

(19)
(12)(KR)
(B1)(51) 。 Int. Cl.⁷
G02F 1/133(45)
(11)
(24)2004 11 10
10-0456495
2004 11 01(21) 10-2001-0055317
(22) 2001 09 08(65)
(43)10-2002-0048854
2002 06 24

(30) JP-P-2000-00384173 2000 12 18 (JP)

(73) 가 가 1 6 6

(72) 가 가 406-1

1 36-20

가 2 5-1

3-17-1-501

(74)

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(54)

[illegible]

y (竝說) y x , x
가
가
IC()
FCA(COG)
(1)
()
가
TFT
(2)
FCA
가
(3)
FCA
가
, FCA
가

(4)

, 가 가

(5)

가

가

가

(6)

가

가

가

FCA

가

(7)

()

(PCB)

가

가

가

PCB

가

가

가

(1)

(2)

(非形成)

(3)

(4)

(5)

가

(6)

(7)

(1)

《 2 가 》

가
(橫)

PNL PNL SUB1(SUB1, SUB2 SU
B2(:)
SUB1 SUB2
가 (5) (6)
SUB1, SUB2가 (2)가 (2)
x DL y GL y x
TFT , TFT DL 가
PX가 (2) CT Cstg가
TFT PX GL SUB1
SUB1 (5) GL
(36), GL (5)

, 가 , DL ()가 SUB1
 , SUB1 (IC)(6)
 , (6) DL
 , (5) DL (6) PNL
 , (10)((10)) (10) (11) (5)
 , (6) (12)가 (12)가 (15), (16A),
 , (16B)) (5) (5) (6)
 , (5) (5) (15))
 , (15) 가 (10) , (10)
 (18) (10) (12) (10) (18),
 , (15) (5) (6)
 , (6) (16A, 16B)
 (16A, 16B) 가 (10) (10)
 (19A, 19B) (12) (10) (19A, 19B),
 (10) (16A, 16B) (16A, 16B)
 , (6) (16A, 16B) 2
 (1) , x
 , (10) (12) (16A) (19A),
 (16B) (19B) (22) (23) (6) (24) 가
 , (10) (10) (12) (15), (16A, 16B), (10) (16
 , PNL, (10) (15), (16A, 16B), (15), (16
 A, 16B) (1) PNL
 , AR
 , 《 》
 , PNL AR (2)
 , 1 (a) 1 (b) 1 (a) b-b
 , 1 (c) 1 (a) c-c y GL
 , SUB1 GL DL
 , GL SUB1 GL DL
 , GI가 GI TFT
 , GL Cstg AS가 AS
 , GI Si TFT GL 가 TFT DL
 , GI y x DL
 , SD1 DL TFT AS
 , SD2가 GI SD1 SD2 TFT
 , TFT SD2 SD1 PX가 AS
 , (P) SD1 SD2 AS
 , AS

PX TFT TFT GL SD2 , y GL x
 , y GL PX y 2 , PX
 DL PX가 SUB1 DL PX
 PSV가 PSV PSV2
 PSV PSV
 PSV TFT
 PSV(PSV2) CT가
 CT ITO(Indium-Tin-Oxide)
 2 PX 3 y 2
 CT 1 DL CT
 DL CT DL CT
 CT CT DL
 DL CT DL
 CT CT DL
 CT GL
 CT 가
 CT CT 가
 PX CT GL
 DL GL
 GL PX (y Cstg가
 2 PX Cstg TFT가 PX
 CT가 SUB1 CT (
) PX가 DL ,
 SUB1 SUB2 BM SUB2
 BM CT 가
 (SUB1 SUB2), 가
 BM FIL x (R, G, B) FIL
 BM OC BM, FIL OC가
 SP AR SUB1 SUB2
 (2) SP GL CT



, PSV PSV1 PSV2
, 가 PSV
PX GL TFT Cadd GL
GL SUB2 OC Cadd CT가
, CT가 SUB2 GL P
X 가 SP가
GL SP Cadd
PX SP
, SP
6 Cadd PX 가 S
P 7 Cadd PX 가
7 SP PX
SP
, SP가 SUB1 가
(4) 3 9 SP GL
Cadd PX SP
, PX
PX
SP PX
SP SUB1
(5) 10 (6) 2 X-X
SUB1 AR PSV가
PSV PSV1 PSV2
, PSV DL (6) ()
, PSV DL PSV (6) 가
, DL AR (6) PSV (6)
PSV () DL PSV ITO
(6) 가 (16B)
PSV SUB1 PSV (6) ACF가
ACF (6) 가 SUB1 (6) ACF
(6) (6) 가
(6) (6) 가
11 (a) PSV가 (6) (6) 11 (b)
ACF PSV
PSV
(6) 가
(6) 가 (5)

(6)
12 (6) (6) 5
600nm (6) 900nm 가 , 가
가 ,
.
(7)
13 6 , (6)
PSV가 .
(6) ,
(6)
(8)
14 (6) (,) (6) 가 .
(6)
(9)
15 8 , 8 가 . PSV
(6)
, PSV (6) ACF가 , SUB1 (6)
(10)
16 5 10 , PSV (6)
LL
(6)
(SUB1 AR) , ,
, 2 LL ,
, PSV1 LL PSV1 , 가 LL
PSV ,
.
, LL 17 IC
(6)
16 1 7 XVI-XVI .
(11)
18 15 , PSV (6)
LL PSV (6)
, PSV (6) (,)
가 , 12 11 .
(12)
19 (a) PNL , b-b 19 (b)
SUB1 SUB2 SL , SL
SL SUB2 ,
, SL SUB1 2 SUB2)가 ,
, SL SUB1 가 PSV PSV2
SUB1 NPSV가 NPSV
PSV1 .

, PSV2 , NPSV SL AR₀ ()
 BM PSV2 , NPSV BM AR₀)
 PSV2 NPSV NPSV
 PSV2 NPSV ,
 , PSV2 NPSV
 NL , , 1) P
 , 2) PNL PNL
 , 3) PNL , 4) PNL
 가 ,
 PNL 가 PNL
 ,
 , 가 가 20 가 (a) b-b ,
 20 (a) (b) AR₀ ,
 PSV , 가
 , , PSV NPSV SL
 , , 21 SL
 (13) SL SUB1
 12 SUB1 , SUB2
 SUB2 BM, FIL, OC ,
 (, 19 (a) NPSV)
 (14) 12 13 , 1
 , 1 CT가 , 가 CT가
 , CT 가
 , CT 가
 , 가 가 , μm
 , CT 1 5 , CT
 , 13 μm ,
 , CT PX , PSV CT CT가
 , CT PX , CT PX가
 , , 12 13
 (15) 가
 , 12 PX CT SL 가
 , PX CT SL 가
 (16) ,
 43 SL GE GE
 20 , GE 가
 (17) , GE
 22 (a) SL ()
 , NPSV

, 22 (a) b-b 가 ()

(18) , 23 17 , NPSV ,

(19) SL NPSV

(24) 18 , SL SL

, NPSV 가 , SL SUB1

(20) 25 , SUB1 SUB2 PSV NPSV SP

2 PSV NPSV 가 , , SUB1 SUB

NPSV 26 PSV

27 25 , SL 가 ,

28 PSV NPSV SL , SL

, SP

(21) 29 SUB1 5 (a) d-d

(1 (a) c-c) SUB1 SUB2 S

25 SP SUB1 SUB2

P SUB1 SUB2

PNL , 가 SUB1

SP (, GL) ,

(22) 29 , SUB1 PSV가 , PSV

(, GL)

(23) PSV ,

(24) (5) (6) , (5)

(6) (5) GL

30 (a) AM SUB1 SUB1 1 5 ,

, 31 (a), (b), (c)

, 30 (a) b-b (相似的) 30 (b)

, 31 (c) W1, W2 , W3

$$W_3 > 2W_1 > W_2 > W_1$$

, PSV (5) , PSV
가 .
(5) GL(
DL)
LL PSV ,
LL SUB1
SUB1
SUB1
36 (a) (5) PSV (L
5) W7 , , 가 L
L , PSV , PSV
(5)
(6) 가
(31)
30 LL PSV
, PSV (AR)
, PSV
(32)
37 (5) , 36
36 PSV EC가 , EC (5)
, EC LL EMI , EC PSV
L , LL EC , L
(33)
38 32 , 37
37 EC AR (1 CT)
, EC (5) (5) GL
EC
AR
(34)
39 (5) , 36
36 (5)
IC가 SUB1 ()
SUB1 (5) SUB1 LL (TCP)
SUB1 LL SUB1 LL SUB1 (5)
가
(35)
40 PNL BL (5)((6)) FL
(5) 37 38 EMI EC가 , EC
EC ACF가 , EC
FL

가

(36)
41 40
EC FL EC
EC FL
(37)
42 40
EC EC FL EC
EC FL

(57)

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.

가

가
(頂面)

12 13. ,

13 14. ,

14 15. ,

15 16. ,
가

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(非形成)

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(封止劑)

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(角)

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가

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13 μ m

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가

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가

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가

13 μ m

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가

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가

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가

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64.

60

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가

65.

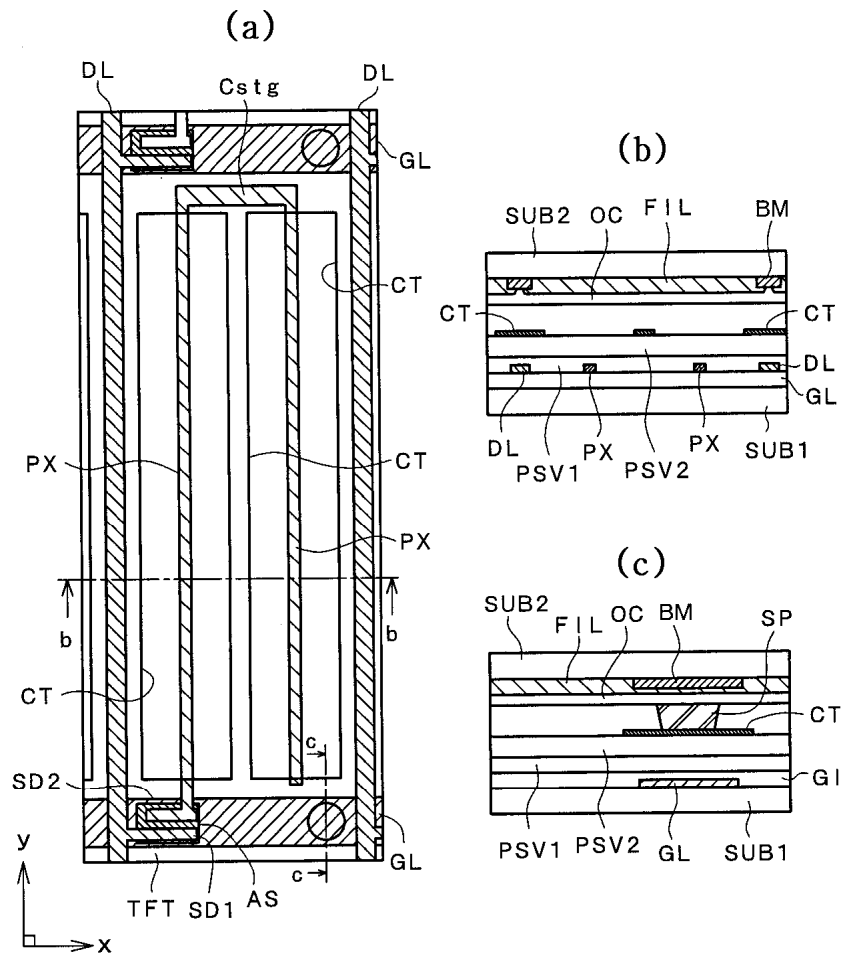
66.

67.

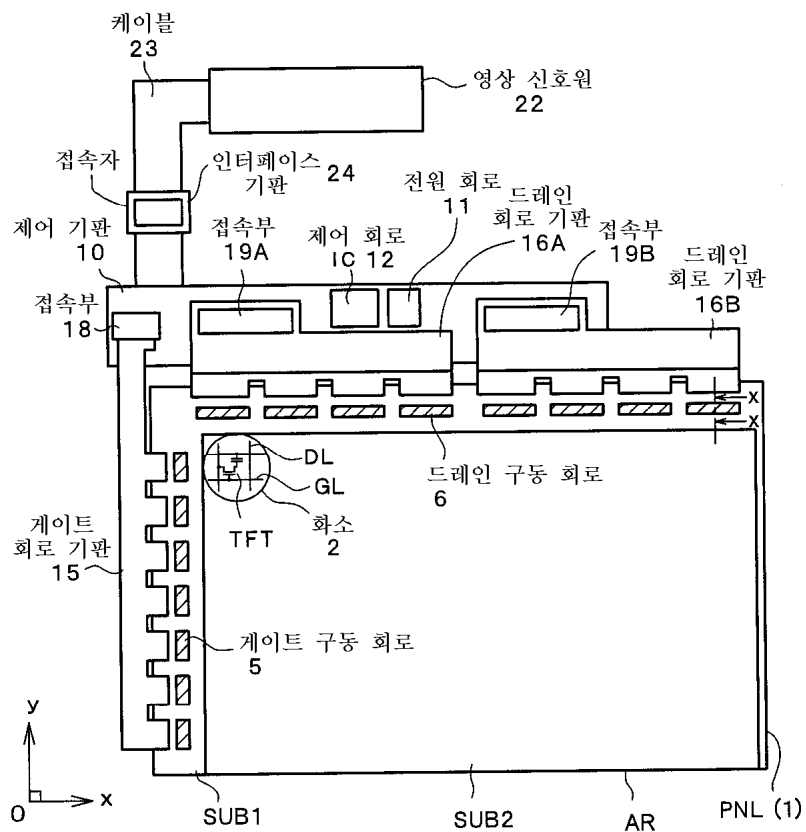
가

- 67 68. , .
69. , , 가 , .
70. , , 가 , .
- 71.
- 72.
- 73.
- 74.
- 75.
- 76.
- 77.
- 78.

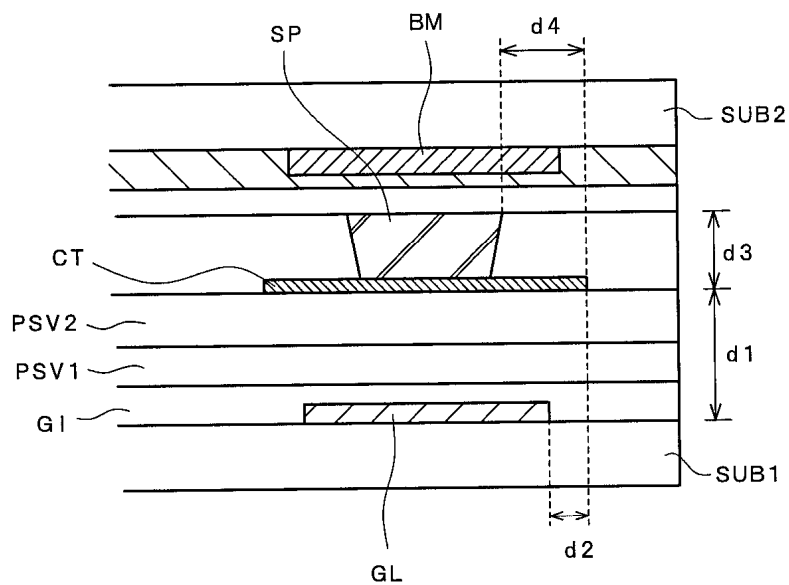
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2

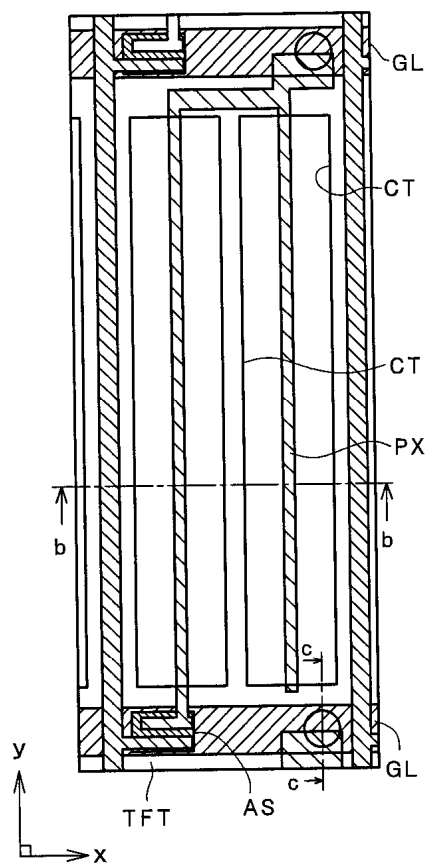


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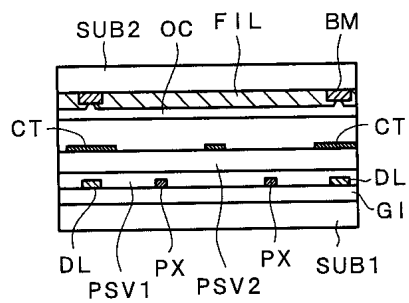


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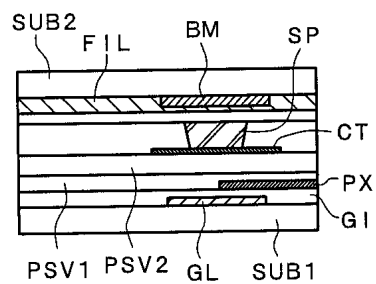
(a)



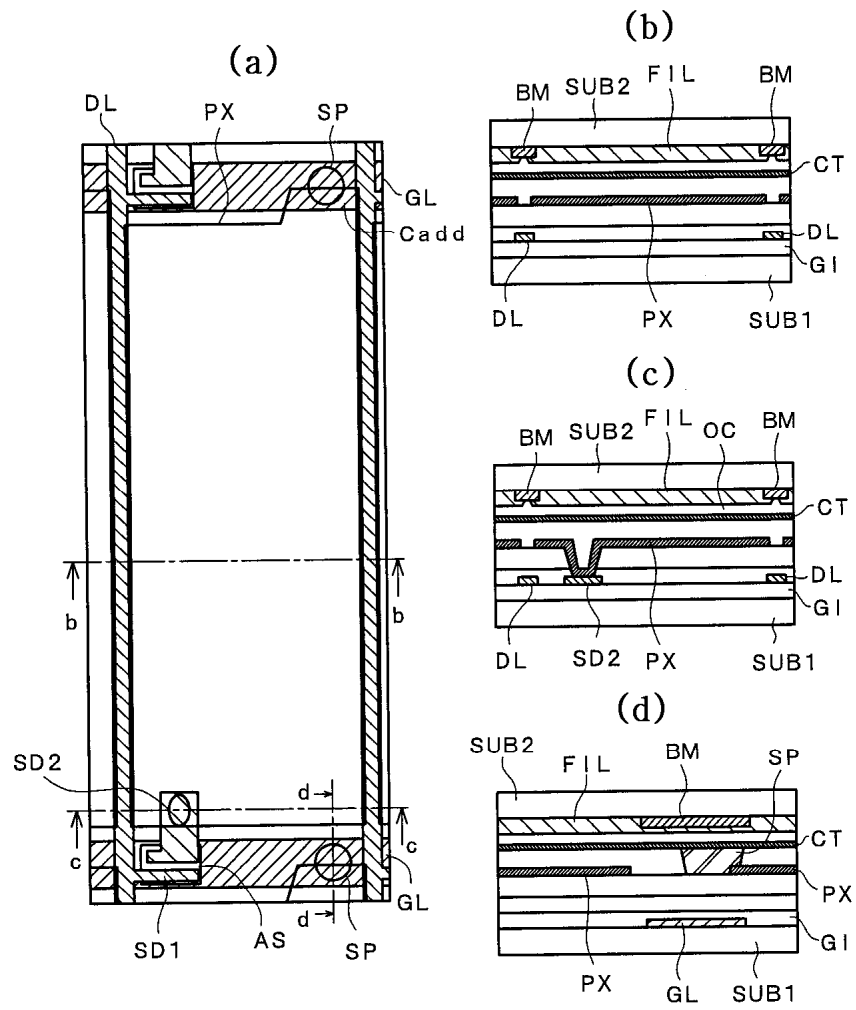
(b)



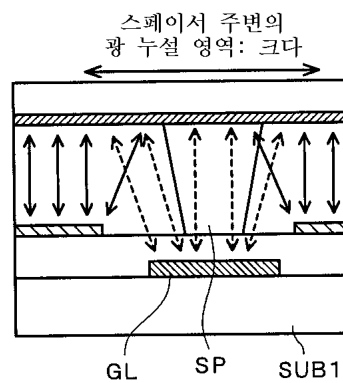
(c)



5

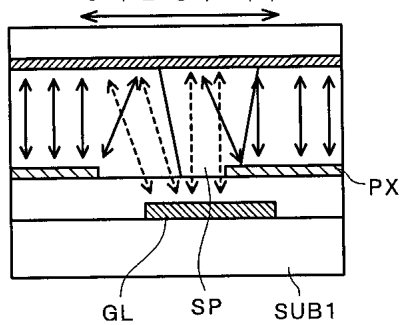


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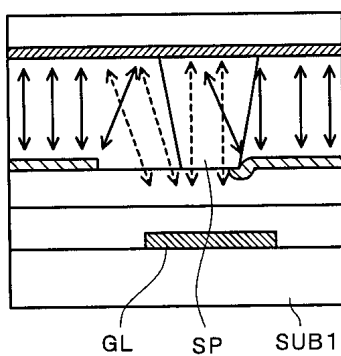


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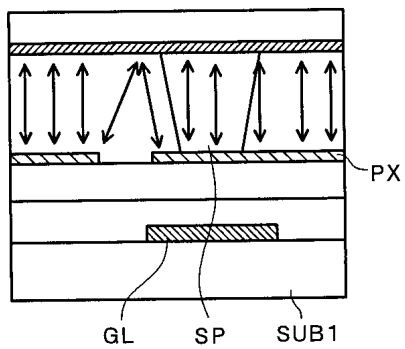
스페이서 주변의
광 누설 영역: 작다



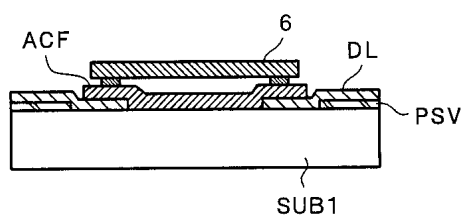
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9

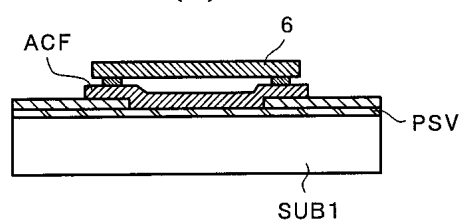


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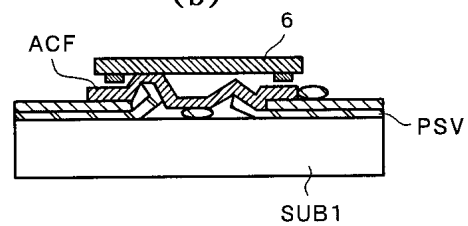


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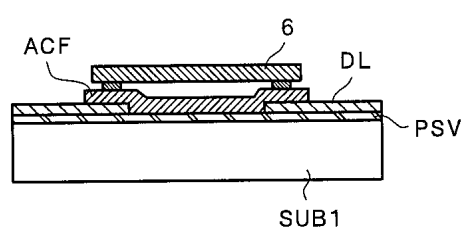
(a)



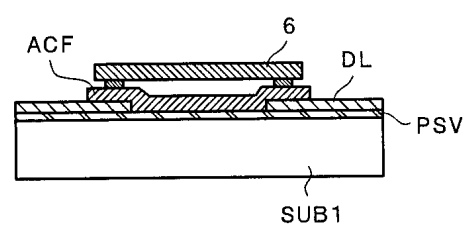
(b)



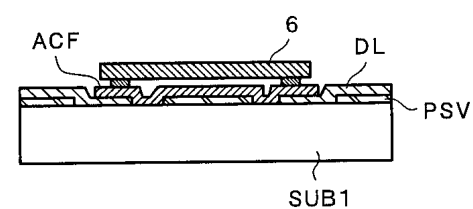
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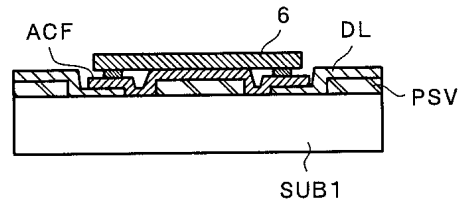
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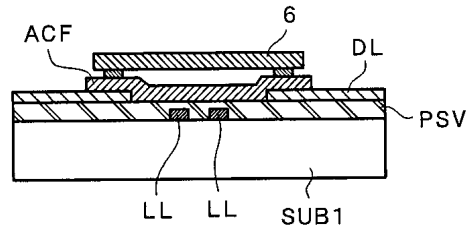
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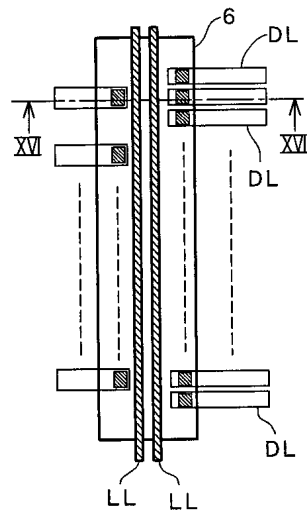
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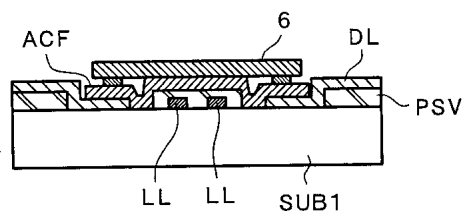
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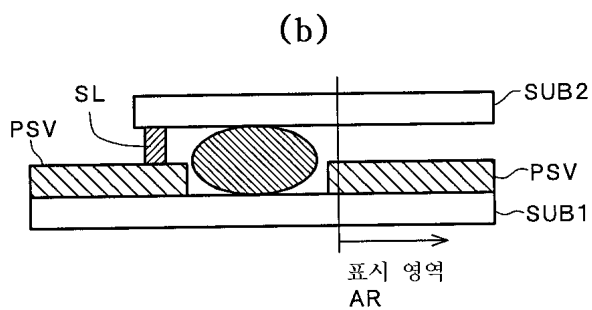
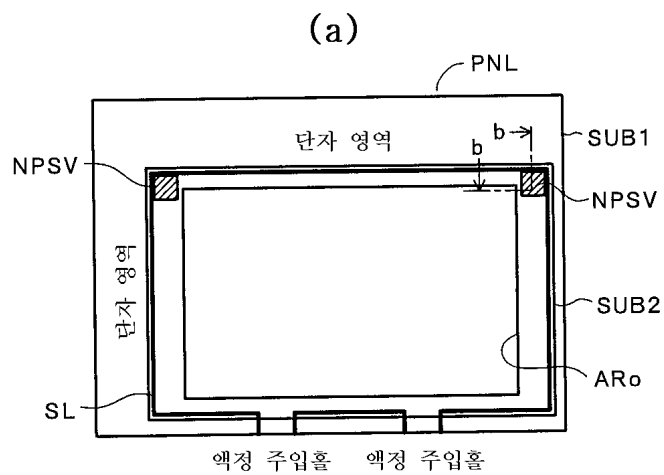
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18

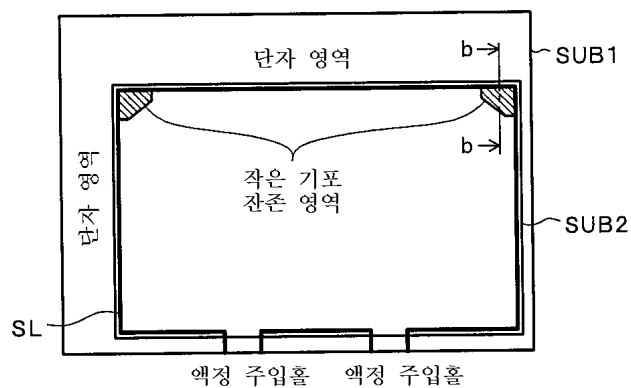


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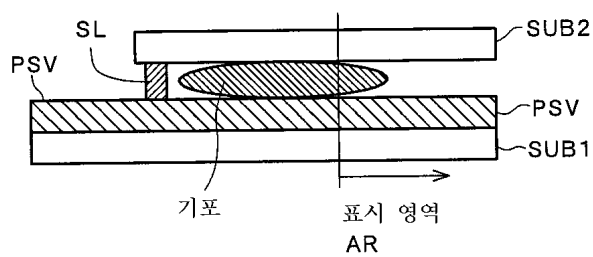


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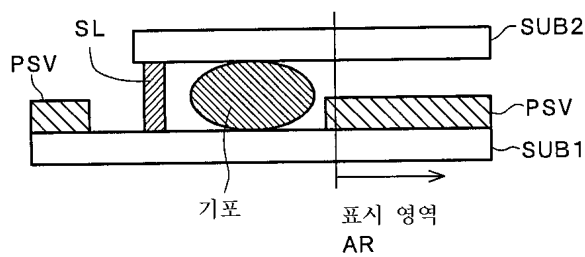
(a)



(b)

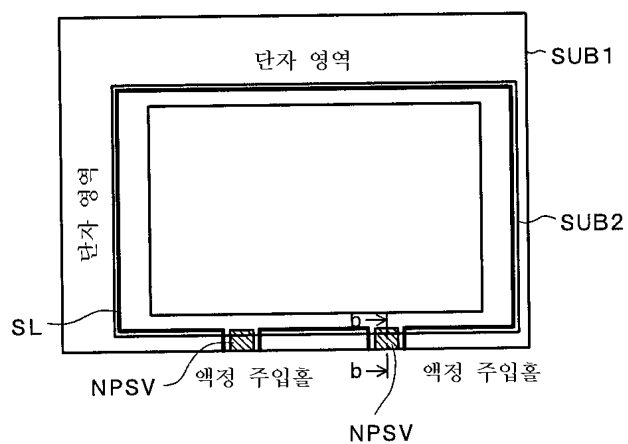


21

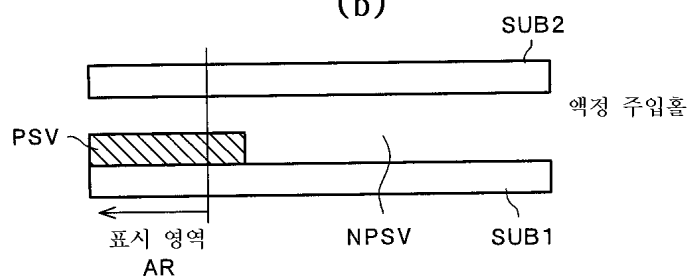


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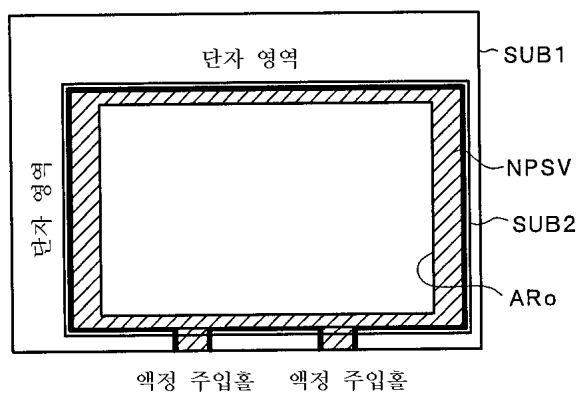
(a)



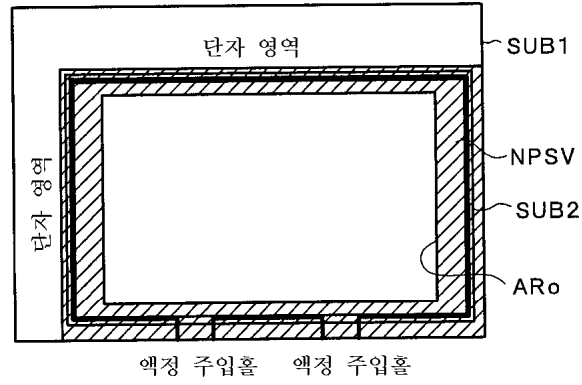
(b)



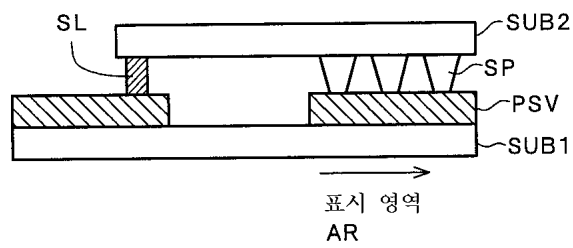
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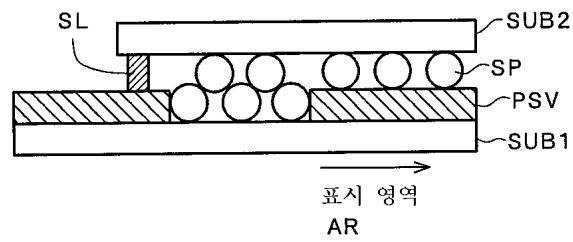
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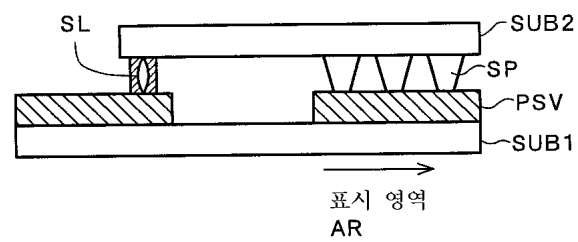
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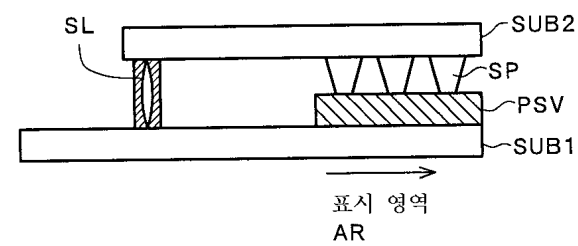
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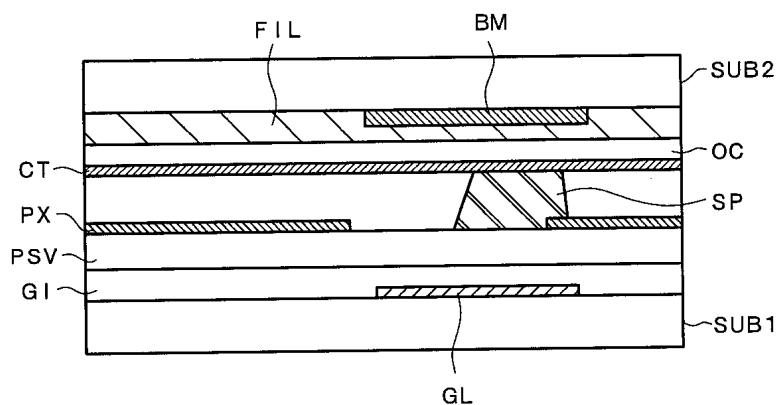
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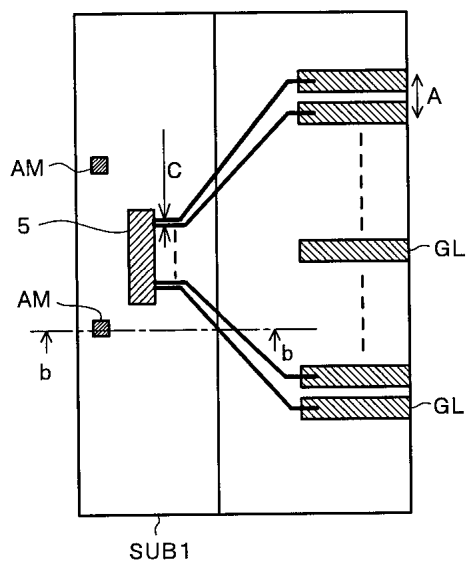


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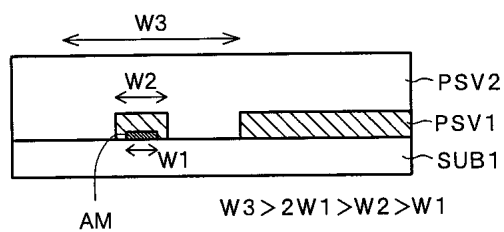


30

(a)

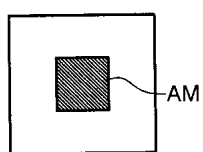


(b)

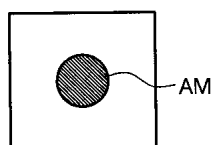


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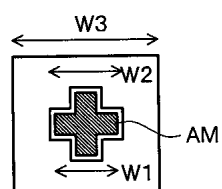
(a)



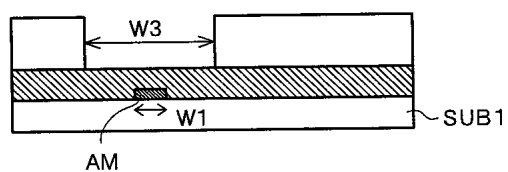
(b)



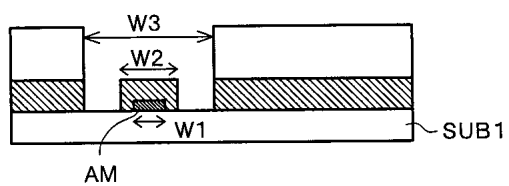
(c)



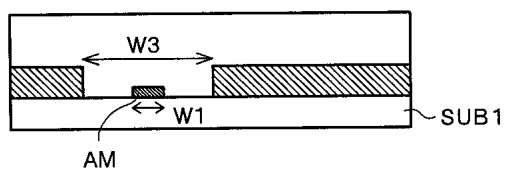
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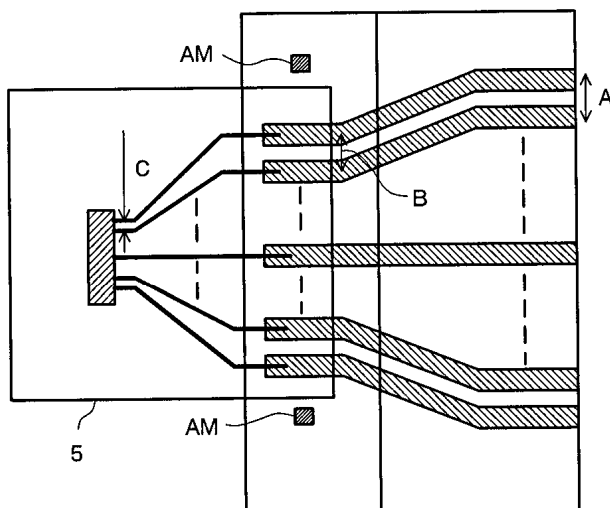
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34

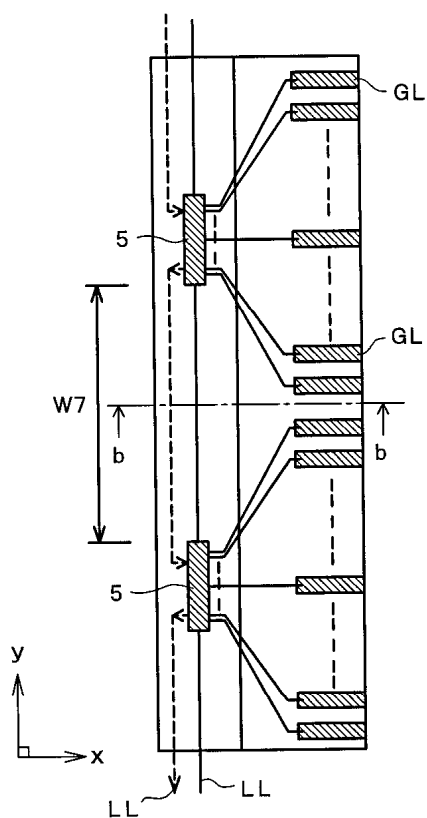


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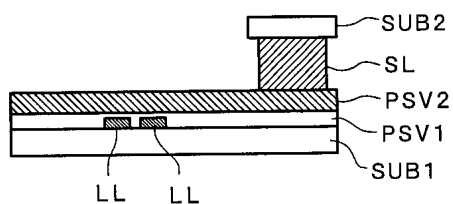


36

(a)

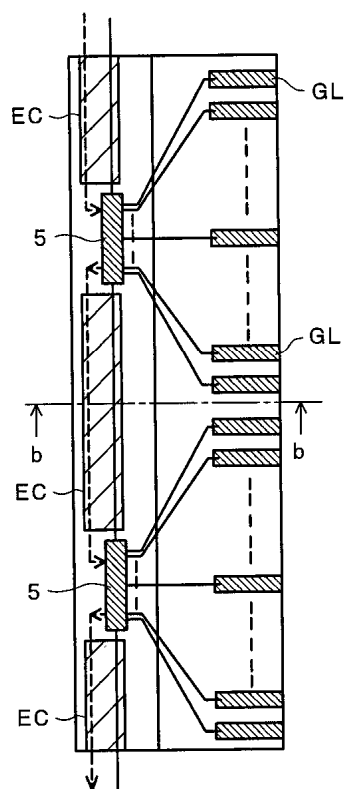


(b)

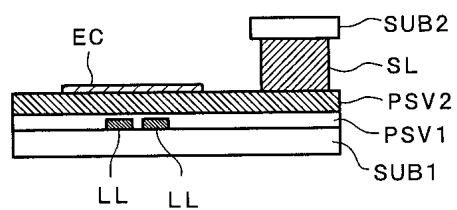


37

(a)

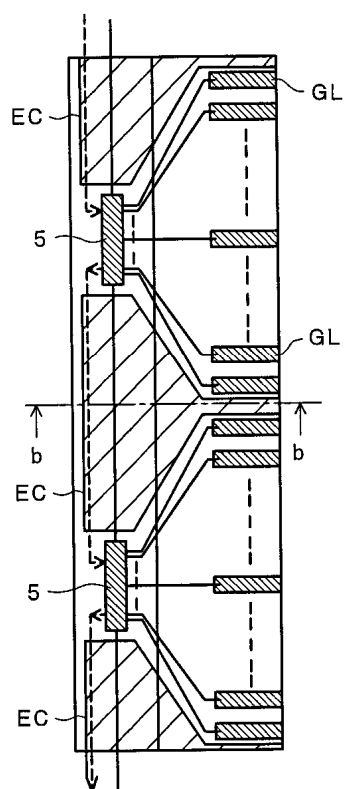


(b)

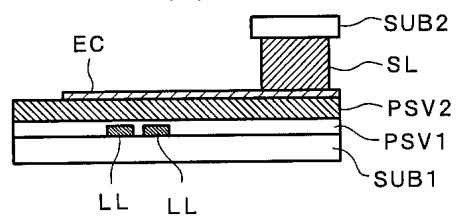


38

(a)

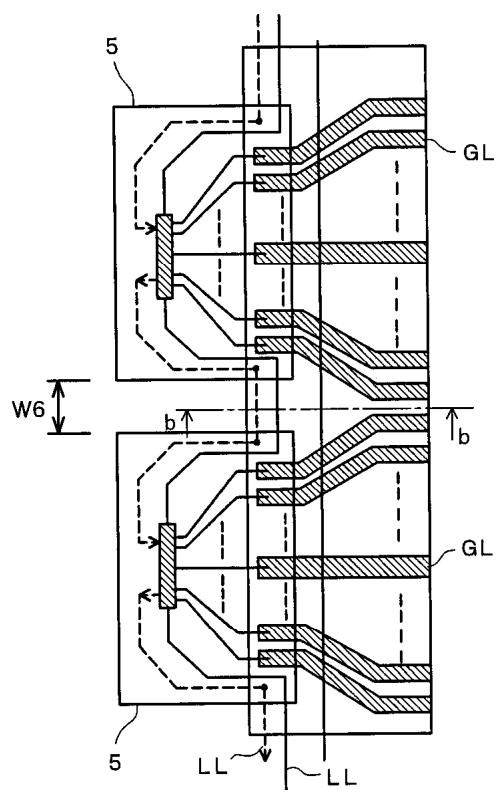


(b)

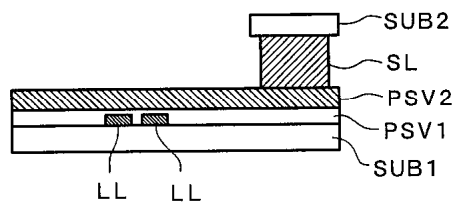


39

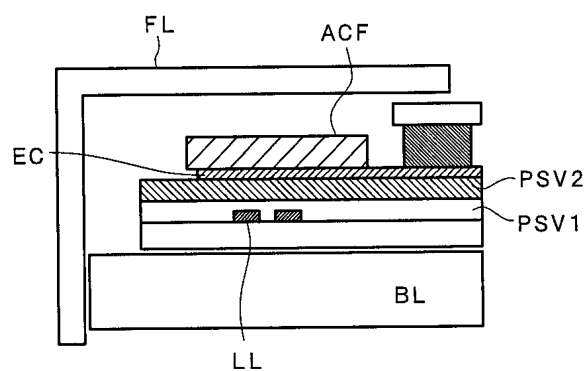
(a)



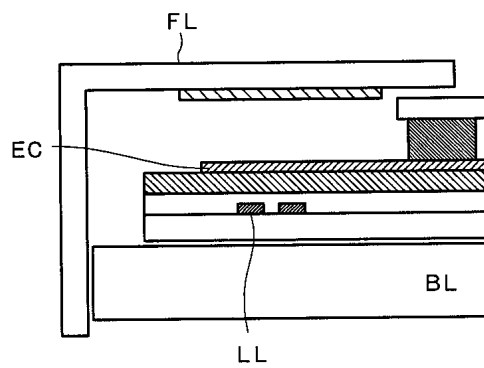
(b)



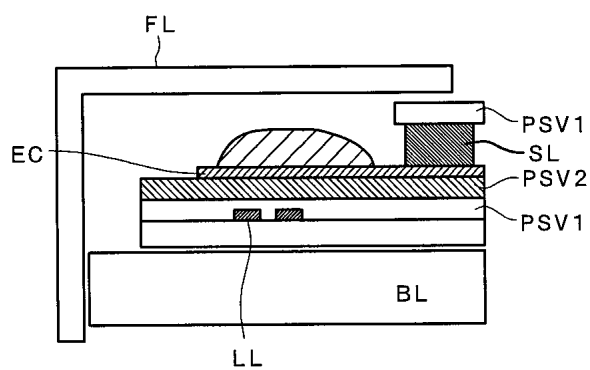
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