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2003 03 06(21) 10 - 2002 - 0051413
(22) 2002 08 29

(30) JP - P - 2001 - 00261680 2001 08 30 (JP)

(71) 가 가
가 4 6

(72) 1 - 17 - 4 - 101

1538

가 3 - 4 - 13

1 - 3 - 11

가

가 1007

(74)

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가

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SUB :

GL :

DL :

TFT :

Cadd :

PX :

CT :

AS :

SD1 :

SD2 :

CND :

SP :

PRO :

,
 ,
 y , y x
 ,
 ,
 가
 ,
 ,
 가

(1)

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가

1 2 2 2

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가
1 2 2 2

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가

1

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가

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1
2
2, SUB1, SUB2가, SL
SUB1 SL SUB2 SUB1 x y
GL y DL
GL DL
AR
GL DL TFT
TFT PX가
PX SUB2 ()
GL SL V
가 가 V
V 가
가 DL SL He
He 가 DL
GL V 가
가 DL He GL
1, 1 - 3
1, SUB1, x y
GL
GL DL
GL CL CL
DL

L CL SUB2 SUB1 SUB2 C
 GL CL SUB1 SiN
 GI가 GL
 GI DL GL C
 add TFT
 GL Si
 AS가 GL
 AS TFT SD1 SD2
 GL MIS
 SD1 SD2 DL
 , y x SD1 DL 가 AS
 SD1 SD2가 TFT
 SD2 AS GI
 PX CN
 AS SD2가 AS가
 AS SD2
 AS SD2 , 가 SD2 (, x
) AS SD가
 , x , x y AR y x
 , AS SD1 SD2
 SD1 AS SD2
 TFT, DL, SD1, SD2가 SUB1
 SiN PSV TFT가 PSV
 TFT

PSV PX가 PX ITO(Indium - Tin - Oxide)

2 PX 가 TFT PSV CH TFT SD

가 PX GL TFT GL GL Cadd

가 PX GL PSV Cadd PX

가 PX가 SUB1 PX (

(x) TFT SD2 AS SD

4 AS SD가 ,

AS SD2가 , , 가 AS

가 가 , 가 AS

TFT - (Cgs) , SD2

AS , SD2 SD

AS SD2 , 5 (a) 5

(d)

2

6 , 1

1 GL TFT AS가

() TFT SD2 가

GL GL AS , AS 가

GL

1 AS 가 , AS 가 AS가 GL GL
가 ,
.

3

7 , 1 . , 7
- , 8 .

1 Cadd . GL GI PX
CND가 , CND PSV
.

, CND , DL .

, , Cadd .

, Cadd , , CND

, CND GL GL
CND GL , CND y , Cadd ,

8 GL W5, GL CND
W4 , GL PX W3 , (1)
가 , PX 가 Cadd
.

1

$$\frac{1}{4} \times W3 \leq W4 \leq \frac{3}{4} \times W3$$

, TFT SD2
1 , 2
.

4

9 , 8 .

8 PSV IPAS
OPAS , CND PX
.

PSV , PX ORI1
Cadd , , OPAS ,

, PSV IPAS OPAS 가
 , TFT SD2
 , 1 , 2
 5
 10 , 7 , 10
 - , 11
 7 , PX가 GL , PX , DL
 GL x DL
 , PX가 CND
 , OPAS
 6
 12 , 7 , 12
 - , 13
 13 SUB1 SUB2
 SP
 P SP Cadd SUB2 SP , S
 Cadd
 , SP ,
 , SP SUB2
 ,
 , SP Cadd CH CND PX
 CH SP
 , 13 (,)
 W6 , CH (,) W7
 , W6 > W7
 CH SUB1 SUB2 , 가 , SP가
 가
 , SP Cadd CH ,
 , 14 (a) 14 (c)

7

15 , 12 .

12 , TFT . , AS
SD1 AS
SD2 SD1 .

TFT SD1 가
SD2 , - (Cgs) ,
SD2 , AS
AS , SD2가
SD2 AS , 가
AS SD2 - (Cgs)
1 가 .

SD1 , 16
60 ° SD1
TFT .

8

17 , 15 ,
TFT .

15 , 7 TFT ,
TFT .

CT가 PX SUB1
PX CT
TFT SD2 PX
Cadd .

9

18 , 15 .

15 , Cadd .

, Cadd GL 가 PRO1
 , PRO1 가 PX .
 TFT SD2 , -
 (Cgs) Cadd - .
 , GL Cadd ,
 - (小) (大) ,
 , SD2 TFT , TFT
 - .
 , 20 가 ,
 TFT Cadd .
 10
 19 , 15 .
 15 , PSV ,
 .
 , TFT , GL 가 TFT SD2
 PRO2 , PRO2가 SD2 .
 , - , TFT SD2
 GL .
 , GL TFT -
 GL .
 , TFT ,
 , TFT EL(EI
 ectro Luminescence) .

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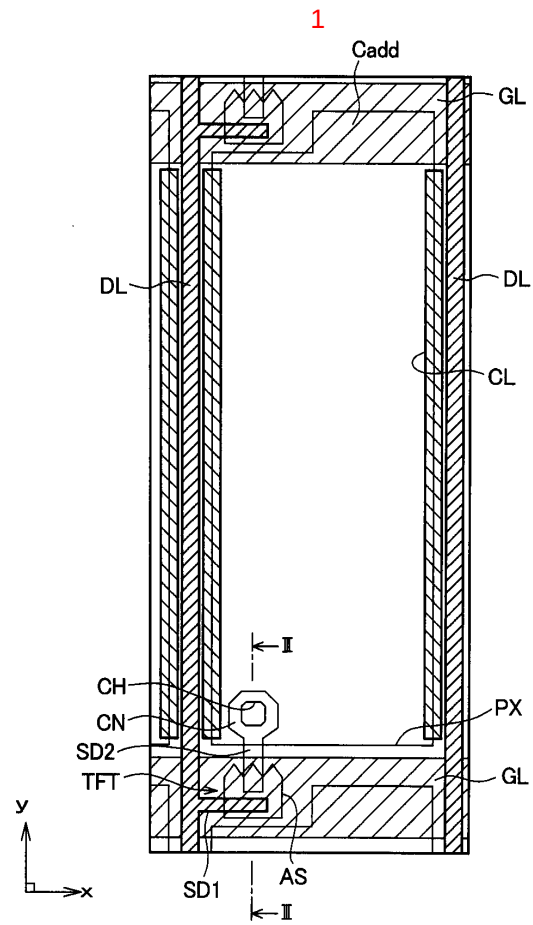
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2

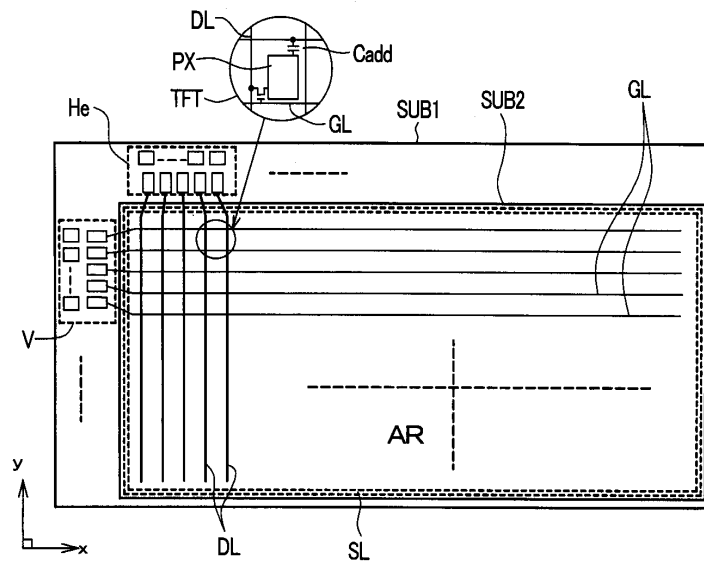
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7

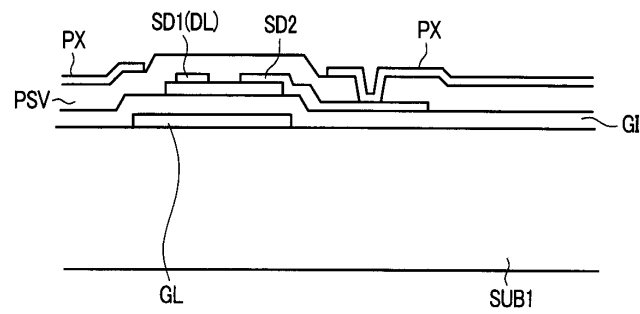
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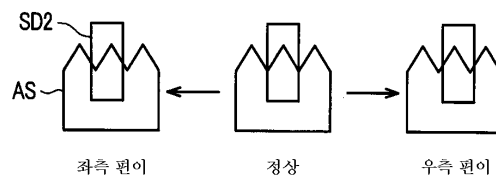
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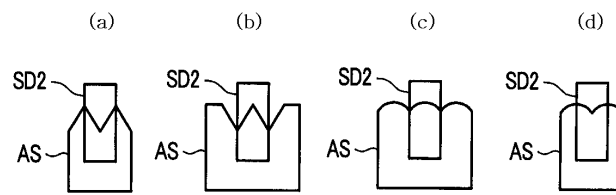
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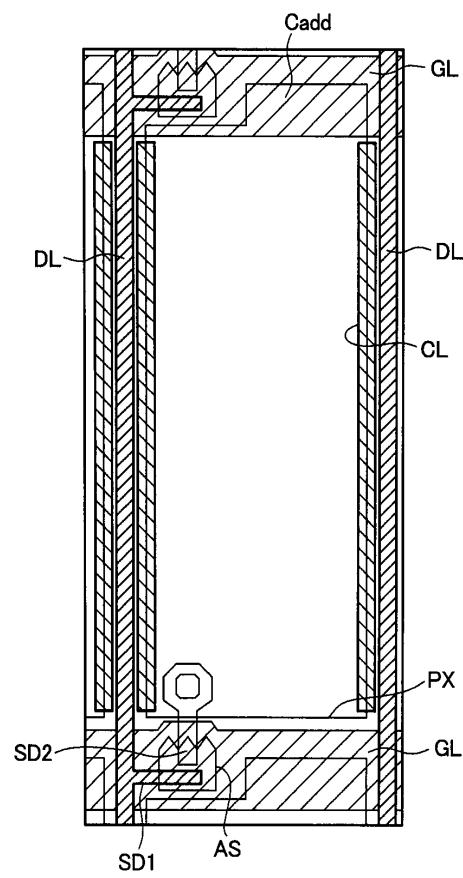
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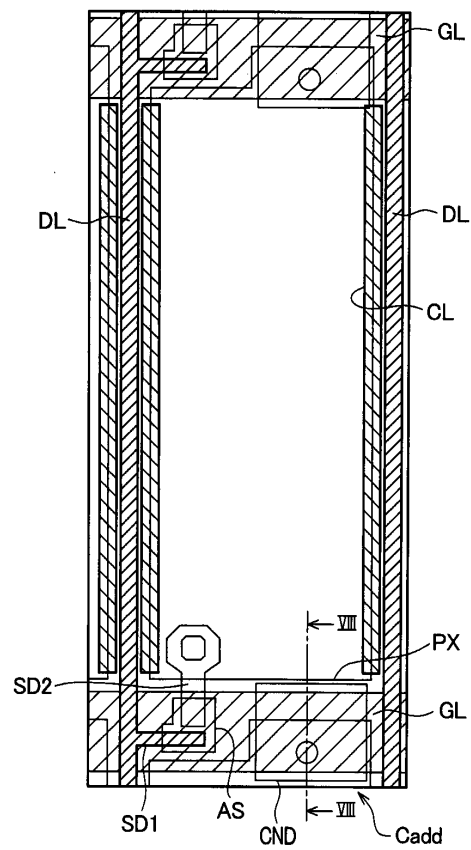
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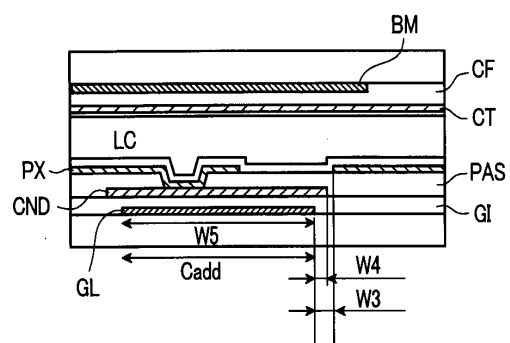
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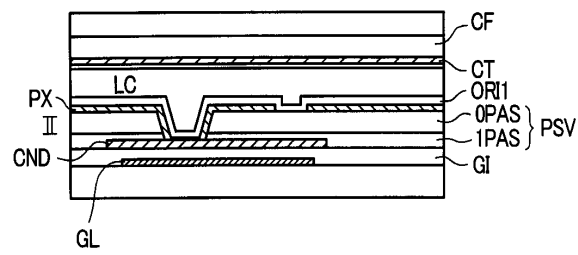
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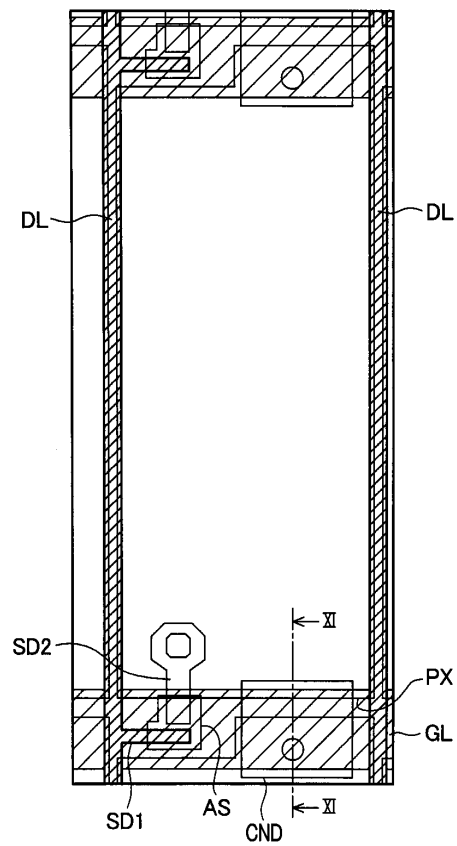
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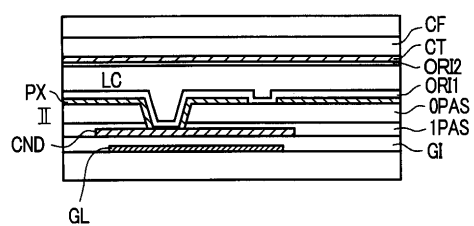
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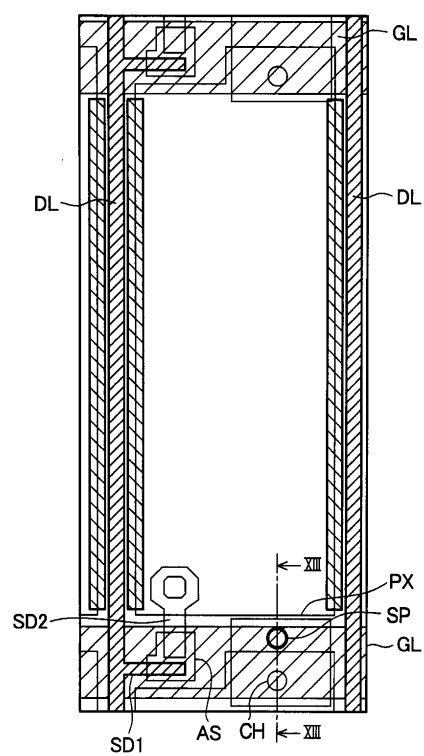
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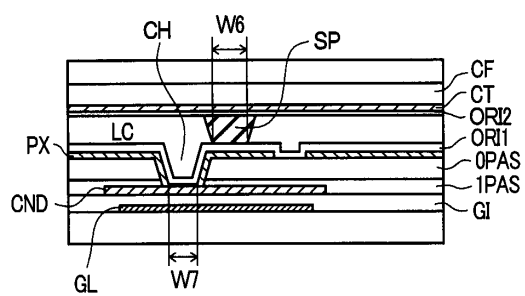
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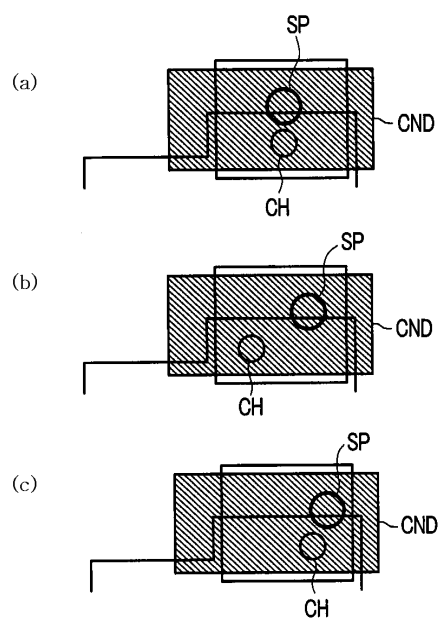
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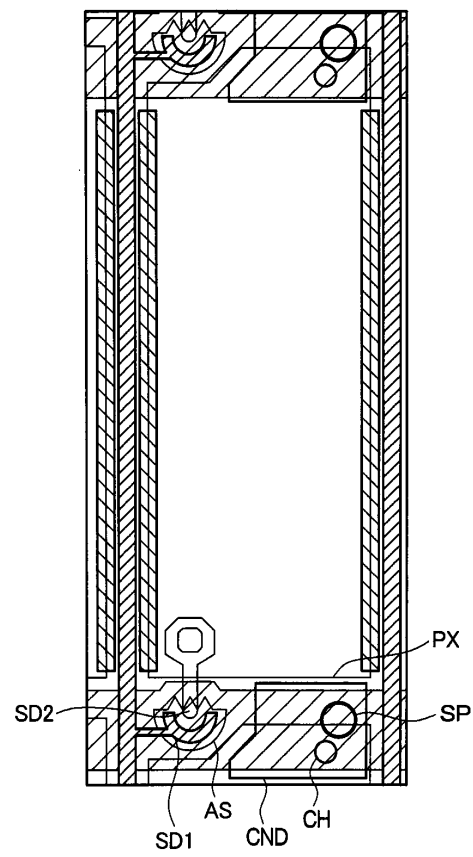
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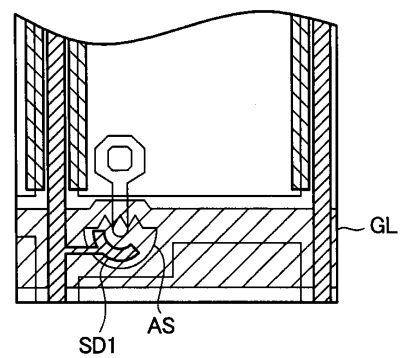
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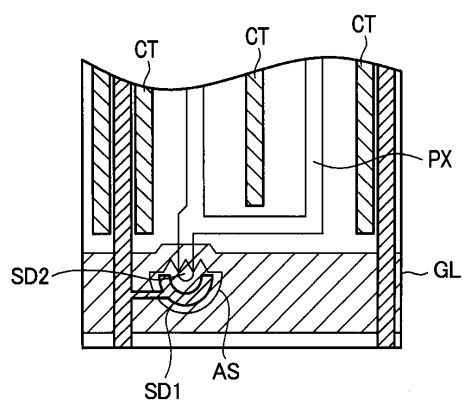
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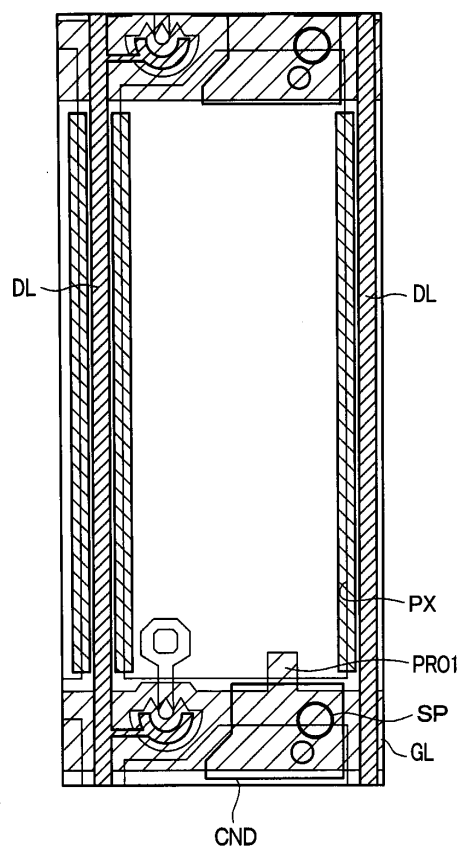
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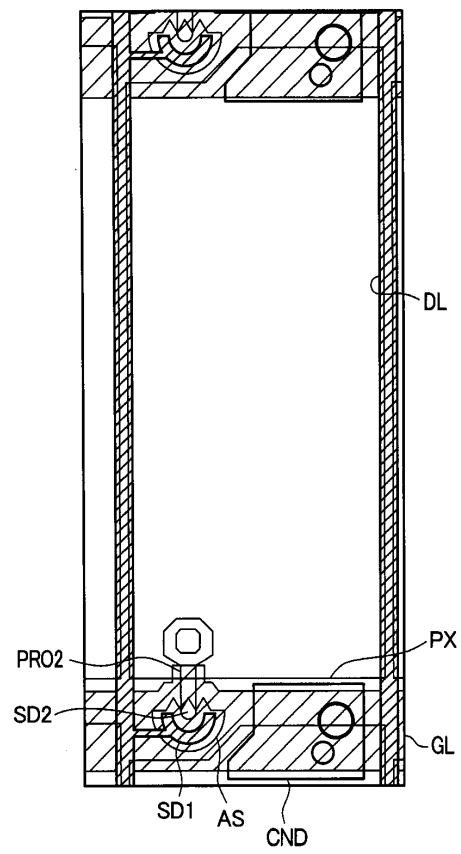
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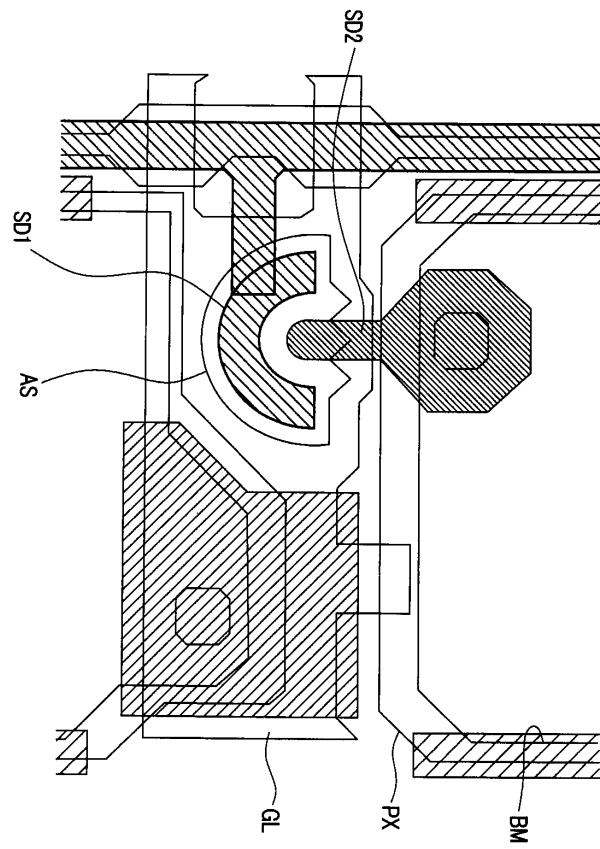
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专利名称(译)	液晶显示器		
公开(公告)号	KR1020030019199A	公开(公告)日	2003-03-06
申请号	KR1020020051413	申请日	2002-08-29
[标]申请(专利权)人(译)	日立HITACHI SEISAKUSHODBA		
申请(专利权)人(译)	株式会社日立制作所		
当前申请(专利权)人(译)	株式会社日立制作所		
[标]发明人	NAKAYAMA TAKANORI 나까야마다까노리 WATANABE RYUUTA 와따나베류우타 OOIDA JUN 오이다준 GOTOU YASUKO 고토야스꼬 MIYAZAKI KAORI 미야자끼가오리		
发明人	나까야마다까노리 와따나베류우타 오이다준 고토야스꼬 미야자끼가오리		
IPC分类号	G09F9/30 H01L29/786 G02F1/1368 G02F1/1362 G09F9/35 G02F1/1343		
CPC分类号	H01L29/78618 G02F1/136213 G02F1/1368 H01L29/78696 H01L29/78669		
代理人(译)	CHANG, SOO KIL		
优先权	2001261680 2001-08-30 JP		
其他公开文献	KR100511041B1		
外部链接	Espacenet		

摘要(译)

薄膜晶体管包括在将液晶放置在间隔中的每个基板中，并且面对在一个基板的液晶侧的一侧的每个像素区域中。该薄膜晶体管包括栅电极，连接到半导体层的栅极信号线，在该间隔中放置该栅电极和绝缘层并层叠，并且漏电极连接到该半导体层上的漏极信号线，并且连接到像素电极的源电极上面的半导体层位于至少源电极的宽度大于源电极宽度的一侧，大宽度截面到周期性凹凸形状。液晶，对准，薄膜晶体管，凹凸。

