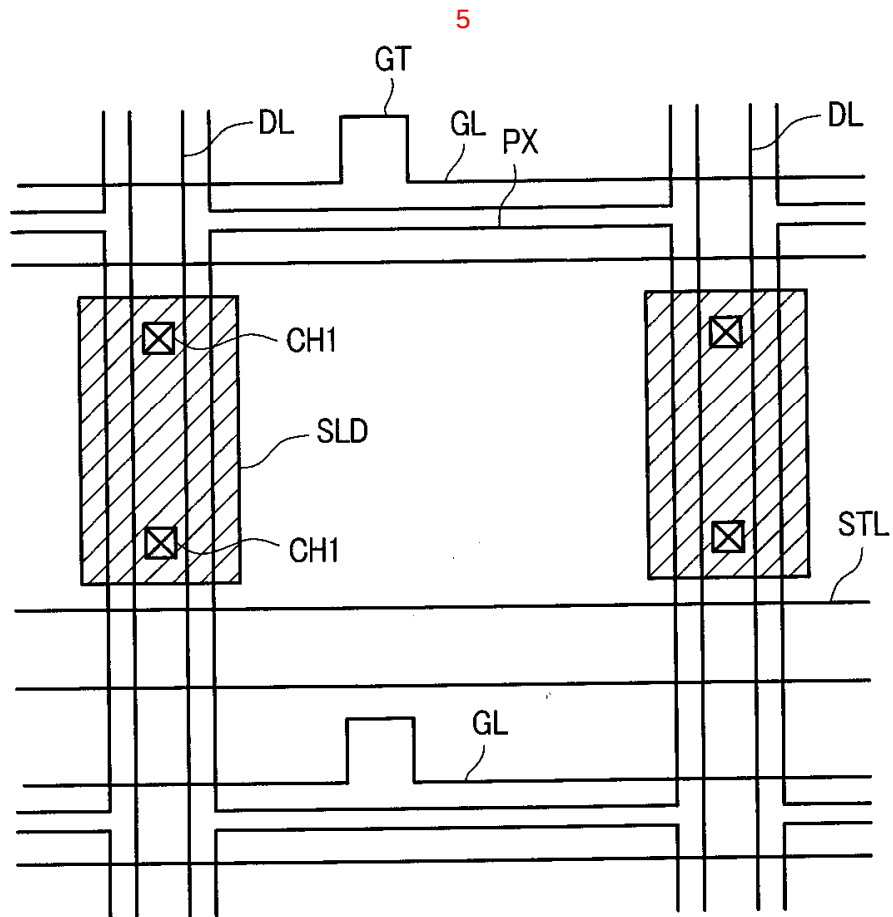
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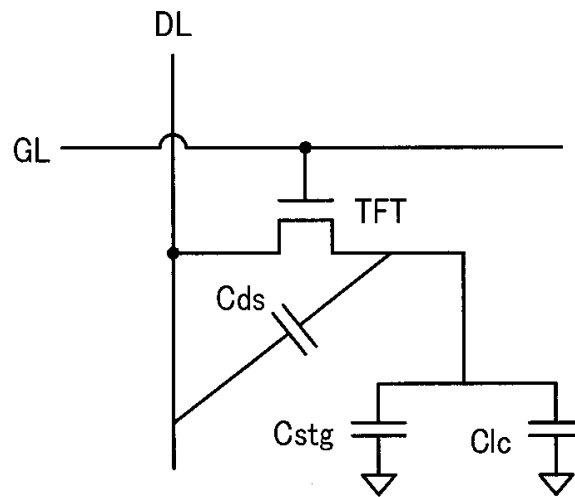


4

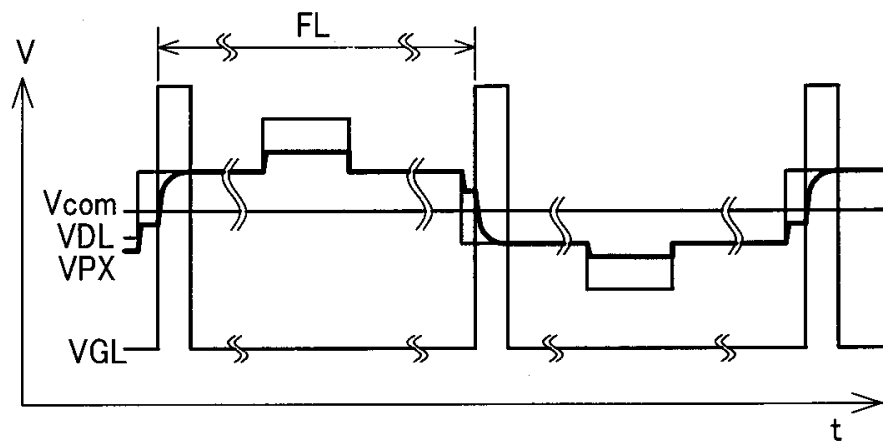




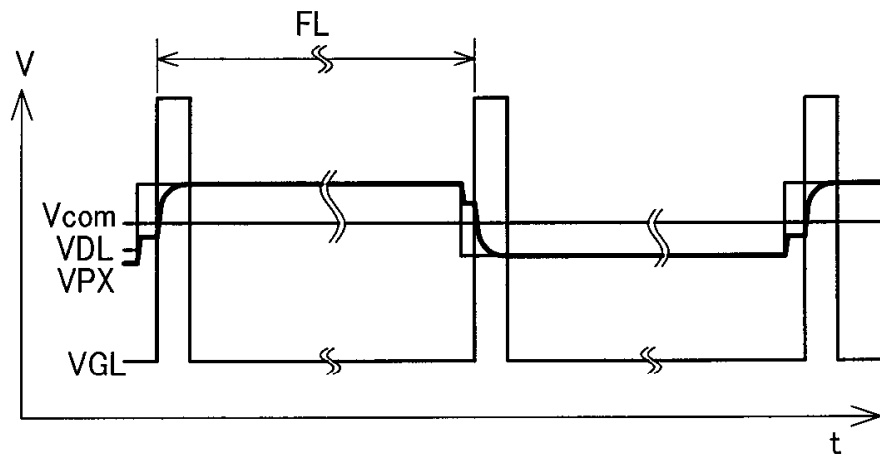
7

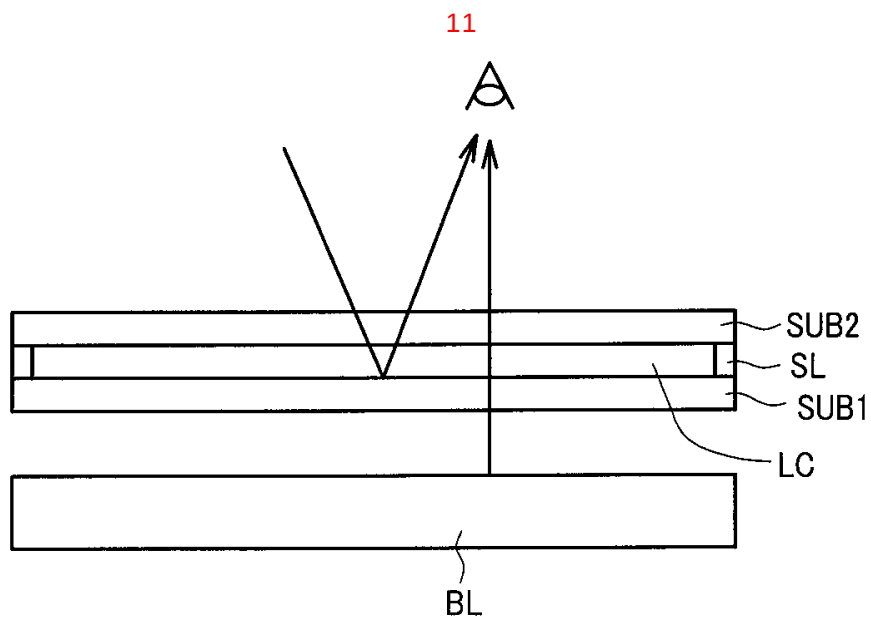
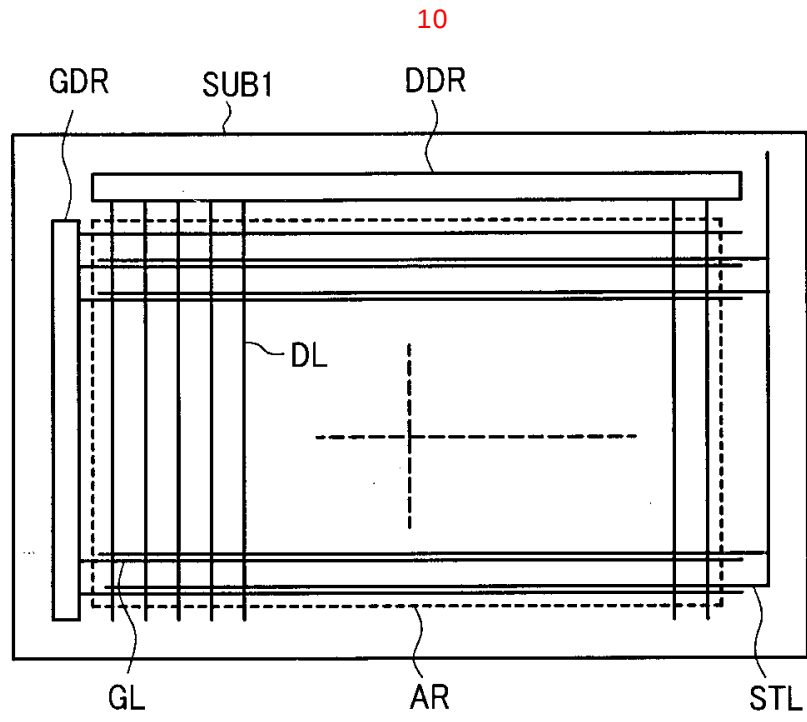


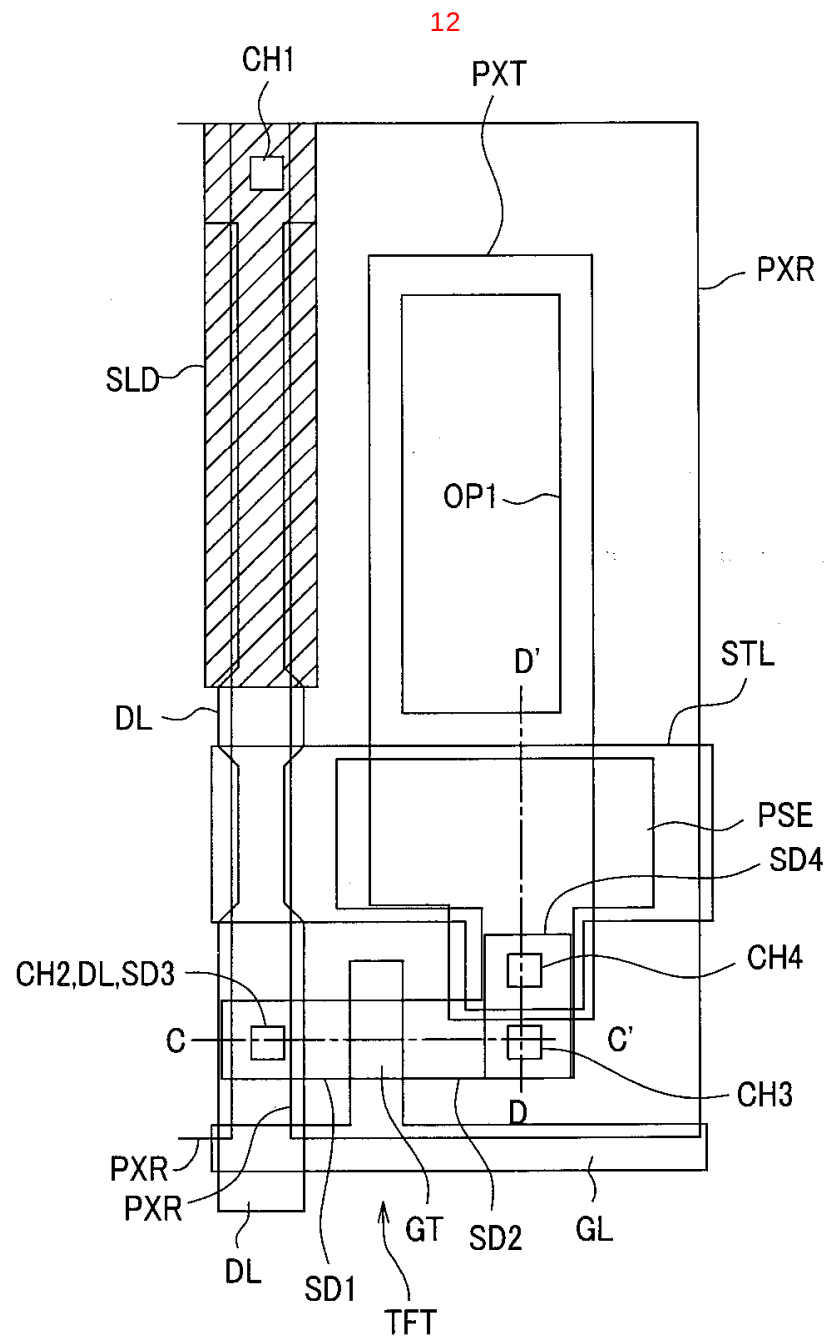
8

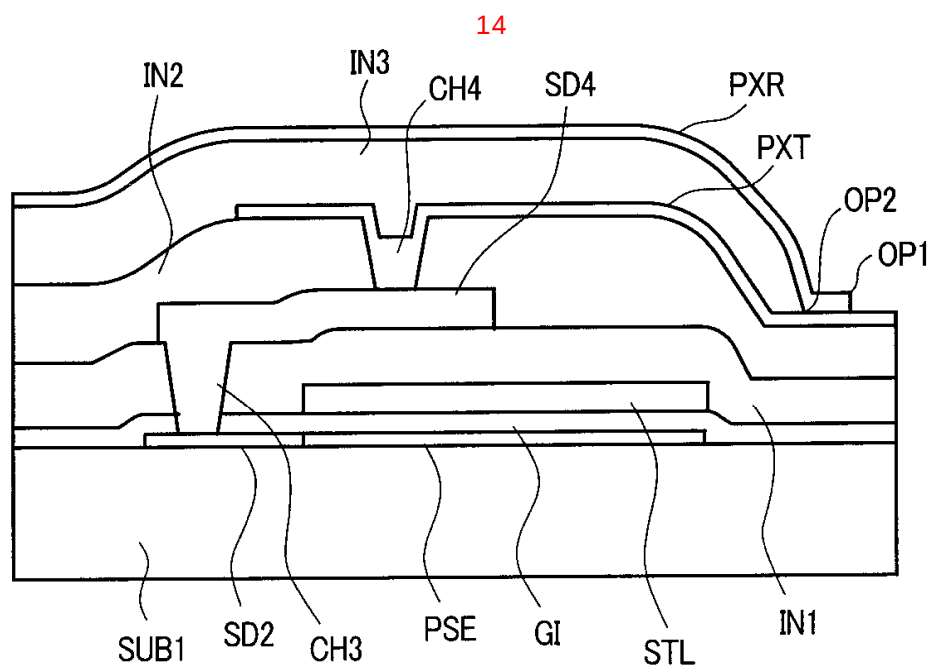
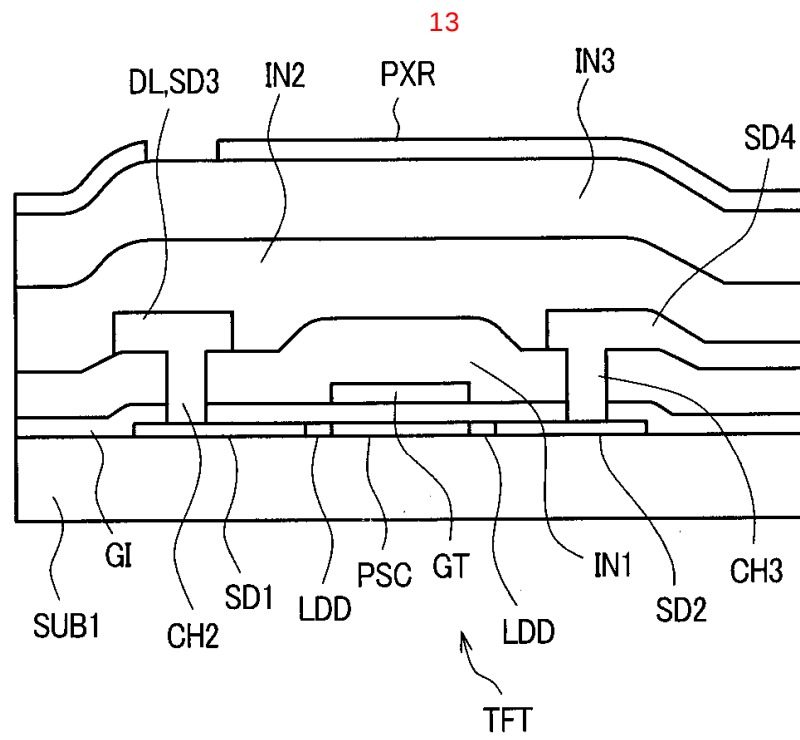


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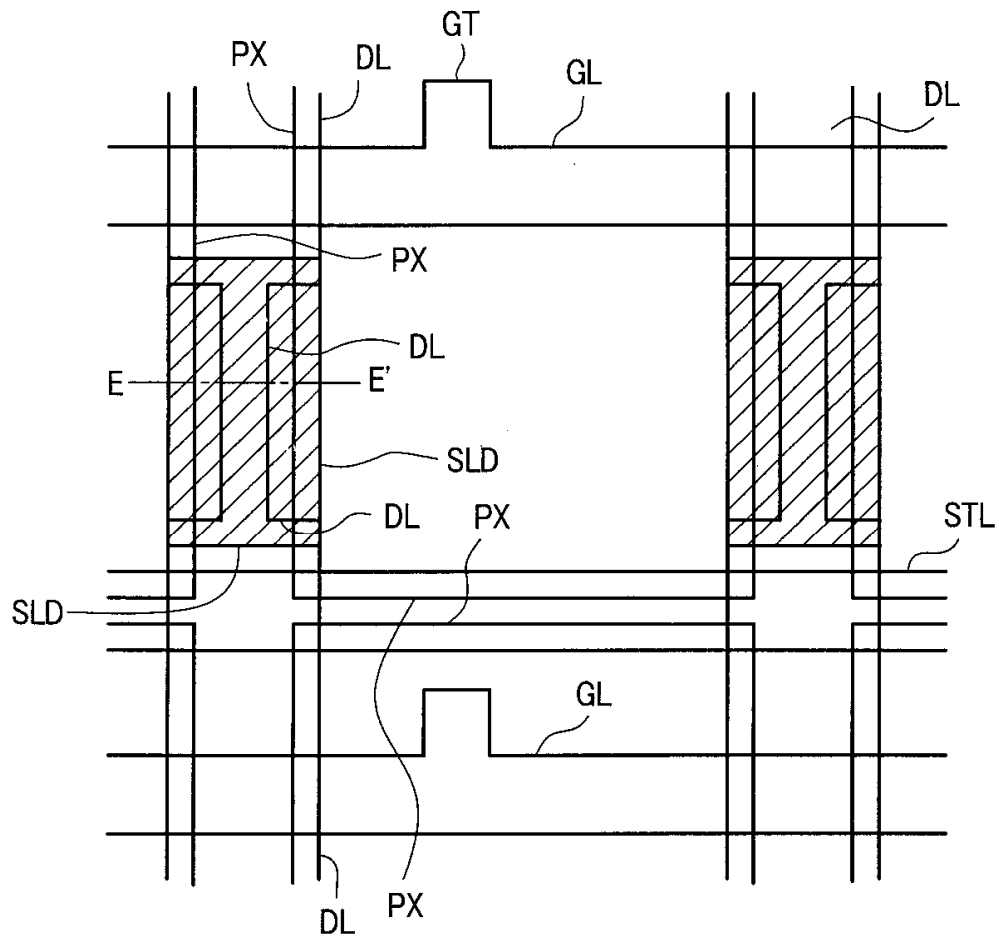






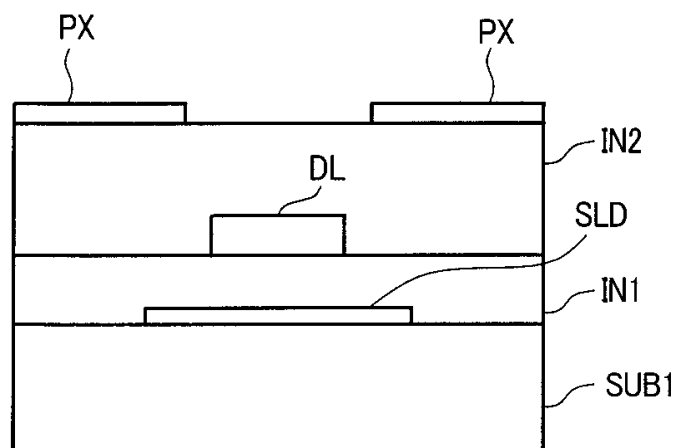
15

(종래 기술)



16

(종래 기술)



专利名称(译)	液晶显示器		
公开(公告)号	KR1020040011377A	公开(公告)日	2004-02-05
申请号	KR1020030052202	申请日	2003-07-29
[标]申请(专利权)人(译)	株式会社日本显示器		
申请(专利权)人(译)	株式会社日本排气量		
当前申请(专利权)人(译)	株式会社日本排气量		
[标]发明人	ASUMA HIROAKI 아스마히로아끼 HASEGAWA ATSUSHI 하세가와아쓰시 MIYAZAWA TOSHIO 미야자와도시오		
发明人	아스마히로아끼 하세가와아쓰시 미야자와도시오		
IPC分类号	G02F1/1335 G02F1/1333 G02F1/1368 G02F1/136 G02F1/133 G02F1/1362 G02F1/1345 H01L21/3205 G02F1/13357 G02F1/1343		
CPC分类号	G02F1/133555 G02F1/136213 G02F1/136209		
代理人(译)	LEE , JUNG HEE CHANG, SOO KIL		
优先权	2002220605 2002-07-30 JP		
其他公开文献	KR100559273B1		
外部链接	Espacenet		

摘要(译)

图像质量提供了良好的显示设备。基板SUB1中的一个基板中的多个图像信号线DLs，夹持液晶层LC的一对基板，布置为矩阵形状的多个像素电极PXs，以及插入绝缘层IN1的多个导电层SLDs该职位包括在内。导电层SLD与图像信号线DL电连接。关于布置为矩阵形状的多个像素电极PX，并且从图像信号线DL提供图像信号。关于多个导电层SLD，图像信号线DL和部分重叠并形成。此外，它防止来自背光BL的光从其相邻的像素电极PX的间隙泄漏出来。液晶层，背光，像素电极，绝缘层。

