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(43)

2001 - 0070450
2001 07 25

(21) 10 - 2001 - 0000742
(22) 2001 01 06

(30) 2000 - 005856 2000 01 07 (JP)

(71) 가 가
가 가 4 6

(72) 가 가 4 - 39 - 9 - 303
가 6 - 18 - 6

13

(74)

:

(54)

SUB1 g3 / CL(CT) g1 g2

1

1		1	.
2	1		.
3			.
4			.
5		2	.
6	5		.
7		/	.
8	7		.
9	7	8	.
10	7	9	.
11	7	10	.
12	7	11	.
13		3	.
14		4	.
15		가	.
16			.
17			.
18			.

< >

GL :

GT :

GI :

DL :

CL :

CT :

PX :

ASI :

TFT :

PSV : ()

SUB(SUB1) :

g1 :

g2 :

g3 : ITO ()

TFT :

ASI :

N⁺ ASI :

SD1/SD2 : /

PAS :

TH : ()

가
) 가 , 2 (In plane Switching : IPS
) () (

가 가

가 ,

SID(Society for Information Display) 99 DIGEST : P20

2 P205, 11 - 202356

46cm(18)
TFT

51cm(20),
가 (,)

가

(

IGO(. .)

(ITO(. .), IZO(. .)
, ITO)

ITO

IT

0

가 .

ITO 가
가 .

ITO , 가

(가) , ITO , ITO
가 .

ITO

ITO

ITO

가 가 .

(1)

(2) / 1 , / , / , / ,

(3) , / , /

2 2 ,

/ , / ,

(4) , / , /

2 2 ,

/ , / ,

(5) , / , /

2 2 ,

/ , /

(6) Nd, Y, La, Sm 가 2 - ,

(7) Mo, Cr, W, Ti 2

(8) ITO(. .), IZO(. .), IGO(. .)

- (9) , Mo Ti
(PAS)
Mo Ti
- (10) Mo / (Al/Nd)
- (11) ITO ITO
(Mo/Al/Mo)
가 가 (ITO)
ITO , ITO
ITO , ITO(In₂O₅) , In₂O₅ + e() 2 · In + (5/2) · O₂()
ITO ITO
가 가 ITO
ITO 가
CVD 가 ITO
CVD 가
ITO 가 120 (ITO)
CVD 300 가
ITO , 1
CVD

가 가 , 가 .

ITO ITO ,

/ ITO ITO , /
, ITO .

ITO (Al - Nd)
. Ti AL
, ITO CVD 가 () ITO ITO
, ITO . ITO

ITO , ITO . ITO
/ /
, ITO

, 가 . ,
, ,

ITO () () ,

가 가 .

1 () ,

1 , SUB , g1 g2
 / GT(GL), g1 g1 ITO
 T g3 / CT(CL) CT , 1 TF
 GT , CL CT .

/ GT(GL) / CT(CL) GI , GT
 ASI N+ ASI , SD1 , SD2 A
 SI / SD1 SD2가 , SD1 , SD2

/ SD1 SD2 / CT(CL) PAS가 ,
 CT(CL) TH SD1 PX가 ,

2 1 , DL DL 2 , GL(
 1) 2

CL , CL CT가
 DL GL TFT가 ,
 TH GT PX GL , SD2 DL SD1

1 2 SUB1 (Al) g1 (M
 o) g2 / GL(GT) CL ,

Ti
 - (Al - Si) Al - (Al - Nd),
 (Al - Nd)

g1 (Mo) g2 , 가
 - (Mo - Cr) .

가 , 가 가 가 1

GO(, CT ITO g3 . ITO , IZO(. .), I
)

ITO , 가 . IZO IGO , CVD
 가 , . 200

3 Mo, Al () ITO, ITO, IZO()
 NMD(TMAH() 2.38%) . , .

O, ITO, Al 가가 (IZO, ITO, Mo, IZO, IT

ITO(ITO) 가 ITO

4 가 ITO (HBr) ITO ITO

ITO

CVD ITO

SiN, Si, n+ Si CVD

Si n+ Si 가

(Mo - Cr) / (Cr - Mo/Cr)

CVD

, SiN 가 5

(2 PX).

HBr

HBr 가 2

PX)

(

, (PX) TFT (CT) 가 , (TFT)
 , 가 ,
 , (CT) 가 가 , IPS (PX)
 5 2 () , 6 5
 , 7 / , 8 12 12 7 TFT
 TFT SUB1 / GT(GL) CL g1 가
 / GT(GL) g1 g4 , CL 가
 g1 g4 () g2 .
 , AL , SUB SOG
 CT , g1 ITO g4 6 CL
 g1 6 g2 g2 6 CL , g2
 , () ,
 ITO CL g1 g3 CT g1
 g2 , g3 CL CT
 , / GL(GT) CL CT , 1 4 1
 GI, ASI, N + ASI, SD1, SD2, PAS
 PX
 , 7 12 (1) ,
 / GL(GT) CL (, - : Al - Nd) g1
 (, - : Mo - Cr) g2
 8
 , CL Mo - Cr g2 ITO
 REG (7 (2)). REG

Mo - Cr CL g2 , REG GL SUB1 Mo - Cr g2 REG (7 (3)).

REG Al - Nd g1 CL Mo - Cr g2
GL g4 (7 (4)). ,
Al - Nd g4 . 9

REG Mo - Cr g2 (7 (5)). Mo - Cr g2

(7 (6)). CL 10 g3 CT

CT , IPS 가 .

(Al - Nd) G1 g3 ITO g4 GL, CL CT
g3 , g1 .

1, CT , 11 ASI (N + ASI), SD
DL SD2 .

PAS , 12 PAS SD1 TH
PX(5, 6) .

GI(SiN) / GL(GT), CL , / ,
CL , / ,

13 3 ,
() .

TFT SUB1 CT g3 ITO
g2 () , (Al - Nd) g1
CL .

g3 CL g2 CT

g1 g2 ,
가 . 120 .

/ GL(GT) .

CT 가 , g3 (TFT) SUB1 ,

14

4

() ,
 TFT SUB1 , CT가 IT
 O (3 g3) , / GL(GT) g2 g1 ITO g3 g6 .
 g1 g6 ,
 () , g2 CL , g3 , / g1 GL
 (GT)
 CL g3 / GL(GT) ITO 3 , CL 가
 UB1 , 3 CT 가 , g5 (TFT) S
 , , ,

15

가

15

() TFT SUB1 AR x () , y ,
 GL GL CL y , x DL
 GL DL GL CL 가 ,
 V H DL GL () V ()가 , H ,
 , V H CPU () POW 가 CTL

16

16

가 1 $V_{CH} V_{CL}^2$, $V_G(i-1), V_G(i)$
 $V_{CH} V_{CL}^2$.
 () 가 1/2 .
 () H , () 가 .

,
/ , /
;

2 2

;

/

,
/ , / ,
,

4.

,
/ , /
;

2 2

;

/ , / ,
,

5.

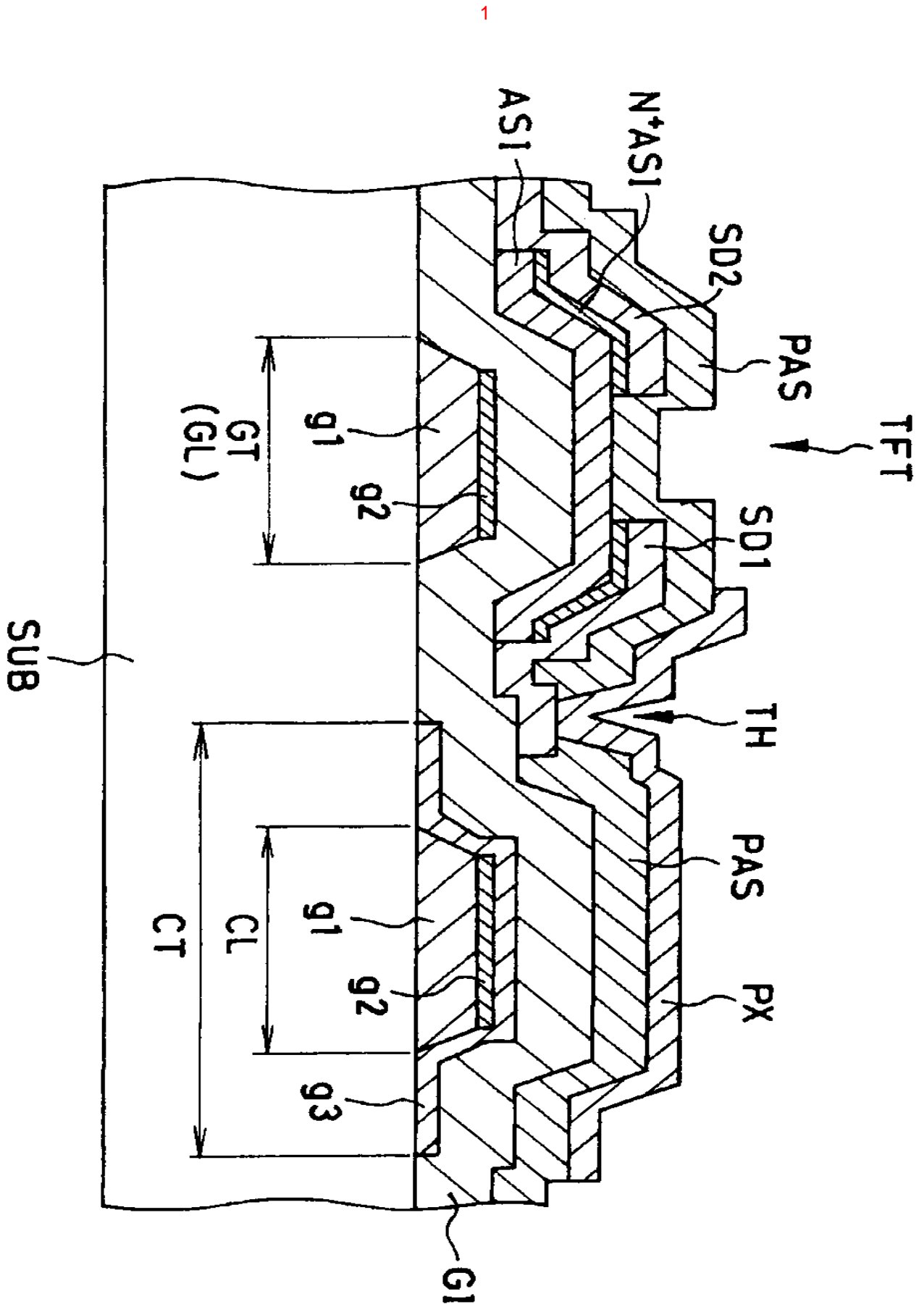
,
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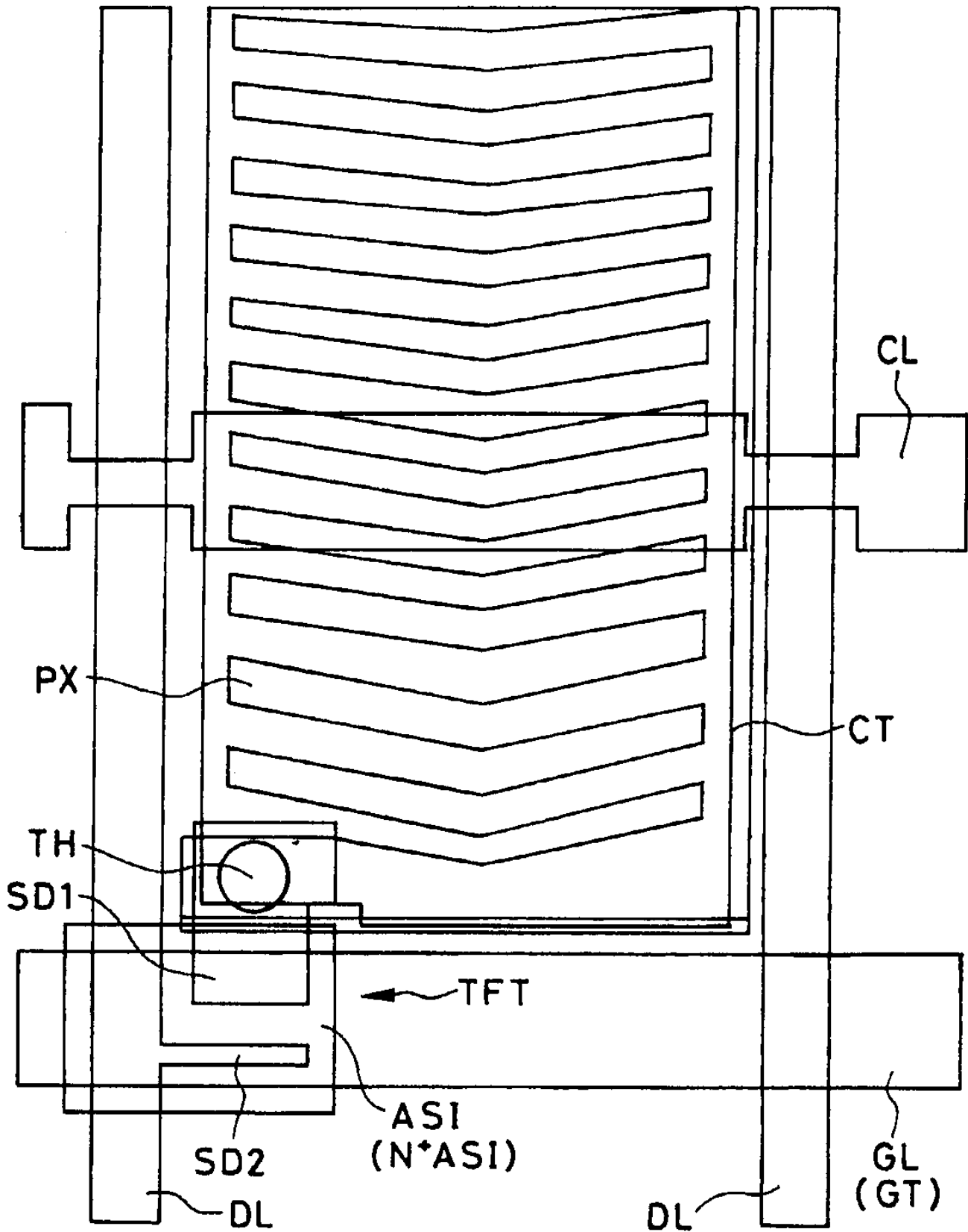
2 2

;

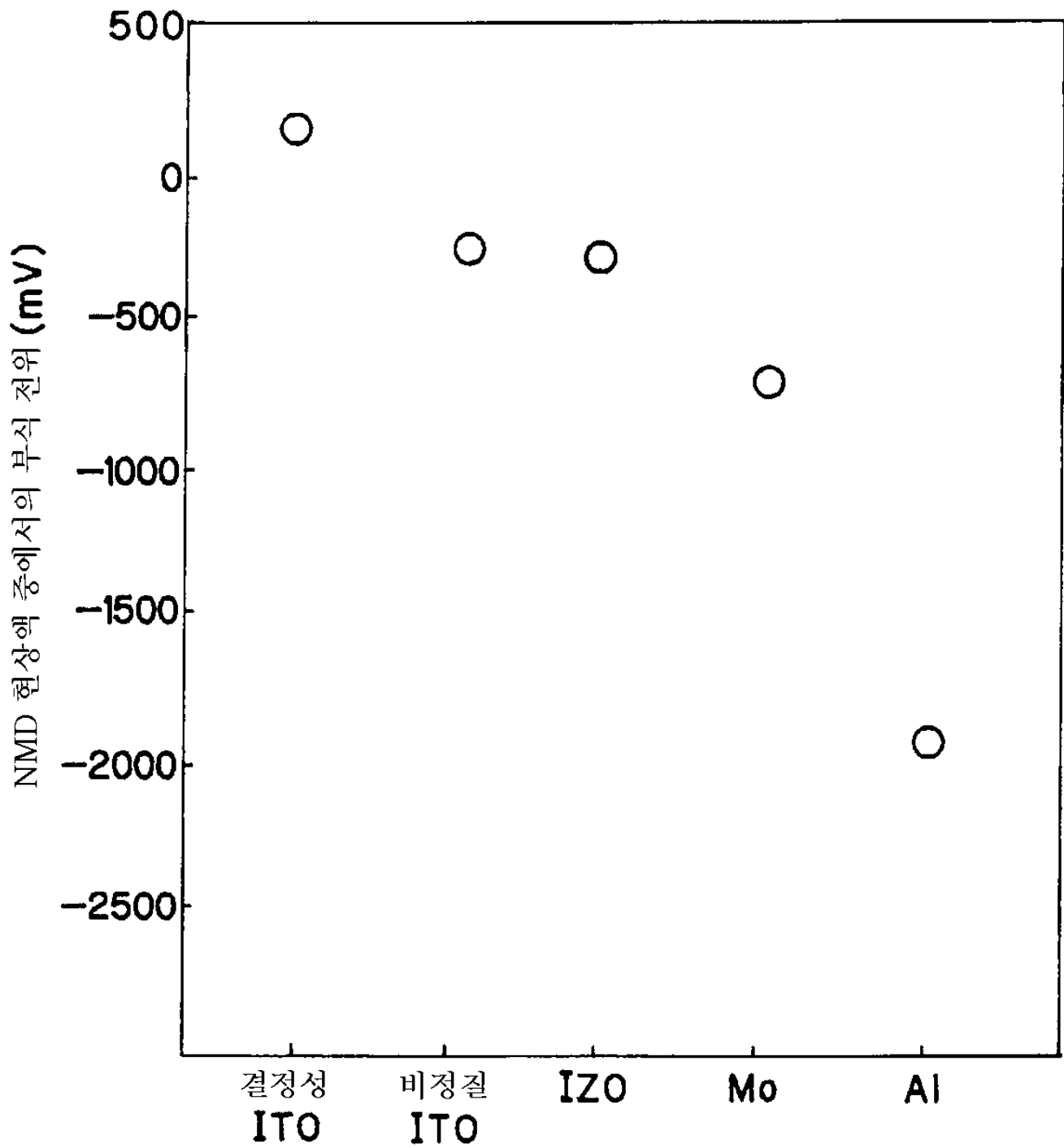
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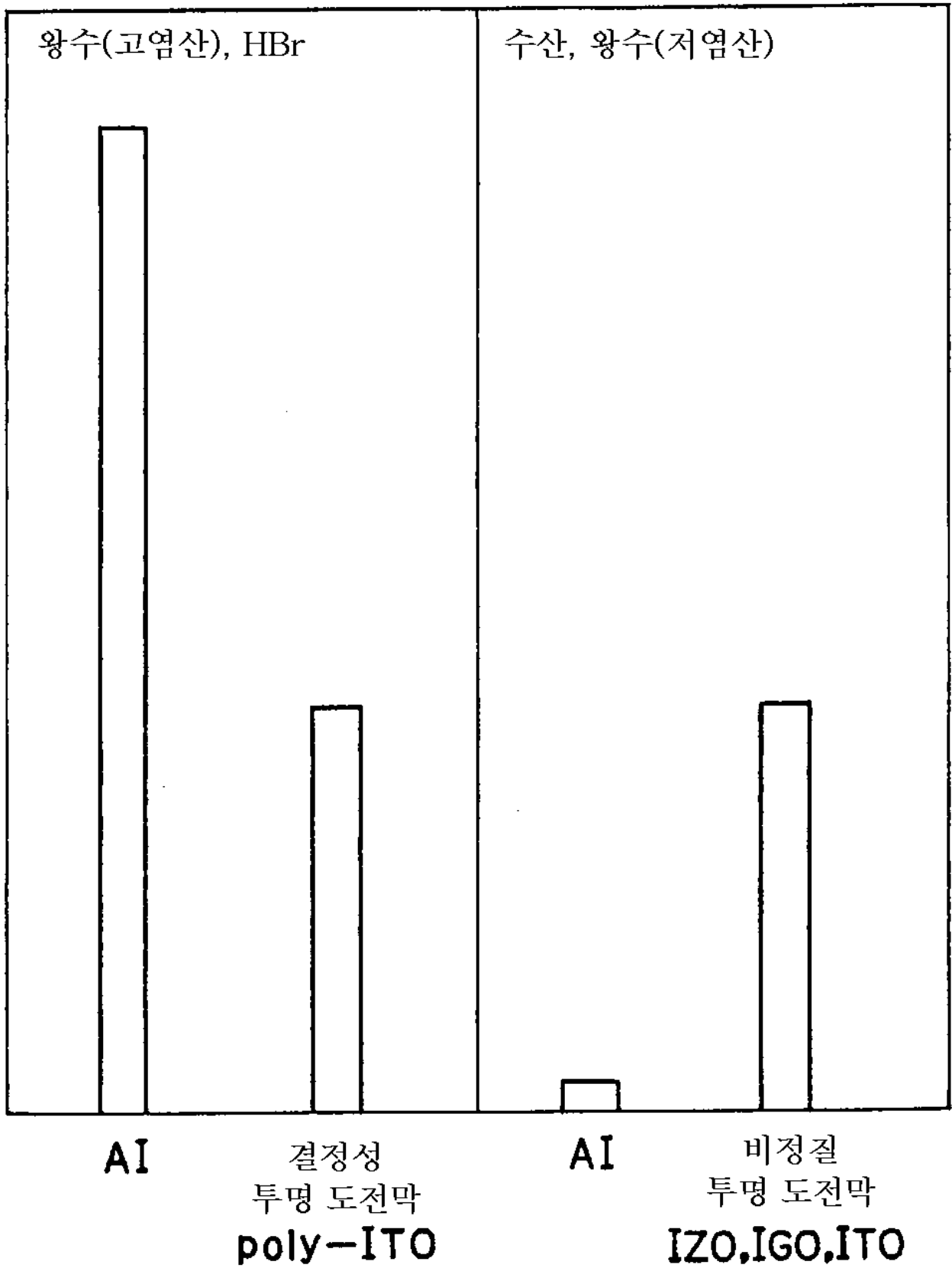
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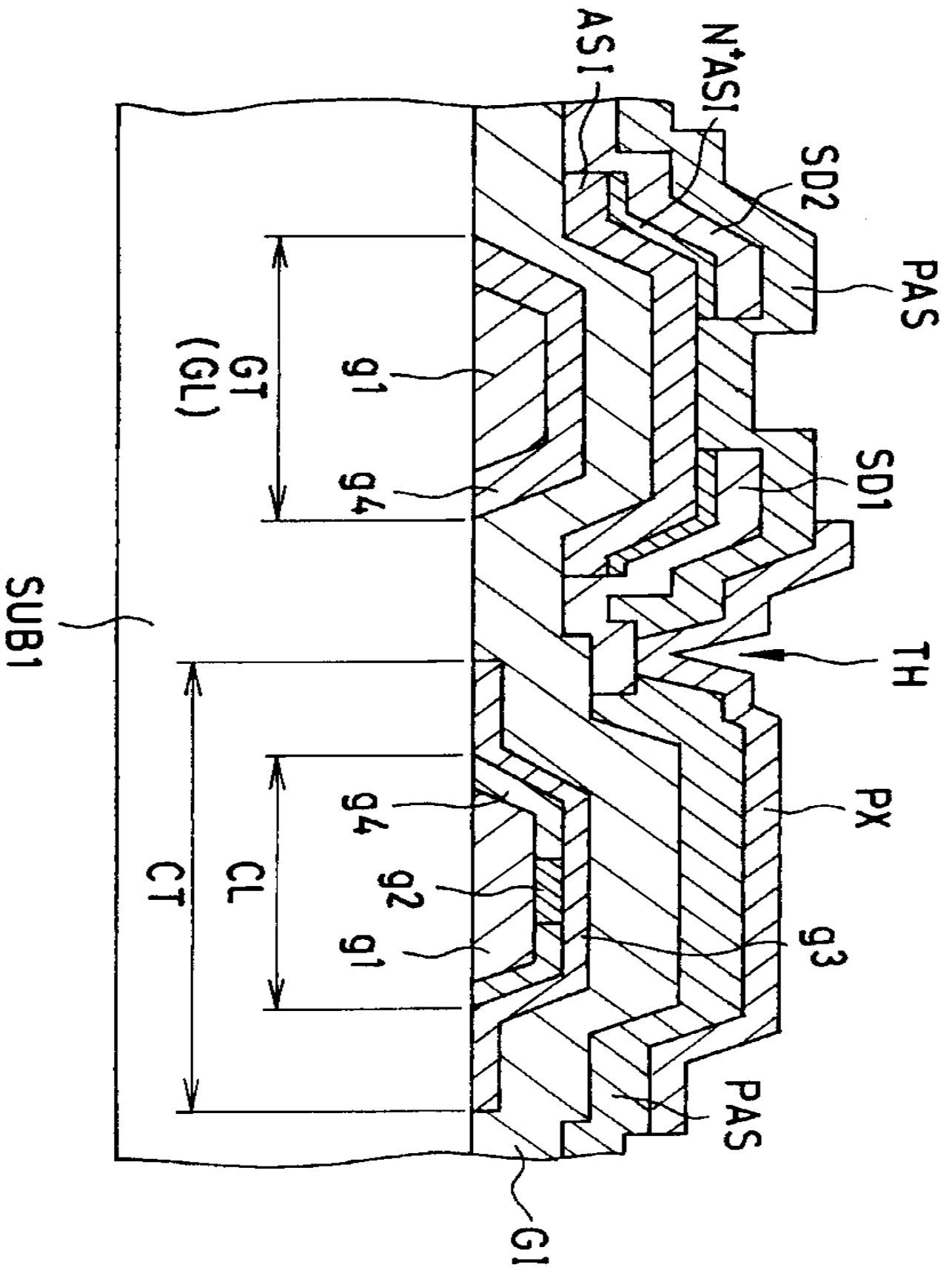


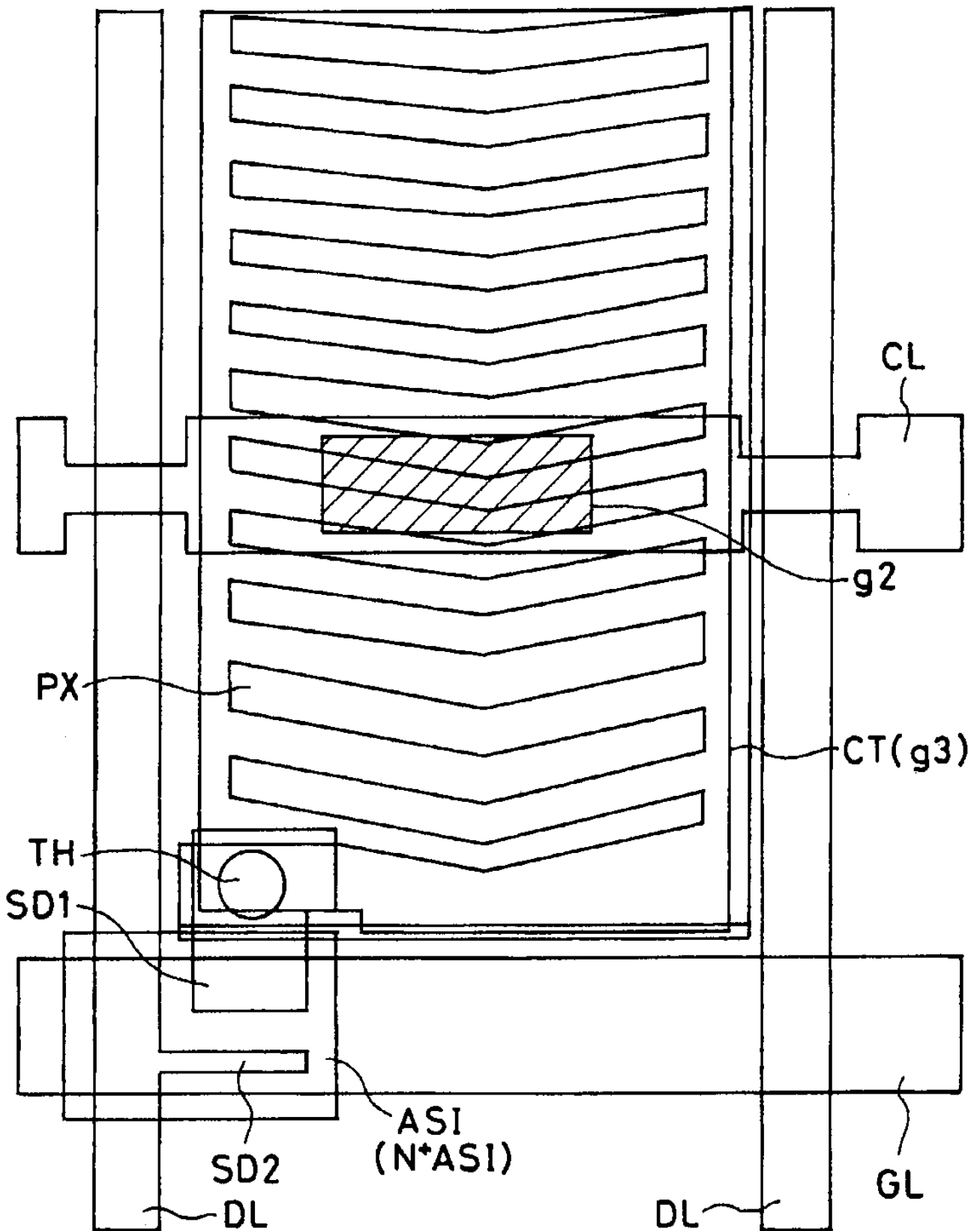
3



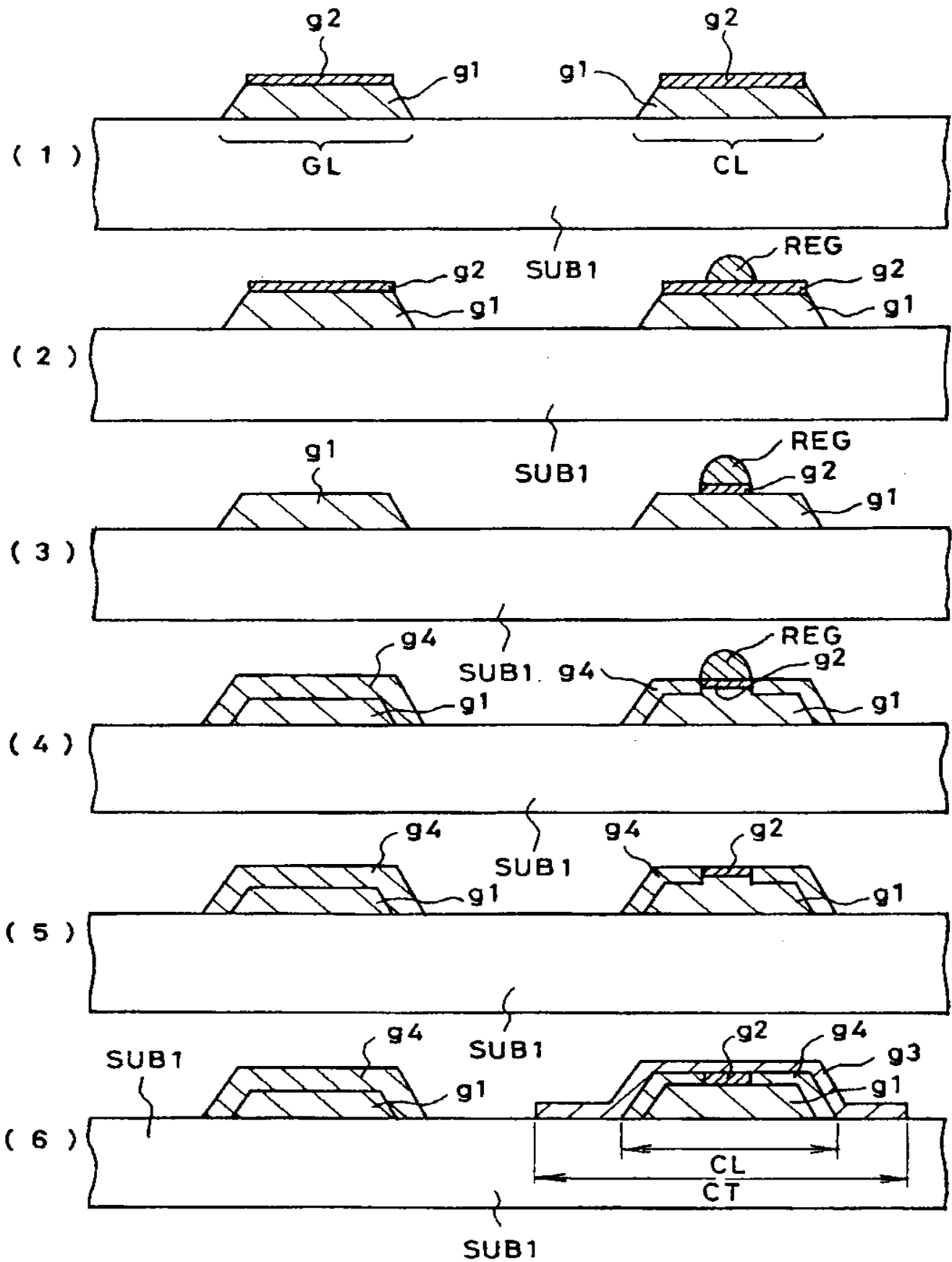


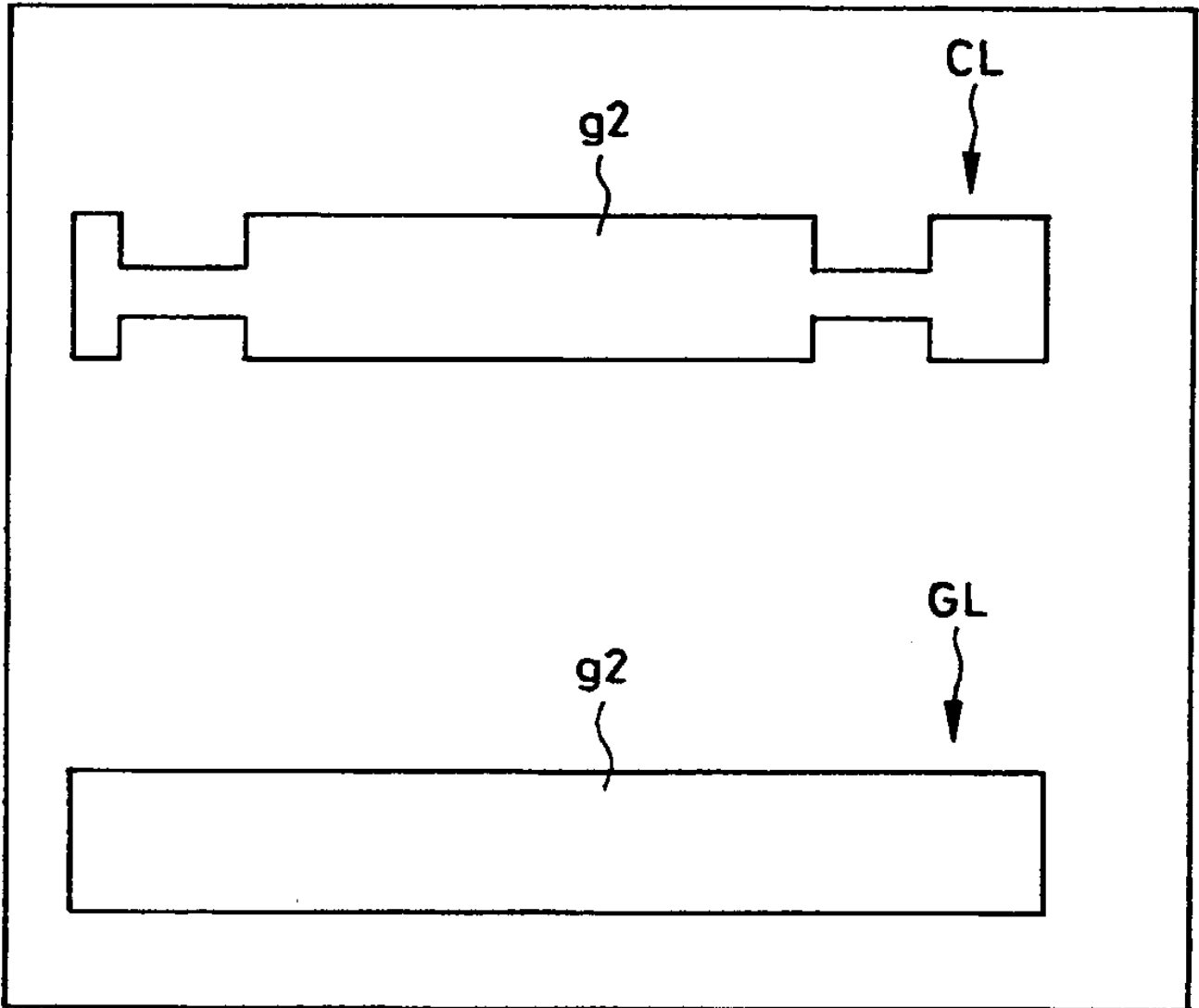
5

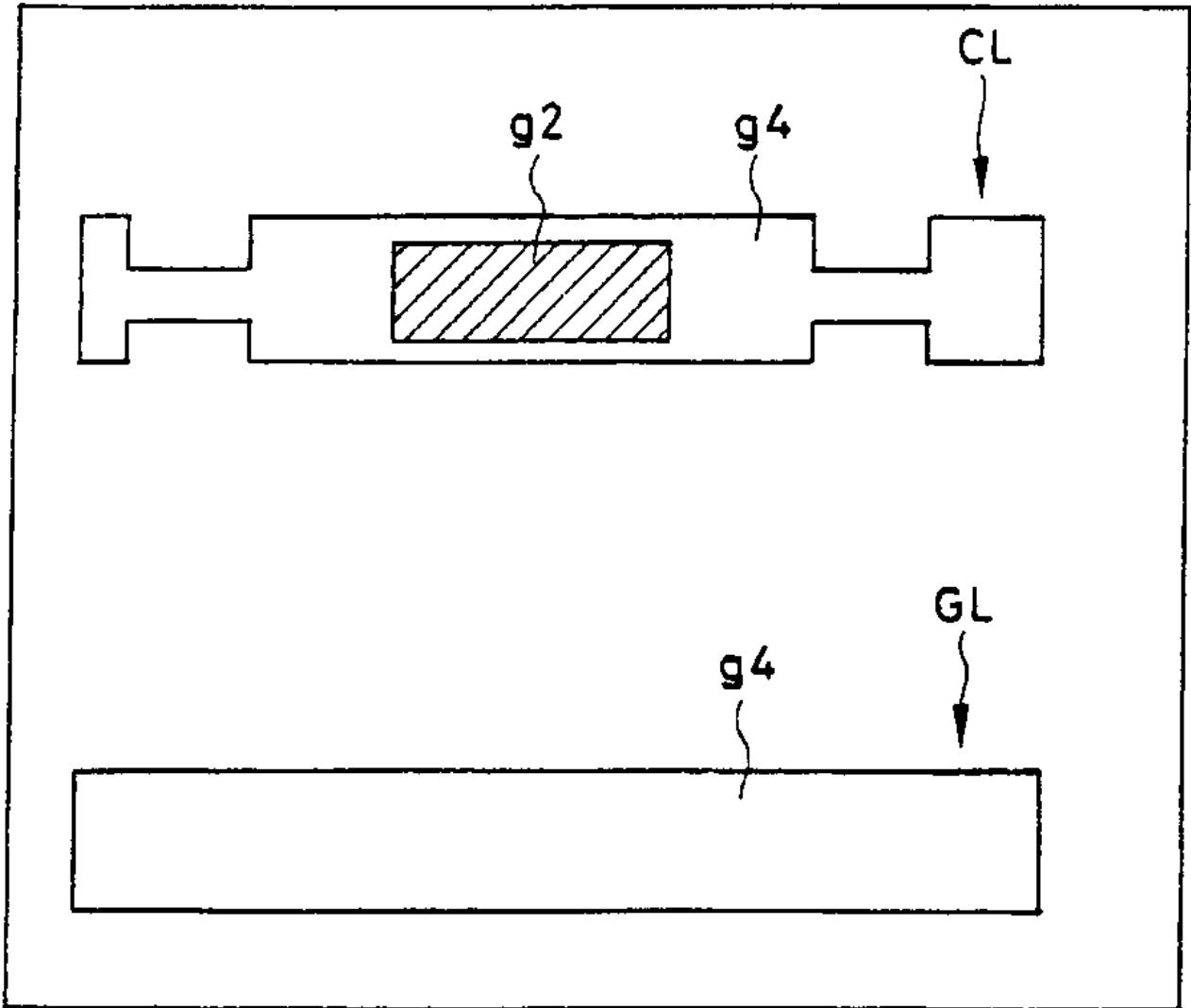




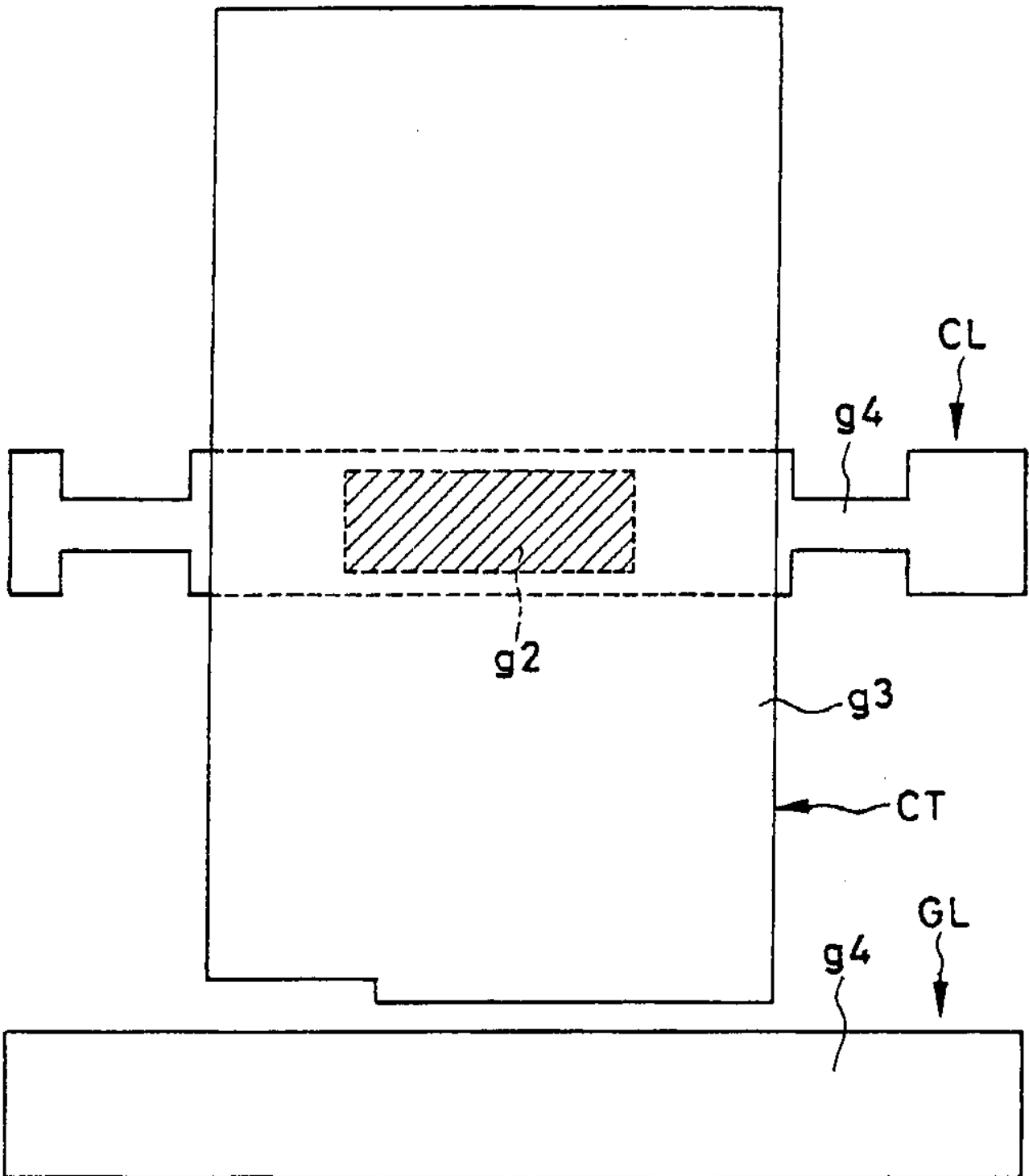
7

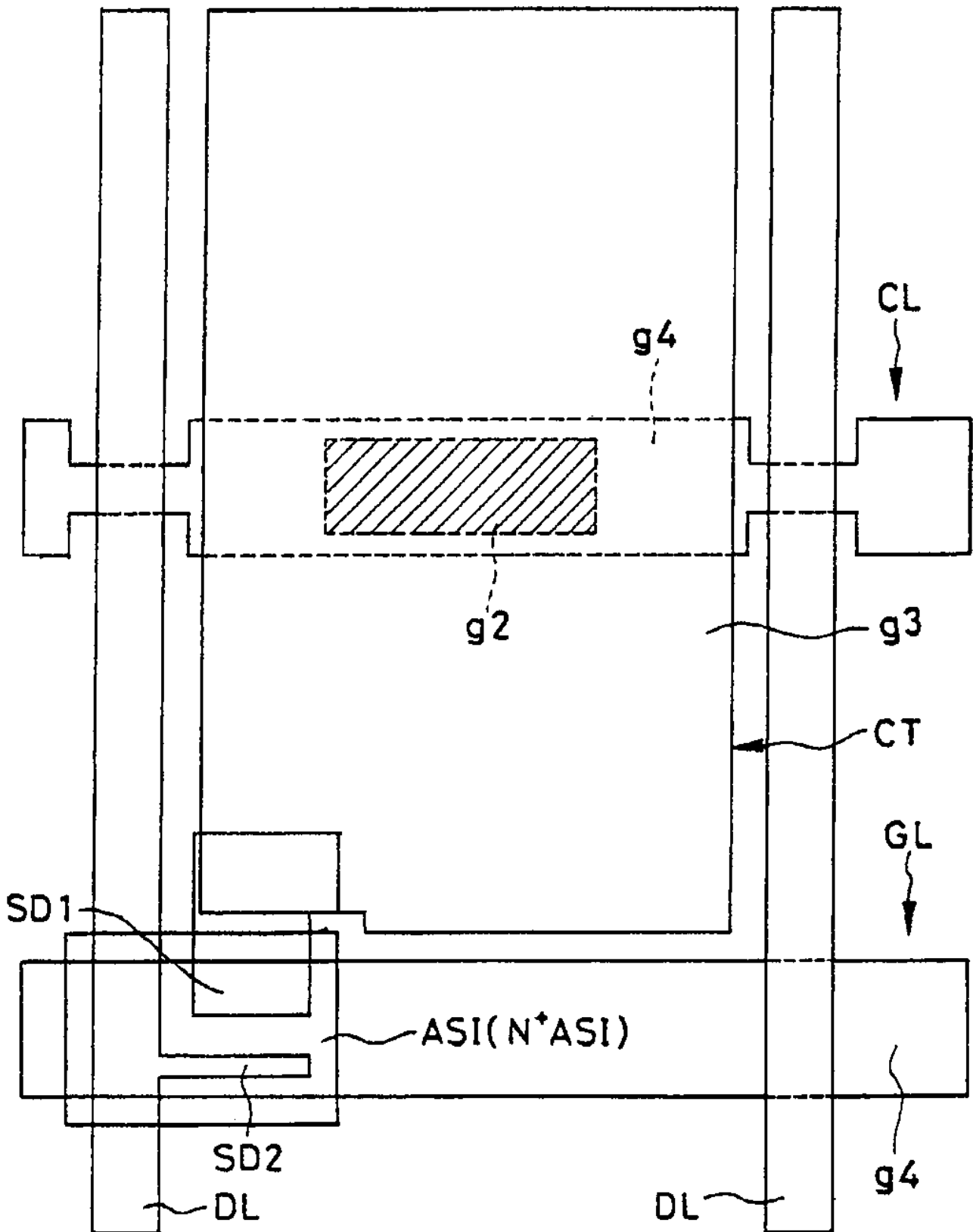


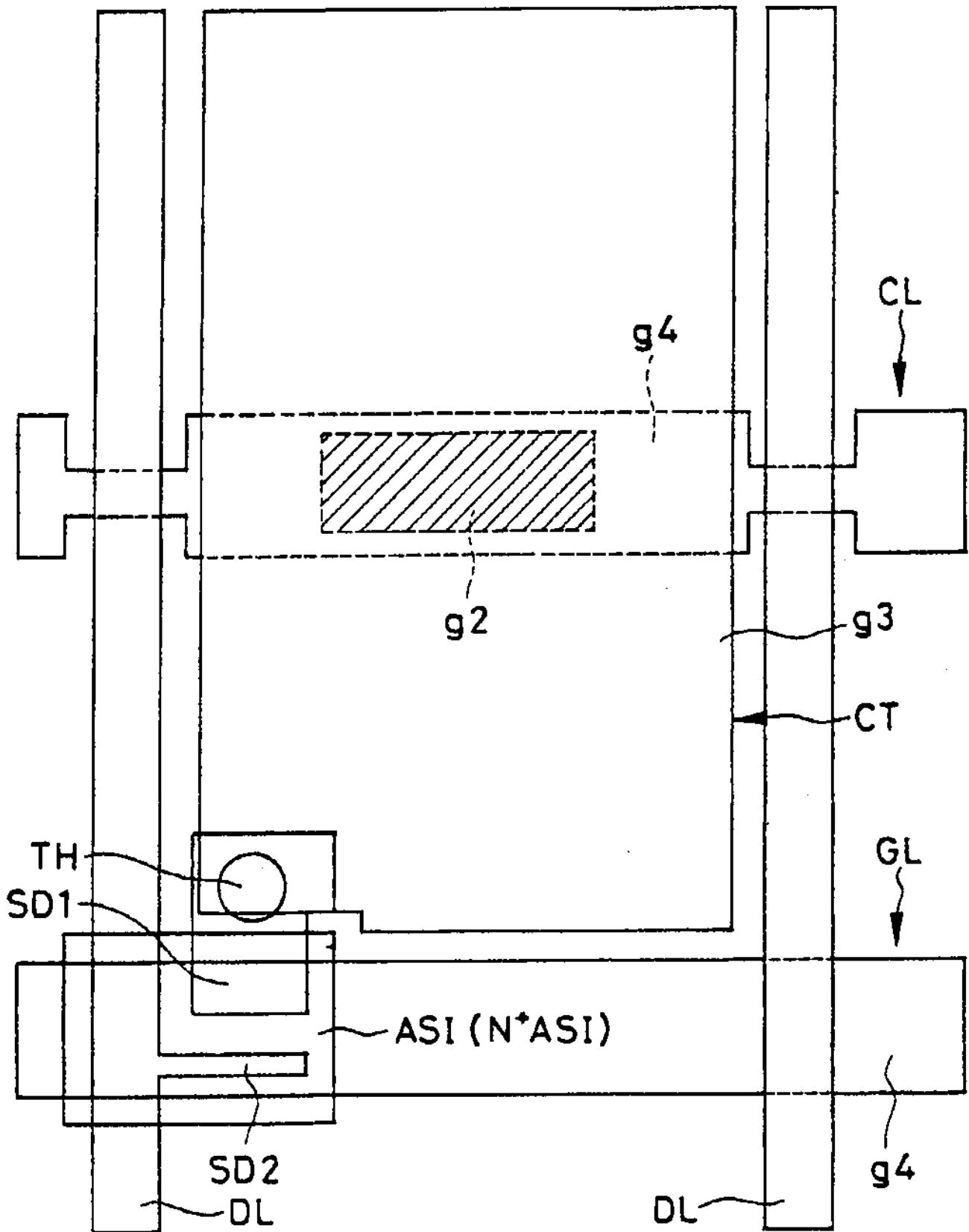




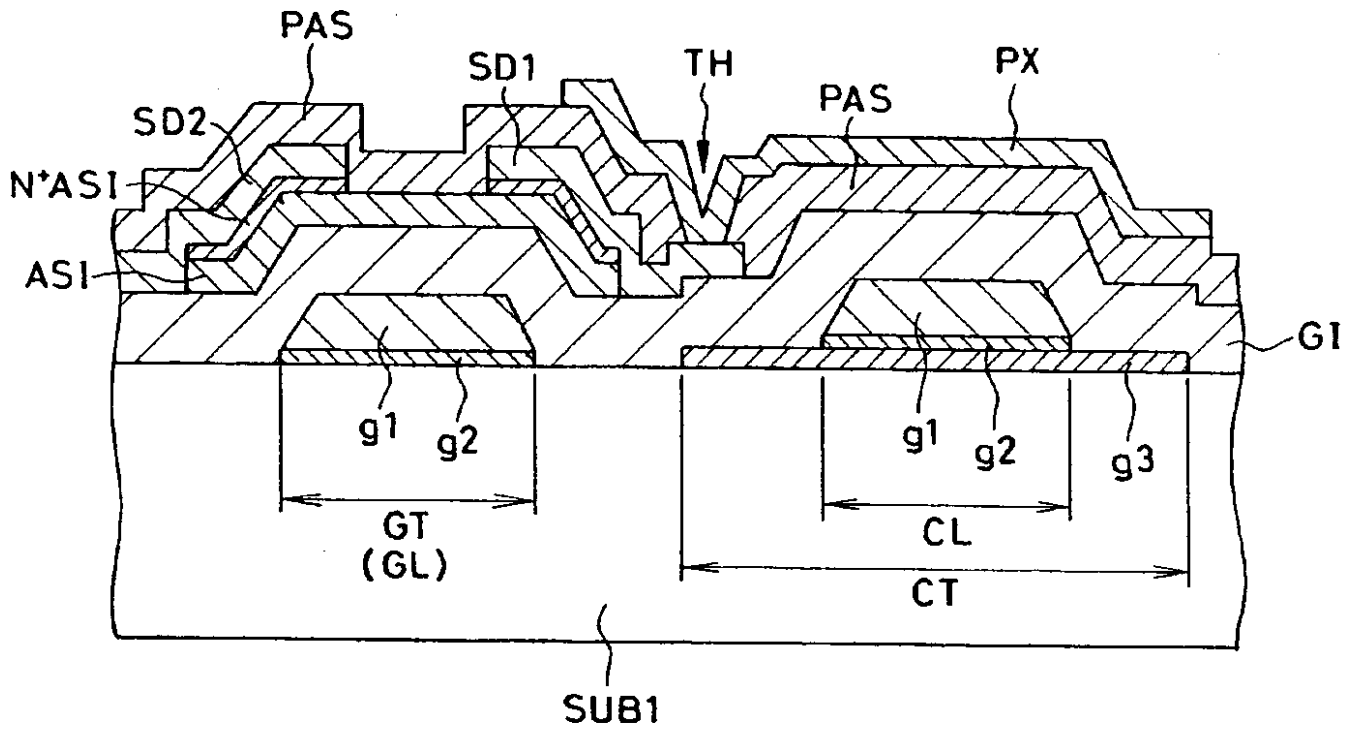
10



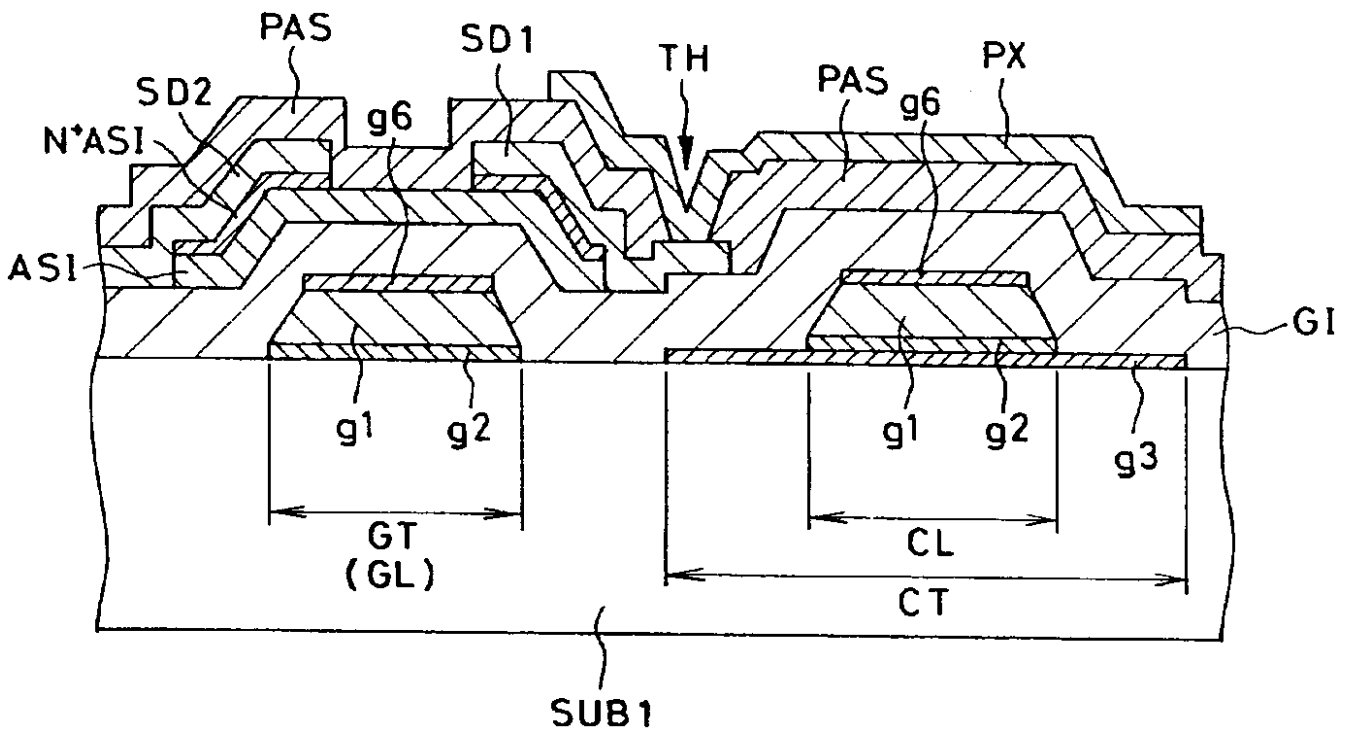


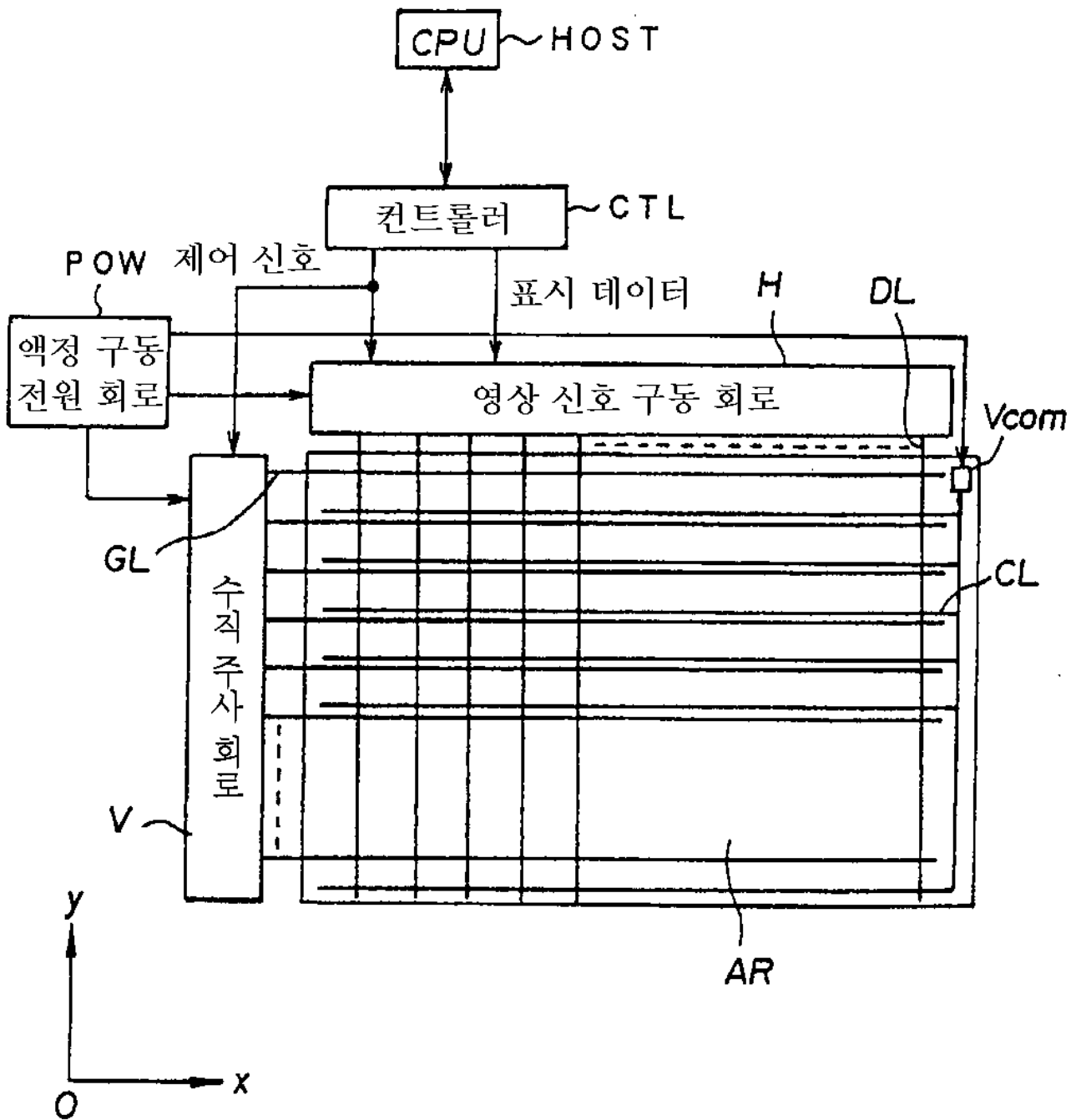


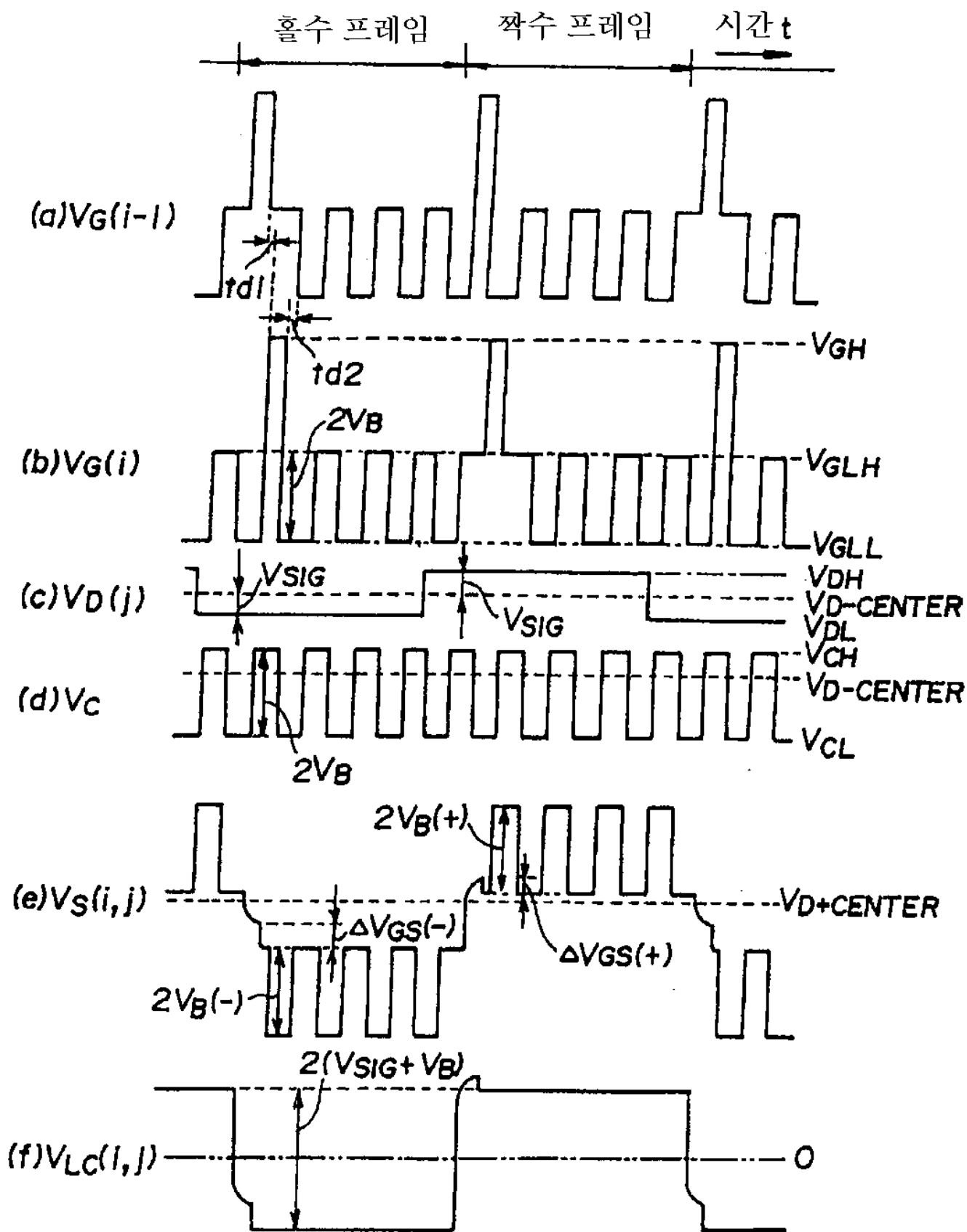
13

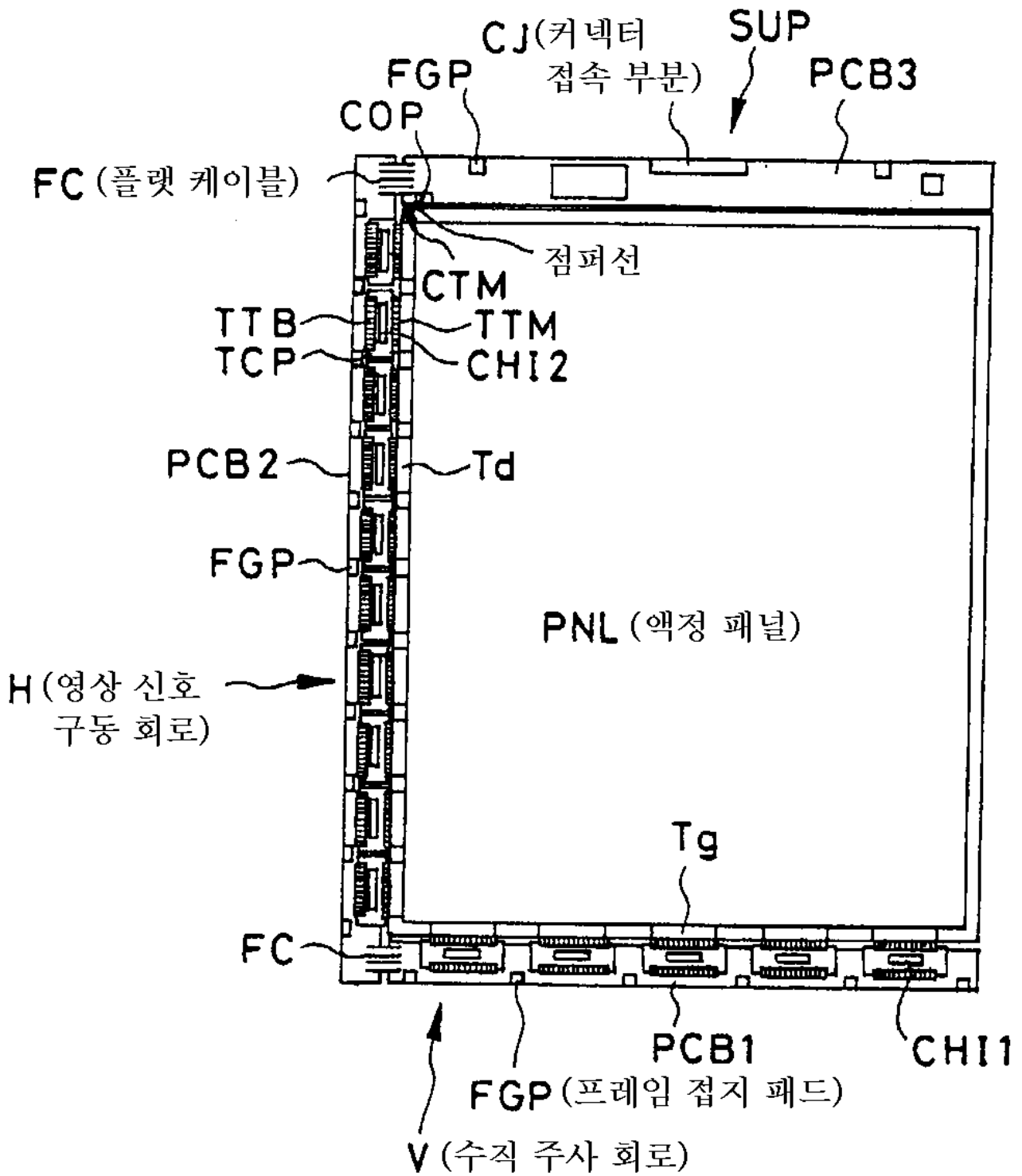


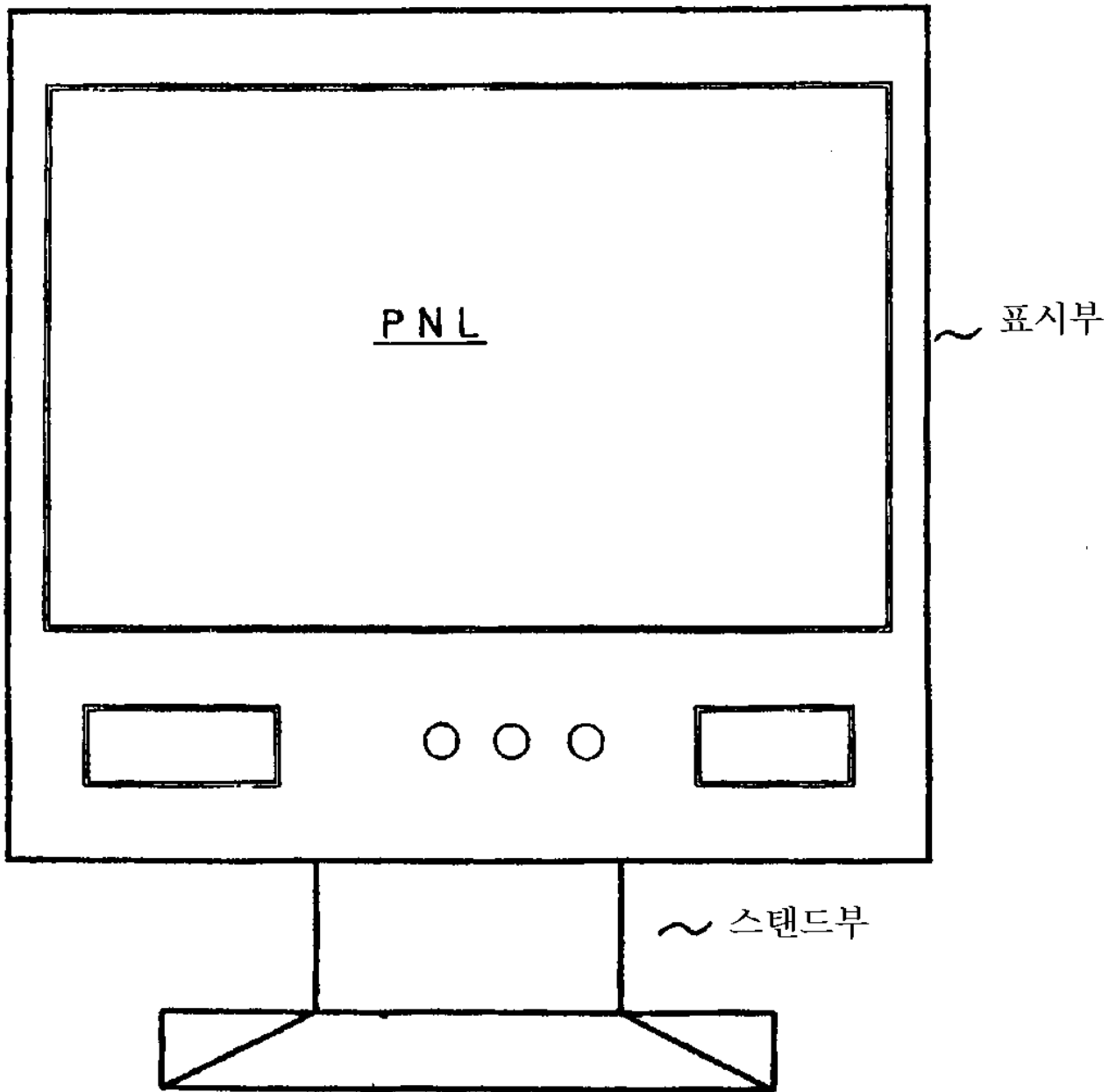
14











专利名称(译)	液晶显示器		
公开(公告)号	KR1020010070450A	公开(公告)日	2001-07-25
申请号	KR1020010000742	申请日	2001-01-06
[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		
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发明人	가네꼬도끼시 후지이가즈미 오노기꾸오		
IPC分类号	G02F1/13 G02F1/1368 G09F G02F1/1362 G09F9/30 G02F G02F1/136 G02F1/133 G02F1/1343		
CPC分类号	G02F1/136286 G02F2203/01 G02F2201/123 G02F2001/13629 G02F1/134363 G02F2001/136295		
代理人(译)	CHANG, SOO KIL		
优先权	2000005856 2000-01-07 JP		
其他公开文献	KR100484464B1		
外部链接	Espacenet		

摘要(译)

从而形成适合于扩大尺寸的布线结构和像素结构。通过涂覆层压结构膜形成公共布线/电极CL (CT)，其中在绝缘基板SUB1上的主要由铝或铝构成的合金层g1涂覆有难熔金属层g2。 1 指数方面 液晶显示器，横向电场系统，非晶透明导电膜，铝膜，氧化铝膜

