

2001 - 0087355
2001 09 15

$$\vdots$$

6 (RI, R2, G1, G2, B1, B2) ³

3 (GA, GB, GC)

1

1

1

2 1

(TTP)

3a, 3b

1

4

1

가

5a, 5b

6

7

8 ()

9

10 FCA

11a, 11b

12a, 12b

1

13a, 13b

1

14a, 14b

1

15a, 15b

1

16a, 16b

1

17a, 17b

1

18a,	18b					1		.
19a,	19b,	19c,	19d				1	.
20a,	20b,	20c,	20d				1	.
21a,	21b,	21c,	21d,	21e,	21f			1
22a,	22b,	22c,	22d,	22e,	22f			1
23						1		.
24a,	24b,	24c,	24d				1	.
25a,	25b,	25c,	25d				1	.
26a,	26b,	26c				1		.
27a,	27b,	27c				1		.
28a,	28b,	28c				1		.
29a,	29b,	29c				1		.
30a,	30b,	30c				1		.
31a, b, c						1		.

< >

GDR :

GTM :

TTA :

ASCL :

C1, C2, C3 :

GLTP :

PB :

LCT1, LCT2 :

C4, C5, C6, C7, C8, C9 :

IPS
가 , 가
가 , 가
45 ° , 1/2
90 ° , 가 .

IPS 가 , 가
(5 - 505247).

3 , 3 , (R), (G), (B) 1
.

, TN
.

, TN ((,
) () , x , y
2 , y , x
(,)) ,
(,) .

) (TFT) . (

가 , 가 ,
가 .

, , ,
IC (, , IC IC) ,
 , IC (TCP) .

, IC TCP가 , (,
) , () .

, , TCP , IC IC
() IC (COG) , FCA .
IC , IC , FCA .

10 FCA
(SUB1) (SUB2)

(SUB1) IC (,) GDR가 FCA .
 , IC () DDR가 가 FCA .

GDR GTM , FPC1
 (DDR) DTM , FPC2

FPC1, FPC2 , FPC1 BENT1
 (SUB1) , FPC2 JT2 BTL
 BENT1 , BENT3 FPC1

FPC2 CT4 FPC1
 FPC2 BAT가 ,
 FPC2 .

, CHG, CHD , ALMG, ALMD , POL2 , AR

(SUB1)
 , 가 . , ,

11a, 11b , 11a ,
 11b .

11a , GTM , TPC , GDR (,) ,
 LCT , ASCL , GTM GDR

(SUB1) () , GTM ASCL
 , LCT , TPC , GT

M 가 .

11b , DTM , TPC , DDR (,) ,
 LCT , ASCL , TTB GDR

가 , , DTM ASC
 L , , TPC
 DTM , LCT ,
 , 가 .

8 - 122806 가 .

가 , (11a, 11b GTM, DTM)가 .

, (11a, 11b TPC) , 가 ,
 , 가 ,
 .

, 가 ,
 가 .

,
 .
 ,

3 , , , , , 6 () , ,
 , , , , ,
 .

3 , , 가 4 , () , ,
 , ,
 .

(1) , , , 3 ,
 ,

IC IC IC IC ,

,
 , , , , , IC 6 , 6
 ,

IC , 6
 .

, 가 ,
 , 가 .

(2) 6 .

가 .

(3)

, , , 3

, ,

IC IC IC IC ,

,

IC , 4

3 , 3 ,

IC 6 , 6

IC 6 IC , 3

가

, , , 가 .

(4) 3 4 6

(5) 3 4 6

가 .

(6) , 3 4 6

3 4 6 .

가 .

(7) , 3 4 6 3

4 6 .

가

가

3

가 가

가 가

가

가

가

가

3

가

1/3

가

가

가

가

FCA

, TCP

가

가 3

6 가

2

3

3

RGBRGB 6

+ - + + - +

, B R

가

가 3

6

RGBRGB 6

+ - + - + -

가

가 n

(n - 1)/2

, 2 × (n + 1)

가 가 가 . , 가 가 가 ,
 , 가 가
 , , , 가 ,
 , , .
 , 2 . 1 가 , ,
 , 2 , ,
 , , 2
 , 가 , 1 , 2
 , 가 가 2 ,
 2 , 2 가 가 2
 , 가 가 .
 , TFT .
 , Ca
 dd , 3 , Cad
 d가 , Cadd가 ,
 , 가 Cstg , 2 , Cad
 , 가 3 가
 , 3 , 6 ABCDEF , ,
 + - + + - + , C D가 , 가 ,
 , Cadd 4 , C
 stg 2 4 가 .
 , 가 가 .
 , TN
 , IPS () ,
 , ,
 1 (SUB2) 1 (SUB1) , (SUB1)
 가
 (SUB2) (SUB2) , 3
 (SUB1)

(SUB1) IC (; GDR)가 (SUB2) 11 IC (; DDR)가
FCA (,).

(SUB1) (CTL) (TTP) (TTP) ,
(TTP) (TTP) ,
(SUB1) (CTL) (GLTP) (DLTP),
(TTP) (Vcom) .
(GLTP) 3 4 (DLTP) 6
(Vcom) 10 11 .
10 11 .
(GLTP) (DLTP)
(Vcom)
가 .
가
가
가

3a, 3b 1 , GDR 3a , GTM , C1, C2, C
, 3b (), TTA , ASCL
3 , 3 , GLTP (GA, GB, GC) (C1, C2,
4 , PB , LCT1 LCT2 (C1, C2, C3)
C3) (GLTP) (GA, GB, GC) 2 .

T1) 3a , (SUB1) , (LC
(C1, C2, C3) ASCL (C1, C2, C3)
ASCL (C1, C2, C3) 3 4

(C1, C2, C3) (GLTP) (GA, GB, GC) (PB)
(C1, C2, C3) , LCT2 GTM
FCA (C1, C2, C3) , GTM TTA

가 , 3b , (SUB1) , (LCT1)
(C4, C5, C6, C7, C8, C9) ASCL (C4, C5, C6,
C7, C8, C9) ASCL , (C4, C5, C6, C7, C8, C9)
6 .

(PB) (C4, C5, C6, C7, C8, C9) (DLTP) (BI, B2, GI, G2, R1, R2)

C8, C9) , LCT2 DTM (C4, C5, C6, C7, FCA

2 (Vcom) 가

(LCTI, LCT2) ,

4 R2) 1 (DLTP) (BI, B2, G1, G2, RI, (GLTP) (GA, GB, GC) 가

4 가 ,

가 가 ,

가

5a, 5b , 5a , 5b , 3a, 3b

(C1, C2, C3) TTA가 , (CTL) ASCL

가 , (C4, C5, C6, C7, C8, C9) TTB가 , (C TL) ASCL

(C1, C2, C3) (SUB1) ASCL (C4, C5, C6, C7, C8, C9)

() 1

가 ,

가

3b (C4, C5, C6, C7, C8, C9)

3 4 (C1, C2, C3)

a

, 3a, 3b 5a, 5b (C1, C2, C3)
(C4, C5, C6, C7, C8, C9) (; GTM)
(; DTM)
.
,
가
가
.
,
FCA
TCP
,
가
.
,
.
6
, 2 (PNL) , (PNL) ()
) (IC) (IC) GDR (DDR), (DDR) (CR
GDR L), PWU .
,
,
, (CRL) (CRL) ,
, (TCON) , (PNL)
.
GDR (DDR)
(DDR) ,
.
7
() () (DDR)
(HTV), (MPX), (CVD), (CDD), (LST),
(GOV), (GFD), DC - DC (D/D) 7 (CRL),
(PWU) .
8 ()
, () (CRL) ()
D2 (CL2) , (DDR) D1 (CLI),
FLM, G (CL3) GDR
.
,
LVDS (LVDS) LVDS ,
GDR () (DDR) .

8 (DCLK) , D2(CL2) , XGA 40MHz (mega - hertz) 가
 . , ,
 .

9 .
 , , ,
 .
 , , , ,
 , , , ,
 , 가 . ,
 .

12a C1, C2 2 . ,
 가 . ,
 . , 12a , 2 .

12b , (ASCL)
 가 (C1, C2) 가 ,
 가 가 , ASCL
 ,
 Cadd, Cstg .

13a C1, C2, C3 3 , 13b ASCL .
 , TFT
 가 ,
 , Cadd 3
 , Cadd가 , Cadd
 cSTG . , ,
 6 ABCDEF , + - + + - + ,
 C D가 가 , 4 , 2 가
 , Cadd 4 가
 .

14a C1, C2, C3, C10 4 , 14b ASCL .
 ,
 가 가 가 ,
 ,

15a C4, C6, C8 3 .

가 가

가

15b ASCL, 12b,

16a

C4, C5, C6, C7, C8, C9

6

3

2

6 가

3

3

RGBRGB 6

+ - + + - +

, B R

6

RGBRGB 6

+ - + - + -

5a, 15b, 16a, 16b 12a, 12b, 13a, 13b, 14a, 14b, 1
가 .

가 , 12a, 12b , 16a, 16b LCT1, LCT2 , 17a TCP
LCT1 ASCL , .
. ASCL
,
, 가 가 , ASCL 가
가 ,
가 ,
가 , ITO ,

가
가
가
1
가
ASCL
가
ASCL
(GLTP) (PB)
2
가
가
가
가
가
(C1, C2, C3) TCP (TCPD)
LCT2 , LCT2가
17b , TCP
17a 18a , 17b
18b
17b 18b , TCP
가
TCP
17a, 17b, 18a, 18b TCP , FCA LCT1
LCT2 , FCA
3a, 3b
가
가

가 FCA 3 . TCP
가 . 가 .

19a 1 GDR, TCP 가 1 , (GL
TP) (PB) , 19b , 1
(GLTP) 가 , (PB)
19c (GLTP) , ,
가 가 . 19d , 가 .

가 . 6
20a, 20b, 20c, 20d . 20a PB 20b
PB 가 19a, 19b, 19c, 19d GLTP
20c , GLTP 20d
.

FCA , TCP 가 1
GLTP , FCA 가 ,
가 , .

20a , IC (GDR) (GLTP) ,
R GLTP , 20b , GD
20c GDR ,
1 GLTP 가 가 . 20d GLTP
가 ,
가 , GLTP
가 , 21e
GDR GLTP , 20d , 가 , G
LTP 가 . 21e
21f , 21e , 가 ,
GDR 가
가 .

22a IC (DDR) . DDR
DLTP가 , 1 (DLTP) 가 가 , PB
22b DLTP 가 .
22c 22b ,

DLTP 가 , 1 DLTP
 가 , 가
 , DLTP 가
 가 , 22c DLTP 가 22d , 20d 가
 , DLTP 21f
 가 DLTP 22e . 22f 21e 가 .

,
 ,
 , 가 n , (n - 1)/2
 , $2 \times (n+1)$.

가 , 가 가 ,
 가 가

,
 , 가
 ,
 , TCP 가 , FCA 가
 .

23
 GLTP , GLTP 가

, 가

GLTP , 가

, LCT1

24a , 21f LCT1 , ASCL
 ,
 ,
 ,
 , 가

[illegible]

2 30a 가 가 25a , 1
 30c 1 , 2 GA, GB high , 30b,
 ,
 31a, b, c , , 가
 , RGB , 2 , 6
 , 4 , , 1 2 가
 31a ,
 31b, 31c ,
 , ,
 , 가 ,
 , ,
 , , , 가 (高精彩)
 , , 가 ,
 , ,

(57)

1.

3
 ,
 ,
 , IC IC
 IC IC , IC IC
 ,
 , IC 6 , 6
 , , , , ,
 IC 6
 ,
 ,

2.

1 , 6
 ,

3.

, , , 3
 ,
 , , ,
 IC IC
 IC IC ,
 ,
 IC ,
 , 3 , 4 3 4
 ,
 IC 6 ,
 , , , , , 6 6
 ,
 IC IC , 3
 4 6

4.

3 , 3 4 6

5.

3 , 3 4 6

6.

3 , , 3 4 6
 ,
 3 4 6

7.

3 , , 3 4 6
 3 4 6

8.

,
 1 , 2 , 3 3 ,
 ,
 2 , 2 가 ,
 ,
 1, 2 3 1 ,
 ,
 1 , 2 , 3 ,
 1 1 ,
 ,
 2 2 ,
 3 3 .
 9.
 ,
 1 , 2 , 3 3 ,
 ,
 2 , 2 가 ,
 ,
 1, 2 3 1 ,
 ,
 , 6 1 , 2 , 3 , 4 , 5 ,
 1 1 ,
 2 2 ,
 3 3 ,

4 1 ,

5 2 ,

6 3 .

10.

1 , 2 , 3 3 ,

2 , 2 가 ,

1, 2 3 1 ,

2 , 3 , 4 ,

11.

8 10 IC , IC가 ,

12.

8 11 , IC

13.

8 11 ,

14.

12 , 가 , 2 가 ,

가 .

15.

12 14 , 가

16.

12, 14, 15, 가 IC, 가 IC n, (n-1)/2, 2 × (n+1)

17.

8 16 , ,
 가 , ,

18.

8 17 , 1 , 2 , 3 , ,

19.

8 17 , 1 , 2 , 3 , ,

20.

8 19 ,

21.

12 17 가 .

22.

8 19 , ,

23.

12 17 , , 가

24.

,
 1 , 2 , 3 3 ,
 ,
 2 , 2 가 ,
 ,
 1, 2 3 1 ,
 ,
 1, 2 3 ,
 ,
 1 , 2 , 3 ,
 ,
 1 1 , ,
 2 2 , ,
 3 3 , ,
 1, 2, 3 ,
 ,
 .

25.

,
 1 , 2 , 3 3 ,
 ,
 2 , 2 가 ,
 ,
 1, 2 3 1 ,
 ,
 1 , 2 , 3 , 4 , 5 ,
 , 6 ,
 1 1 ,
 ,
 2 2 ,
 ,
 3 3 ,
 ,

4 1
,
5 2
,
6 3
,
1, 2, 3, 4, 5, 6 ,

26.

27.

24 26 , 가 TCP IC

28.

$$1, 2, 3, 3$$

, 2 , 2 가 ,
 ,
 1, 2 3 1 ,
 ,
 1 , 2 , 3
 ,
 1 1 , ,
 2 2 , ,
 3 3 , ,
 1, 2, 3 ,
 ,
 .

29.

,
 1 , 2 , 3 3 ,
 , 2 , 2 가 ,
 ,
 1, 2 3 1 ,
 ,
 , 6 1 , 2 , 3 , 4 , 5
 ,
 1 1 , ,
 2 2 , ,
 3 3 , ,
 ,

4 1 ,
 ,
 5 2 ,
 ,
 6 3 ,
 ,

1, 2, 3, 4, 5, 6 ,
 ,
 .

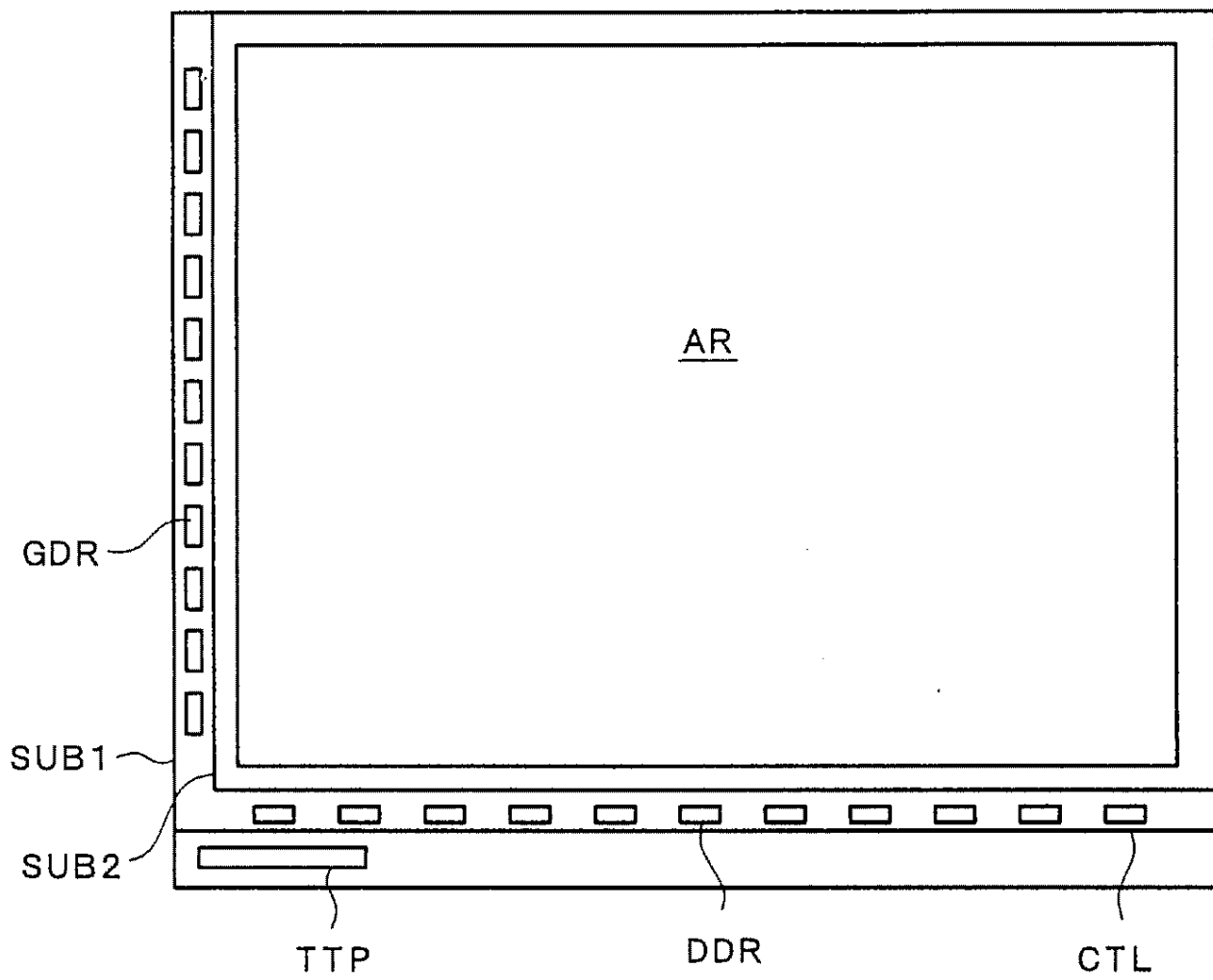
30.

,
 1 , 2 , 3 3 ,
 ,
 , 2 , 2 가
 ,
 1 ,
 1, 2 3 ,
 ,
 2 , 3 , 4 ,
 ,
 ,
 ,
 ,
 .

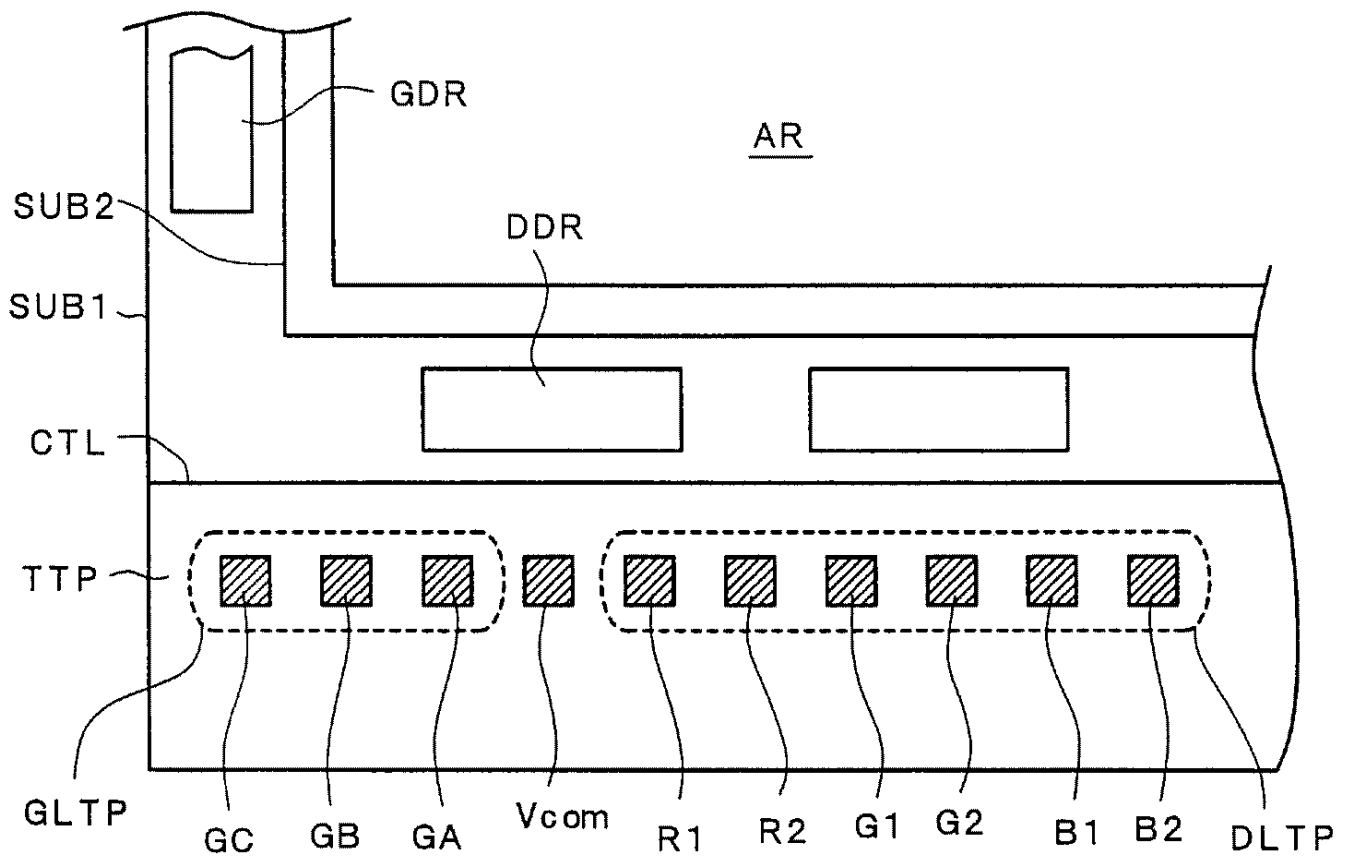
31.

28 30 , 가 TCP IC
 .

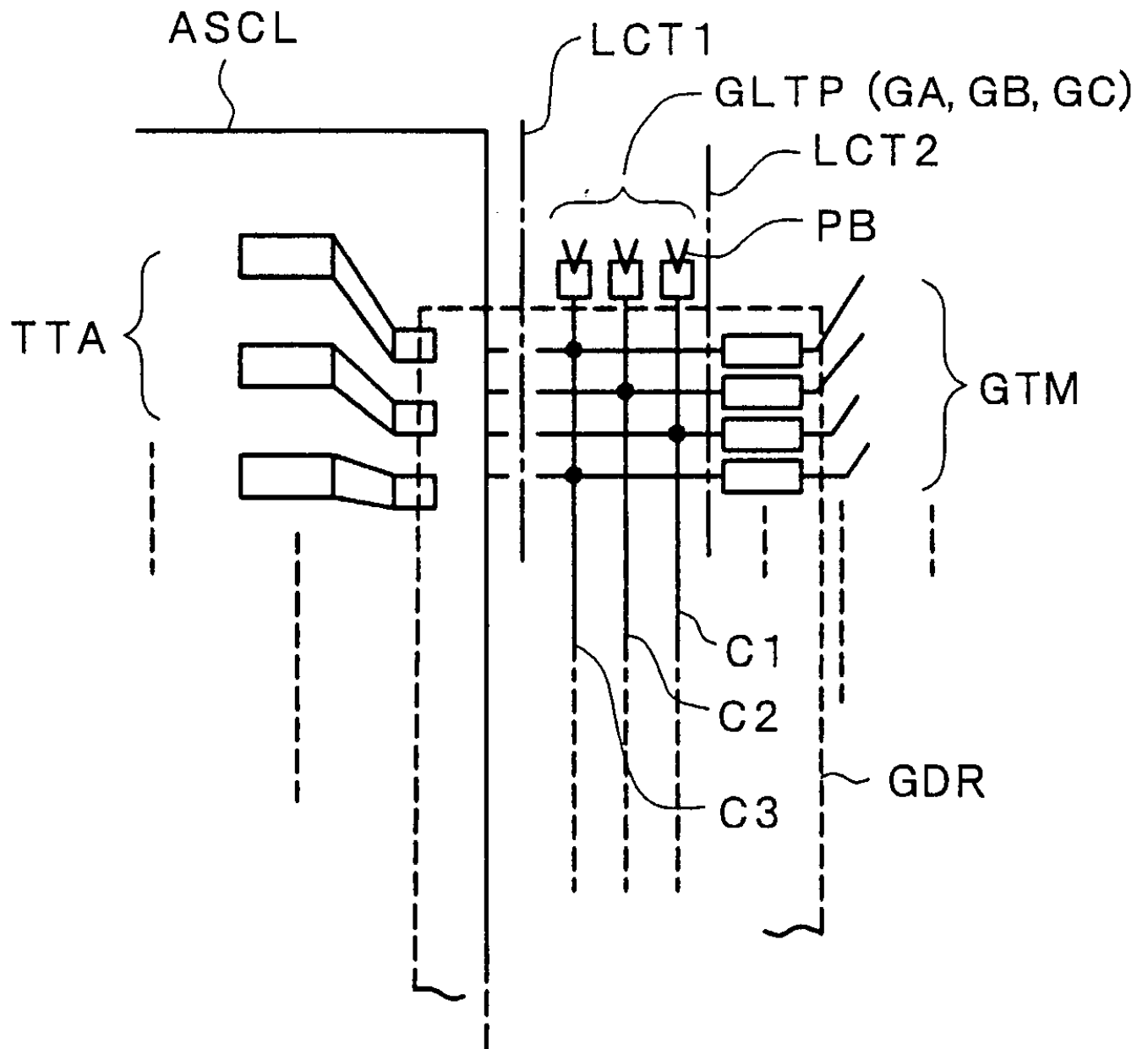
1



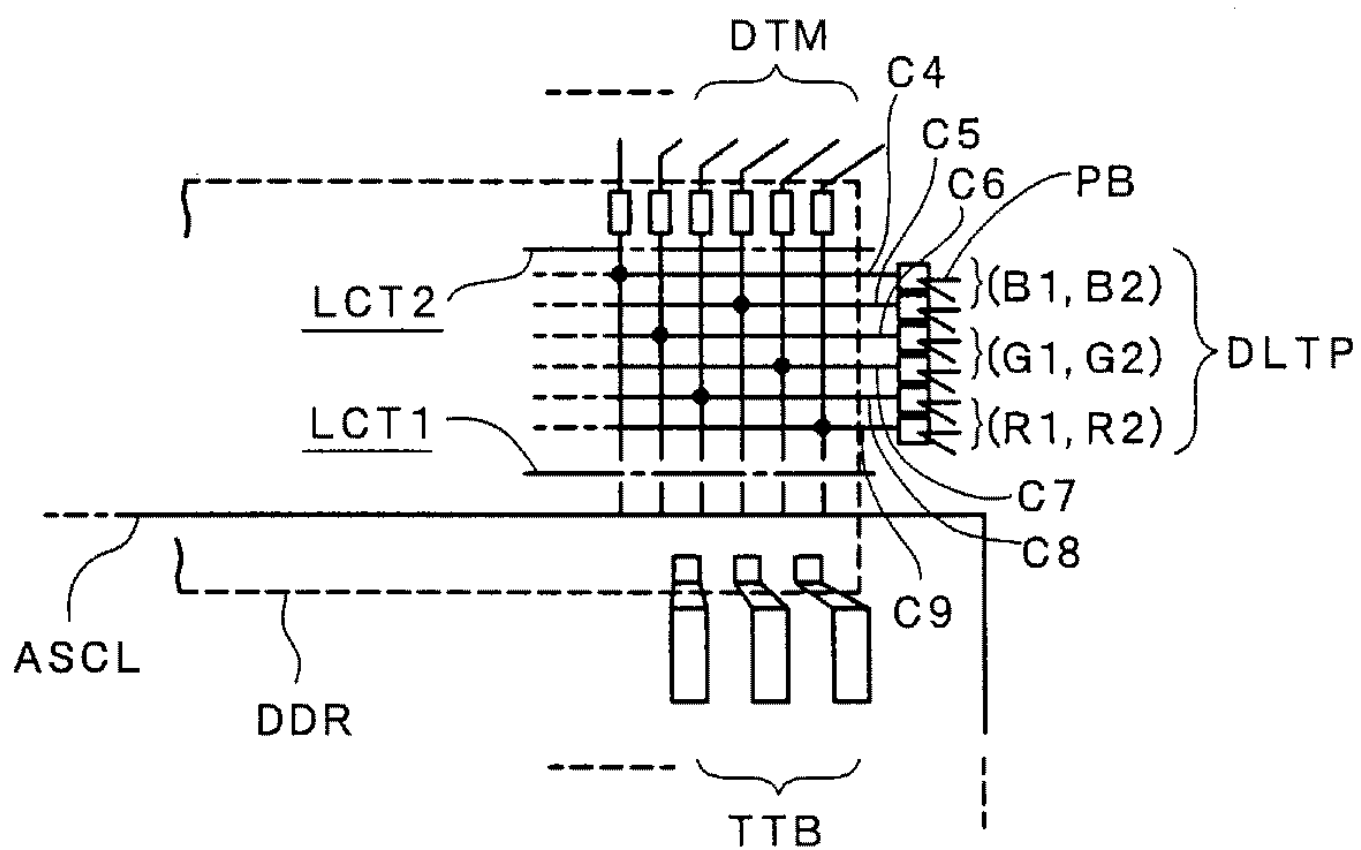
2



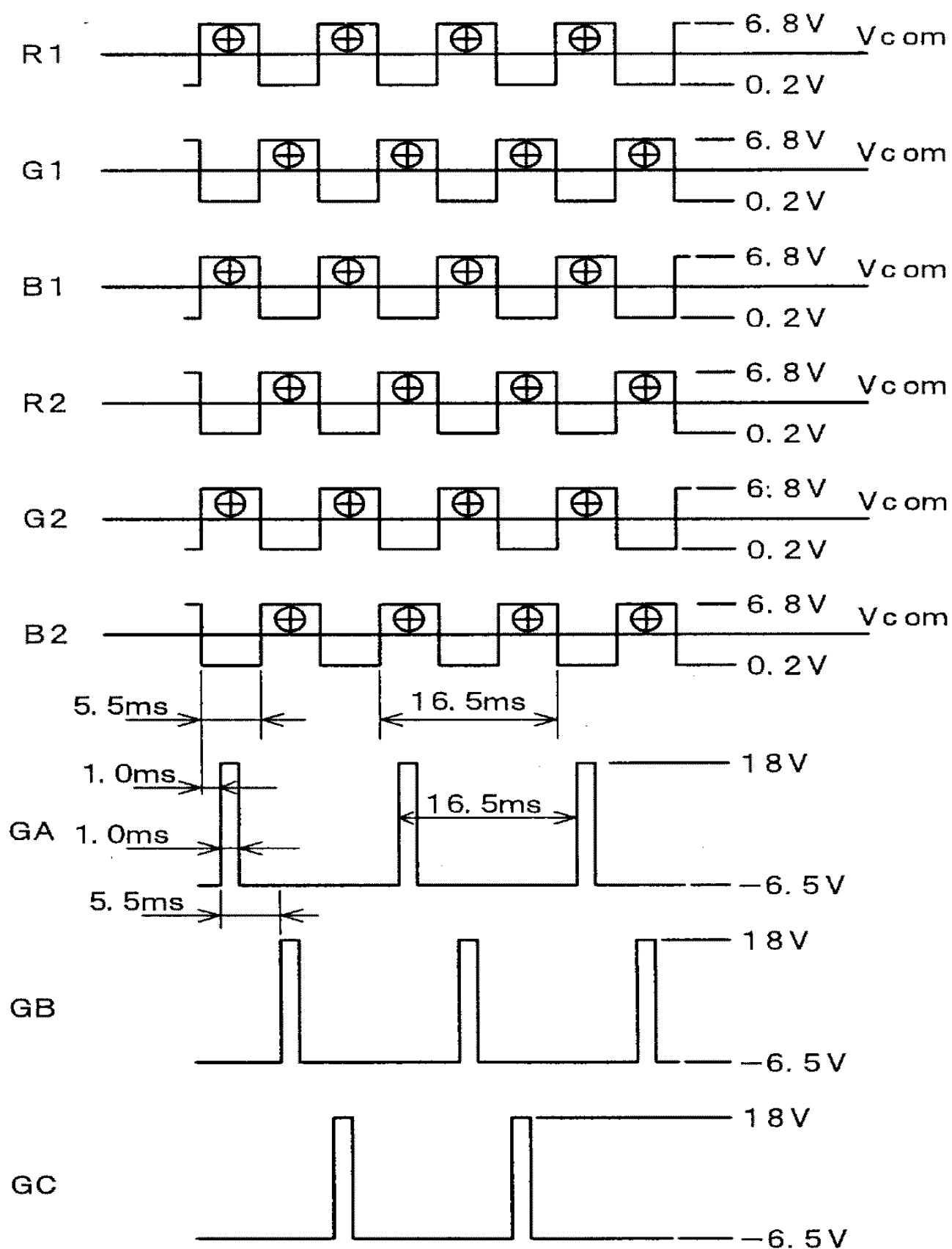
3a



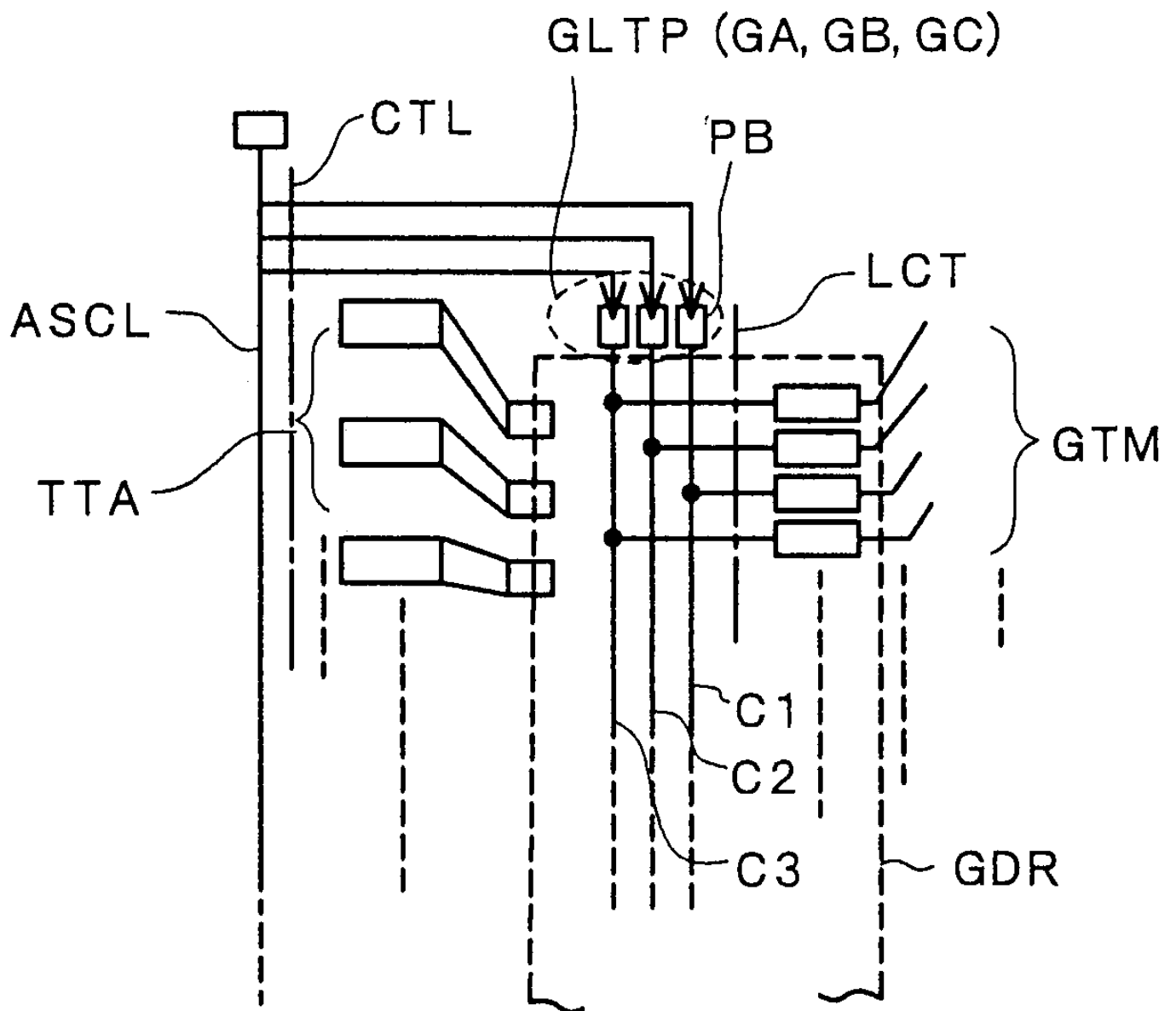
3b



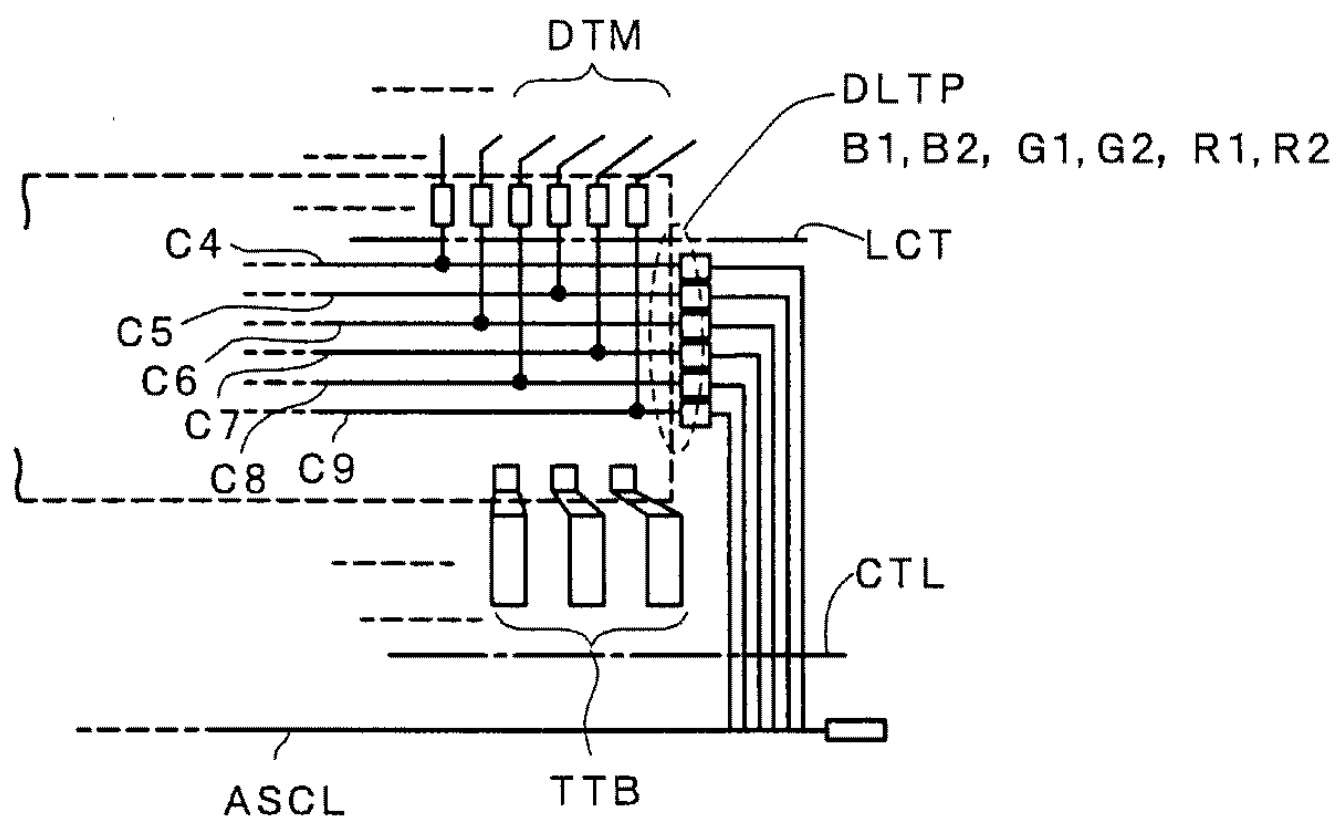
4

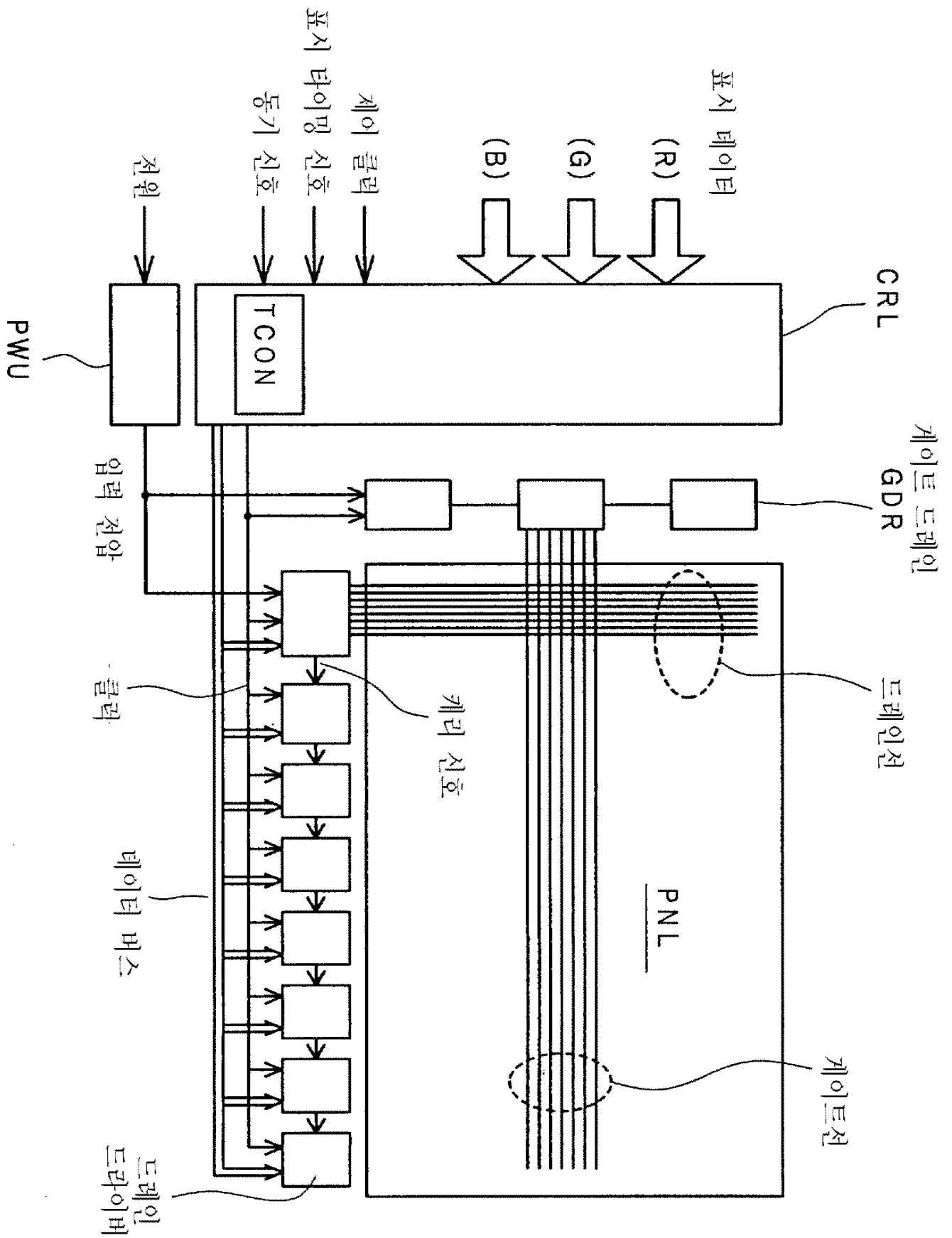


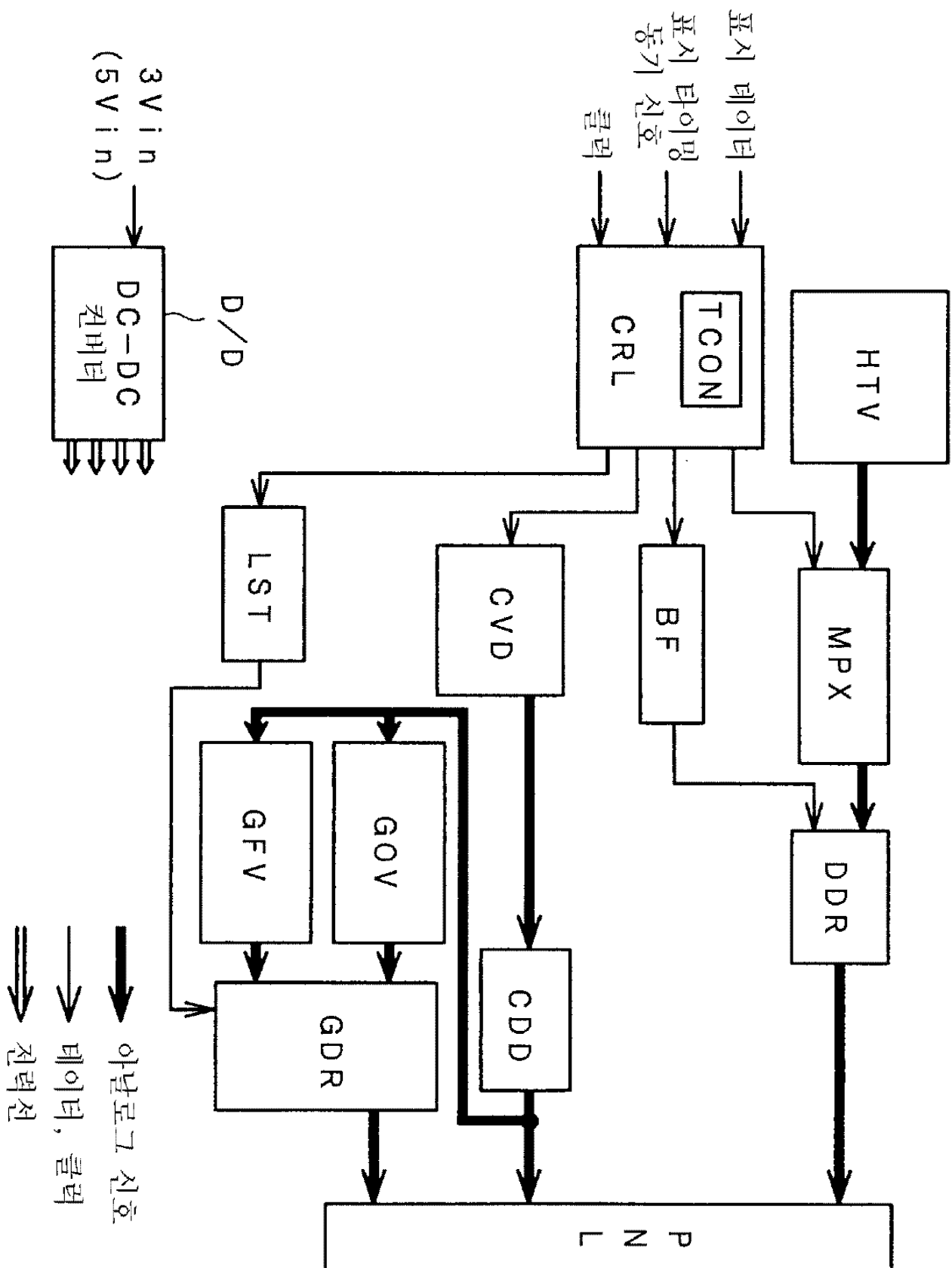
5a

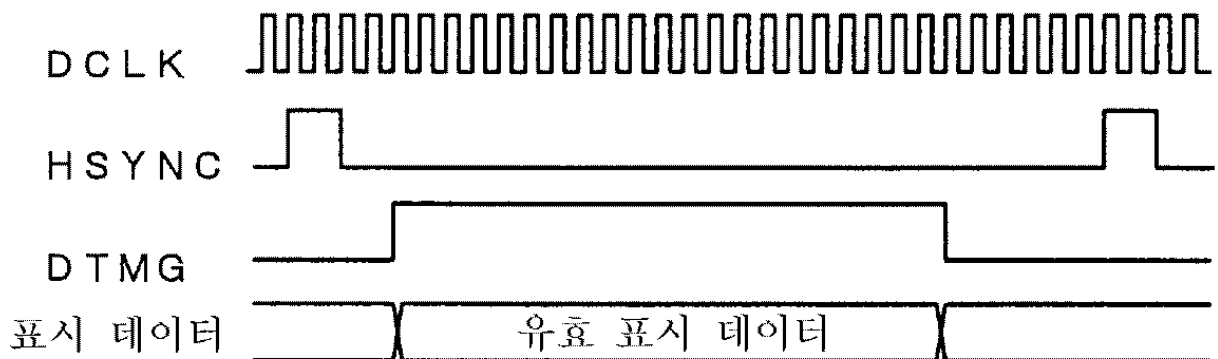
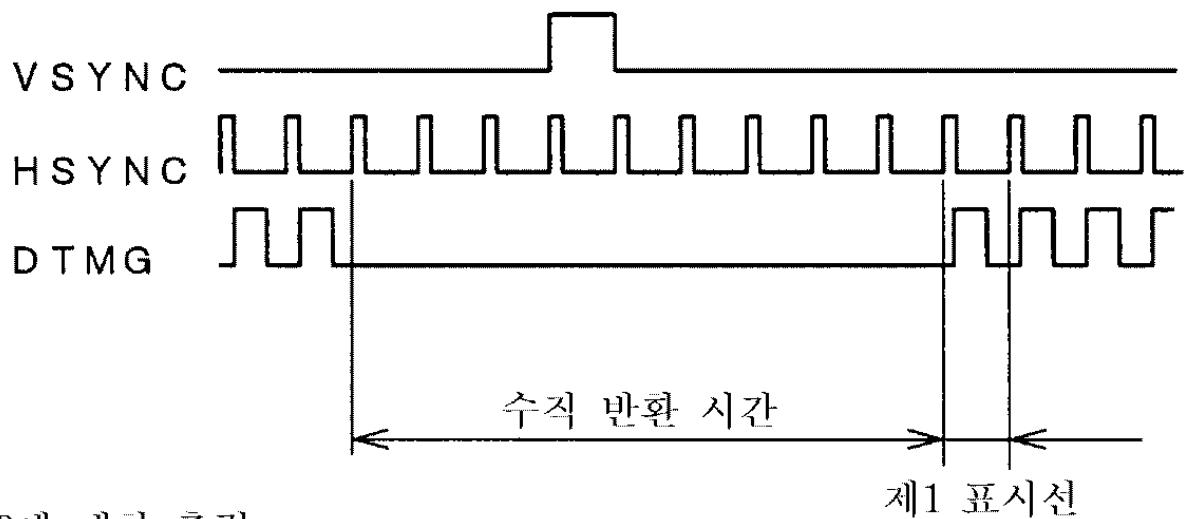
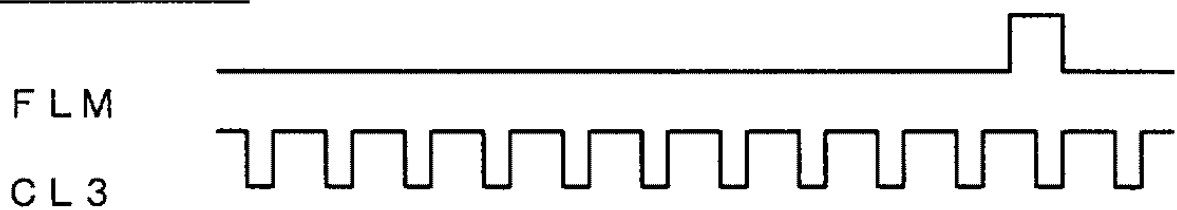


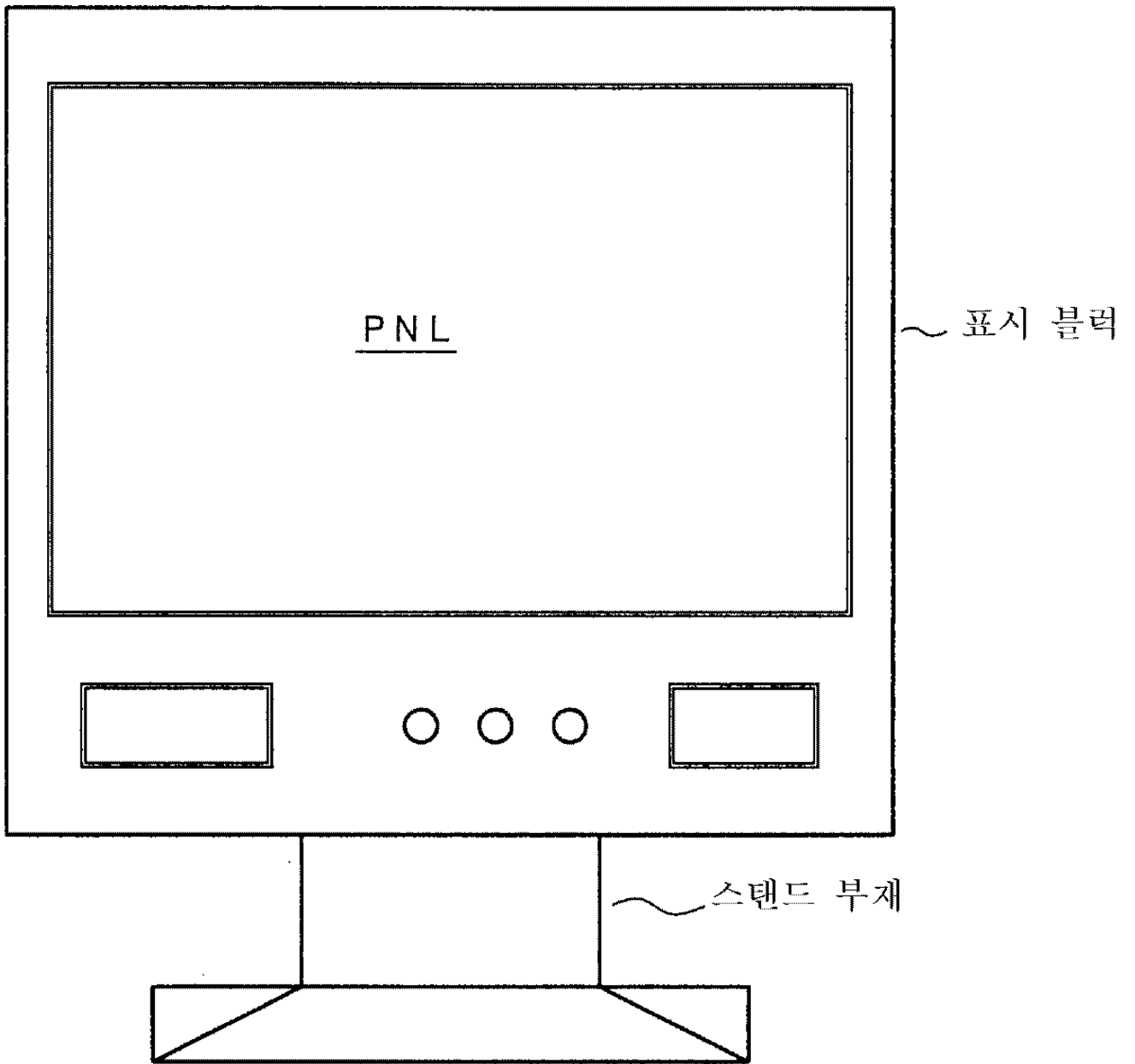
5b



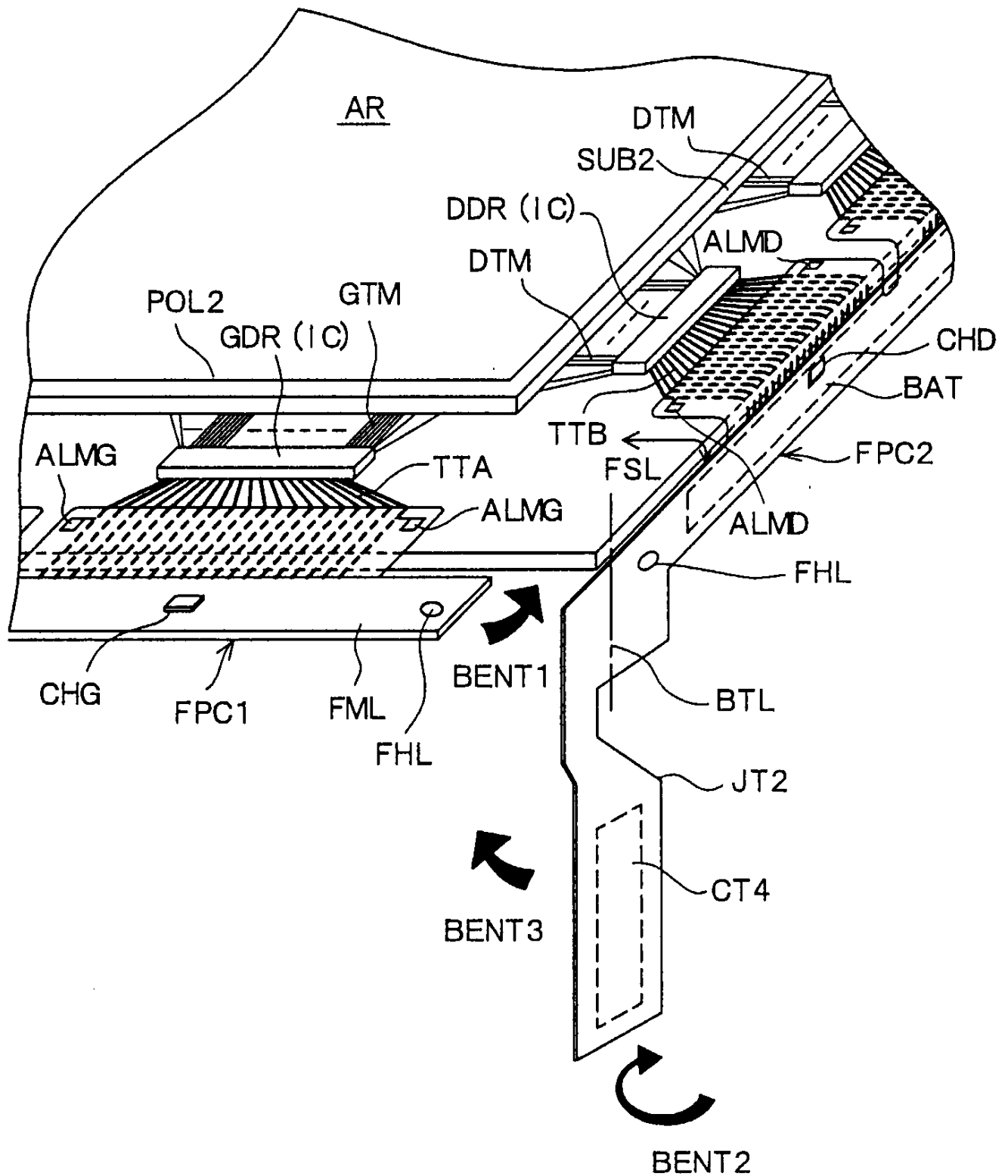




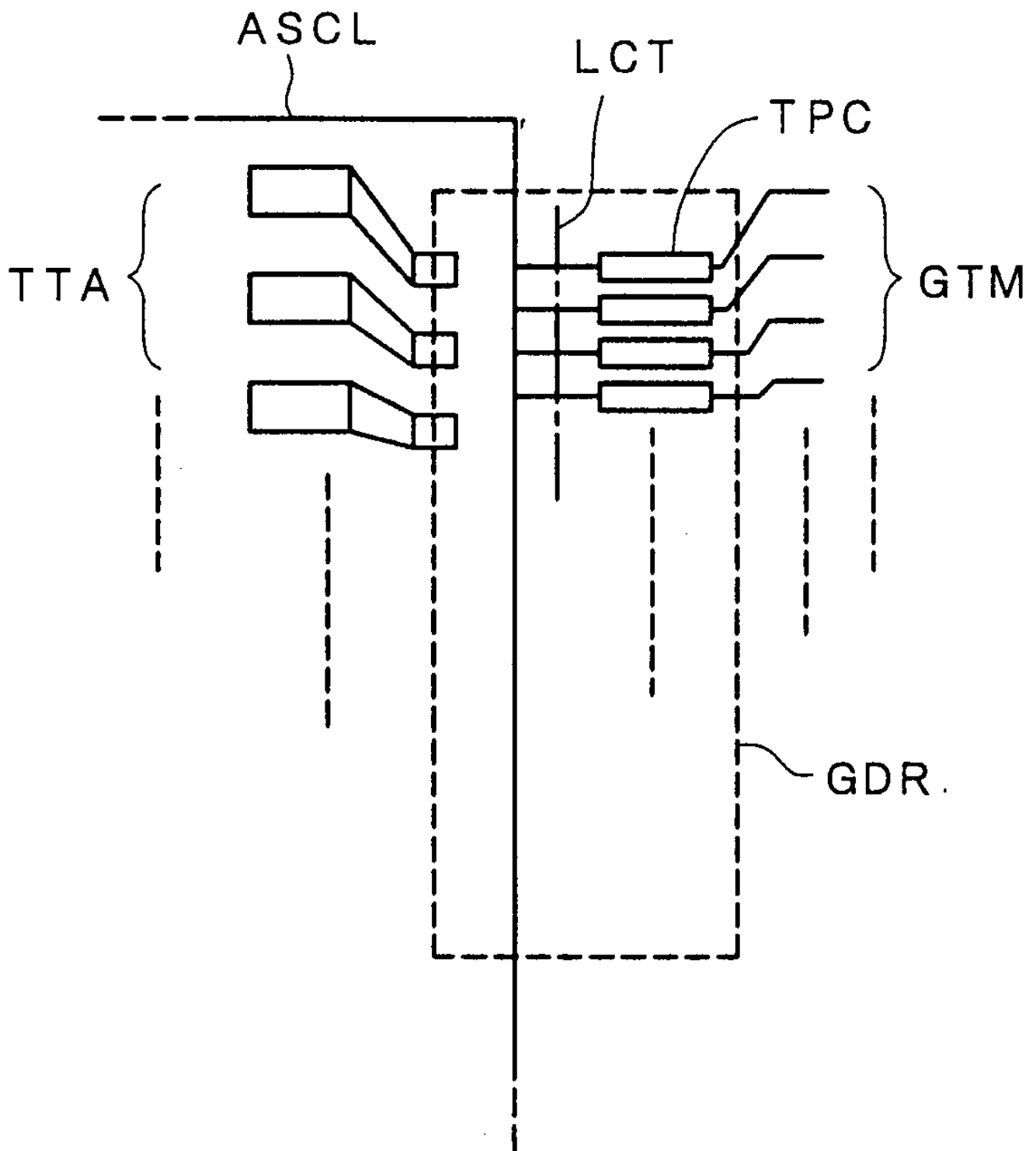
CPU로부터의 신호DDR에 대한 출력CPU로부터의 신호GDR에 대한 출력



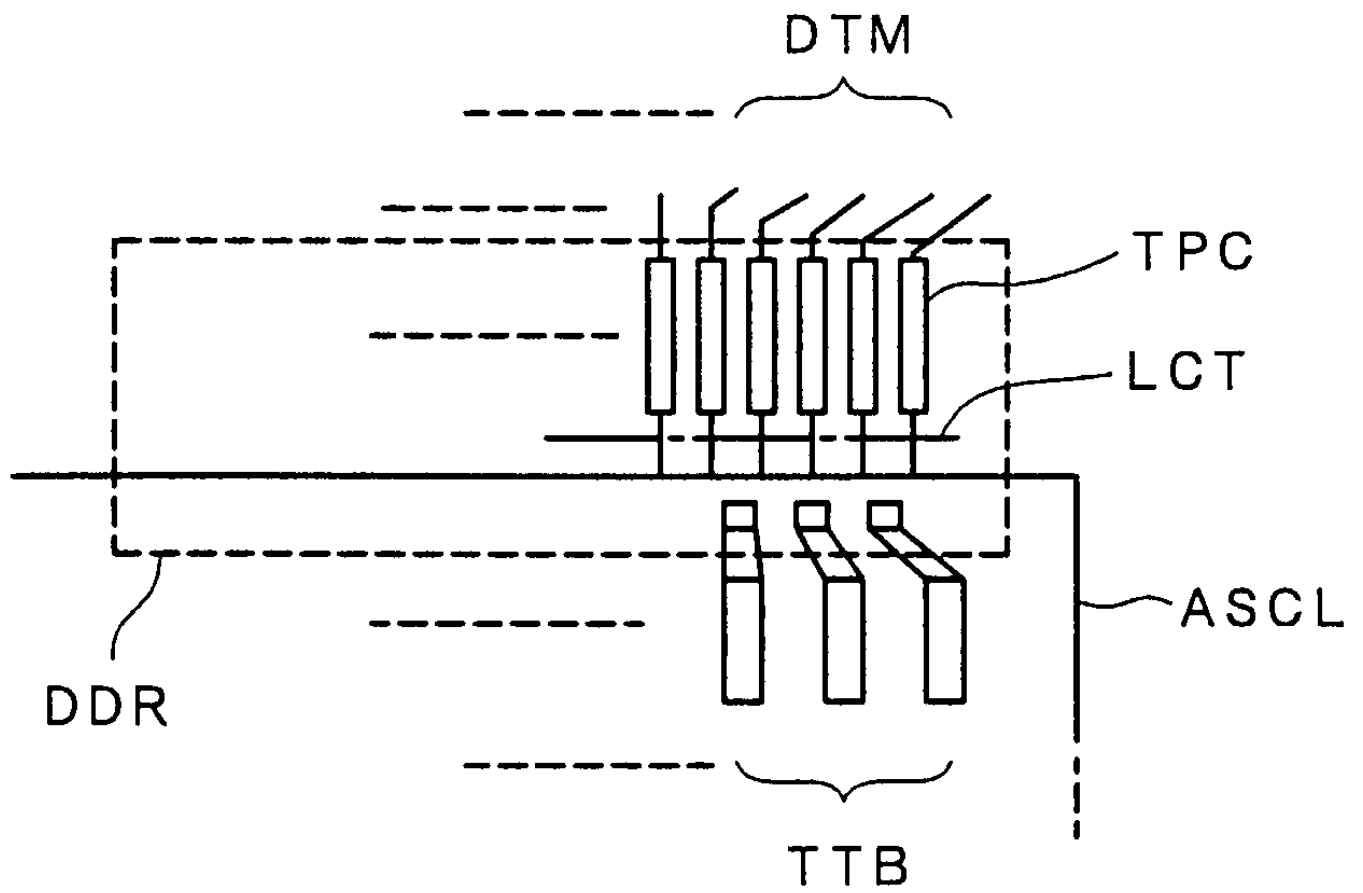
10



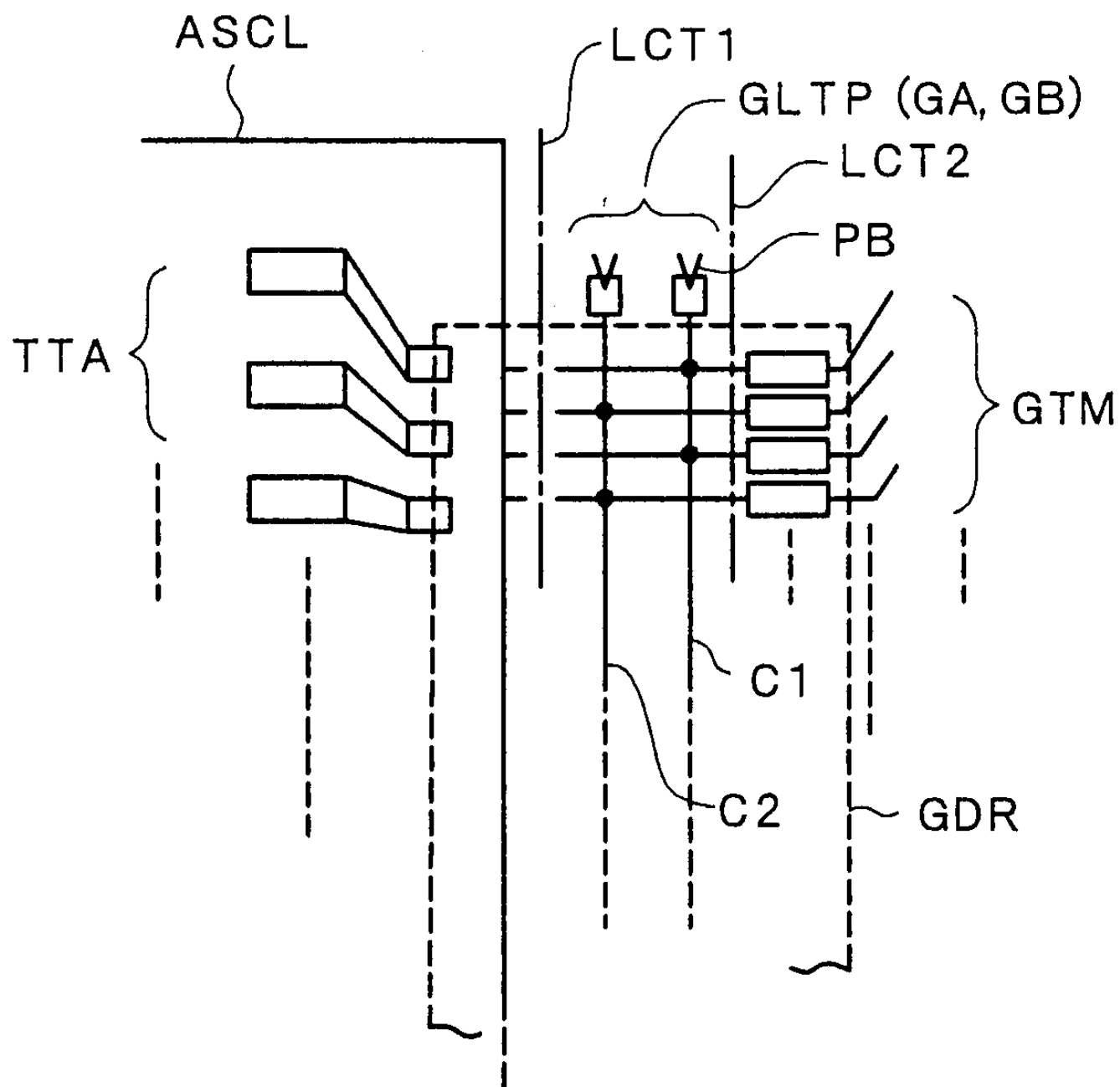
11a



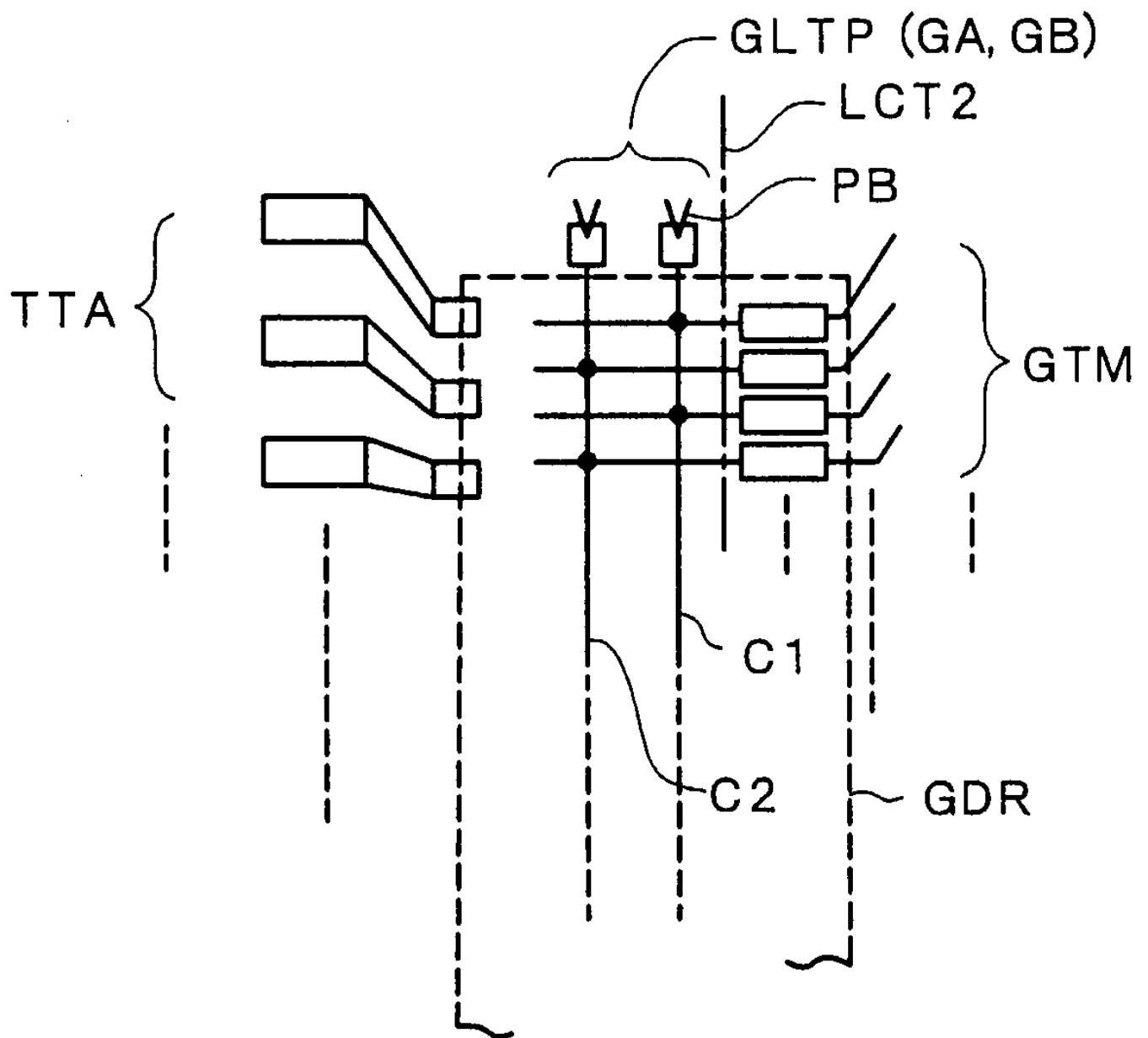
11b



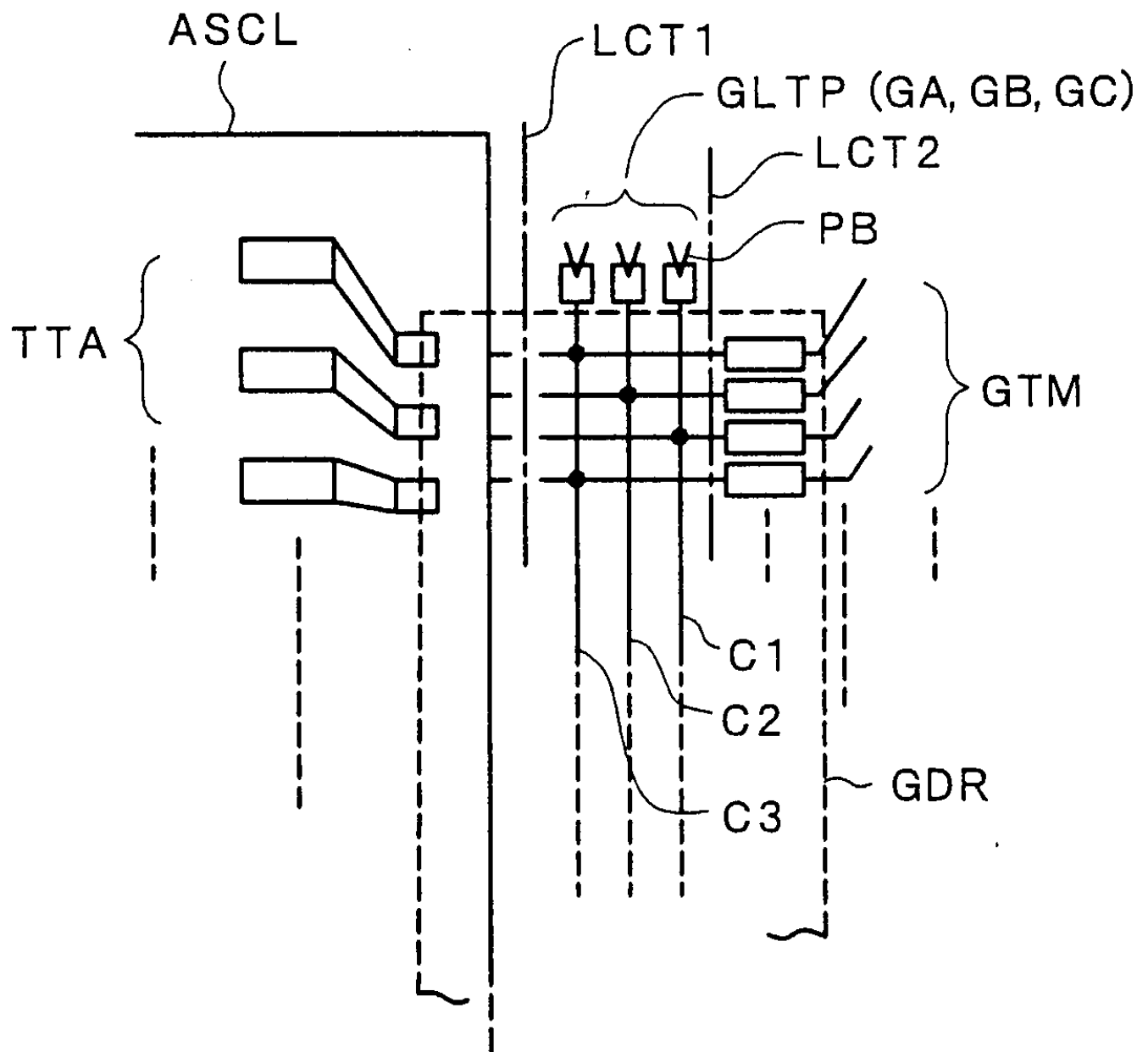
12a



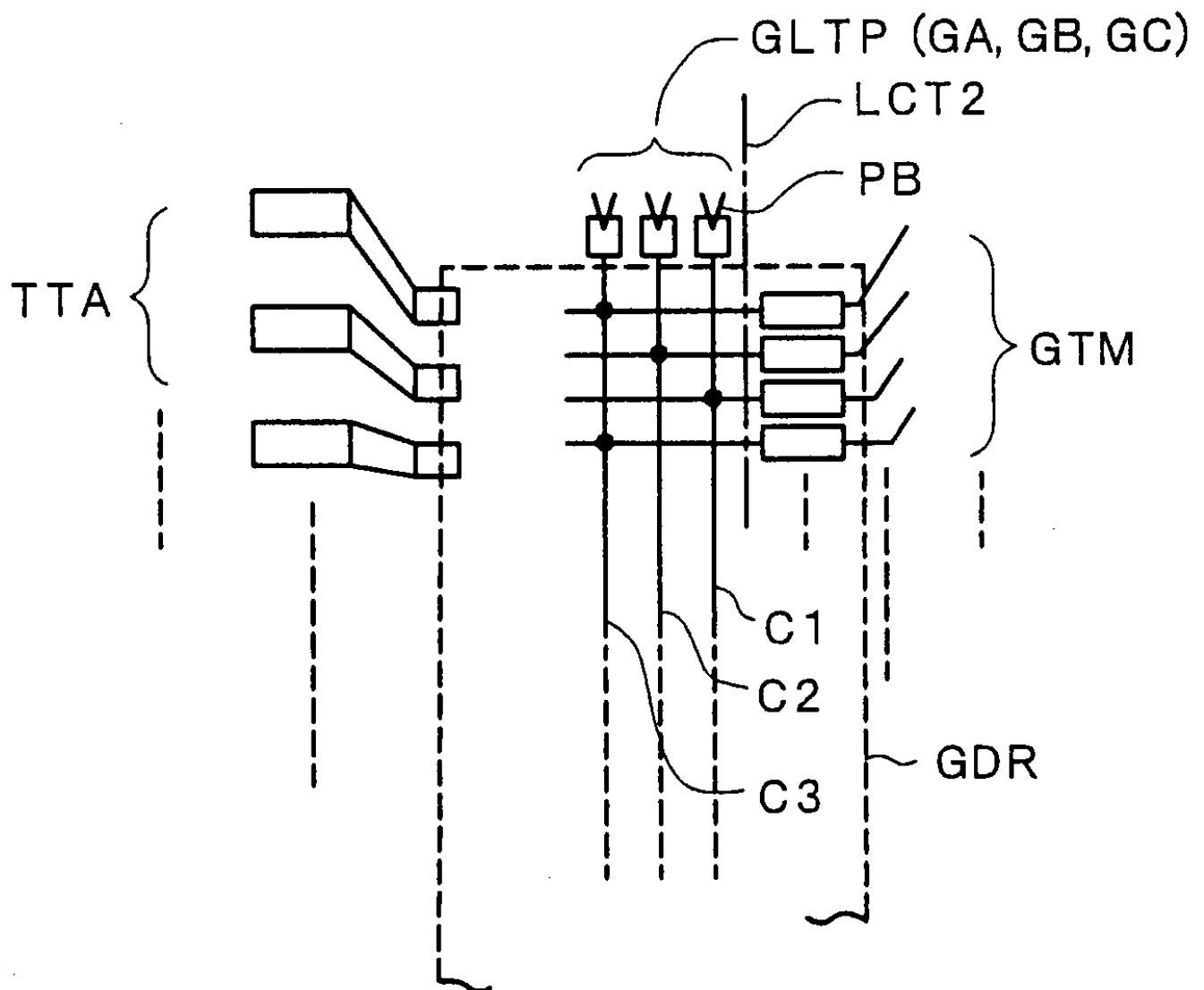
12b



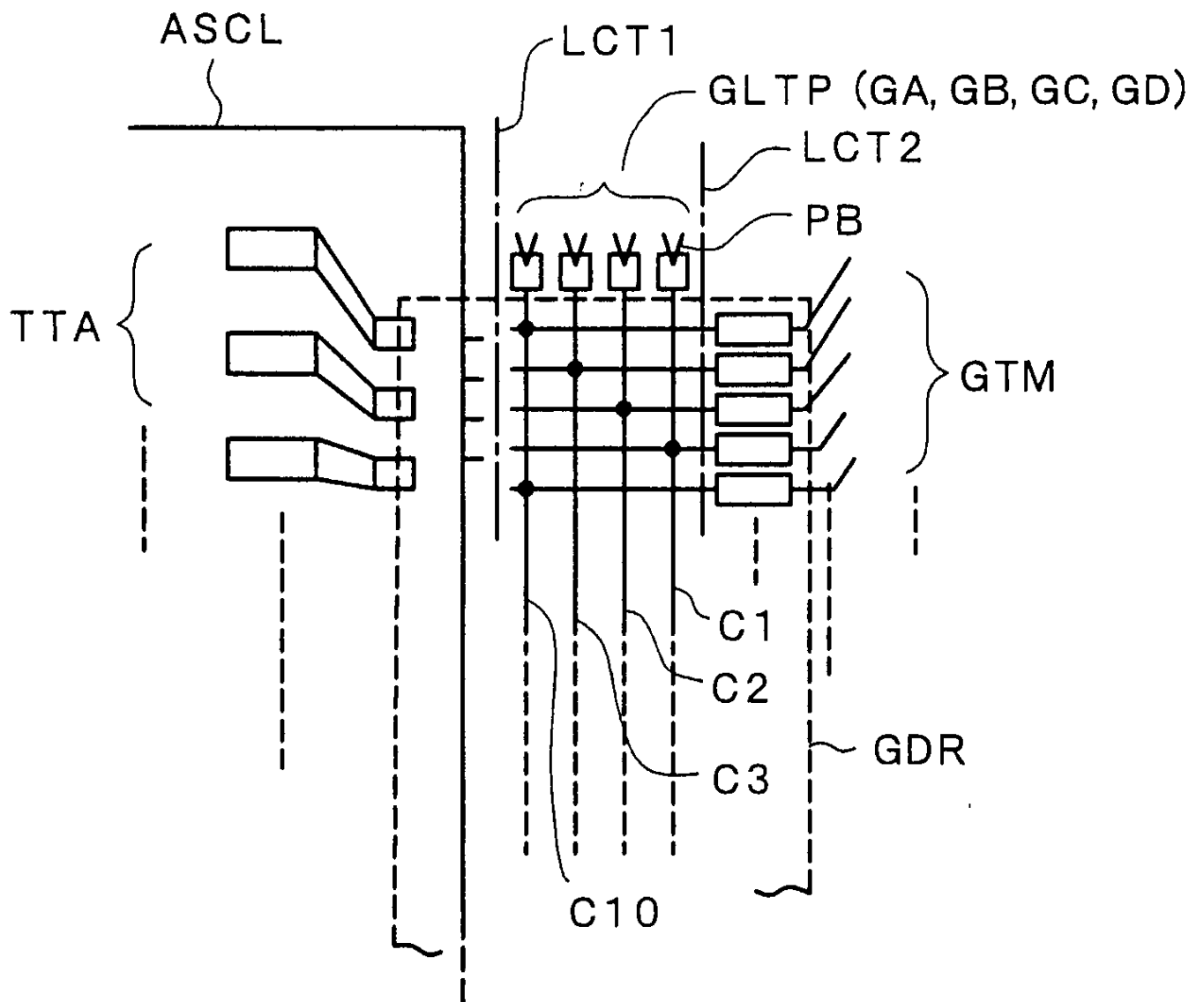
13a



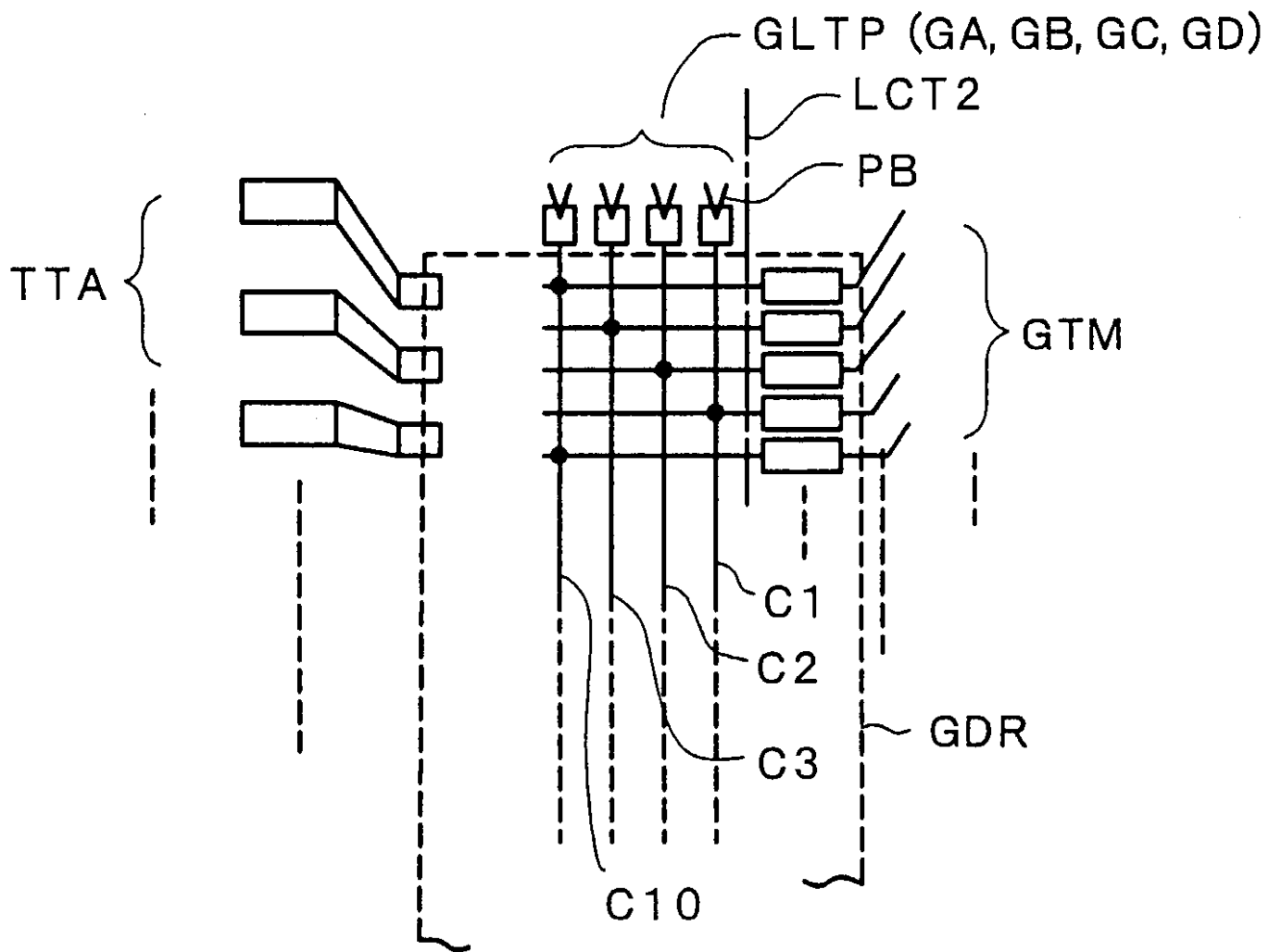
13b



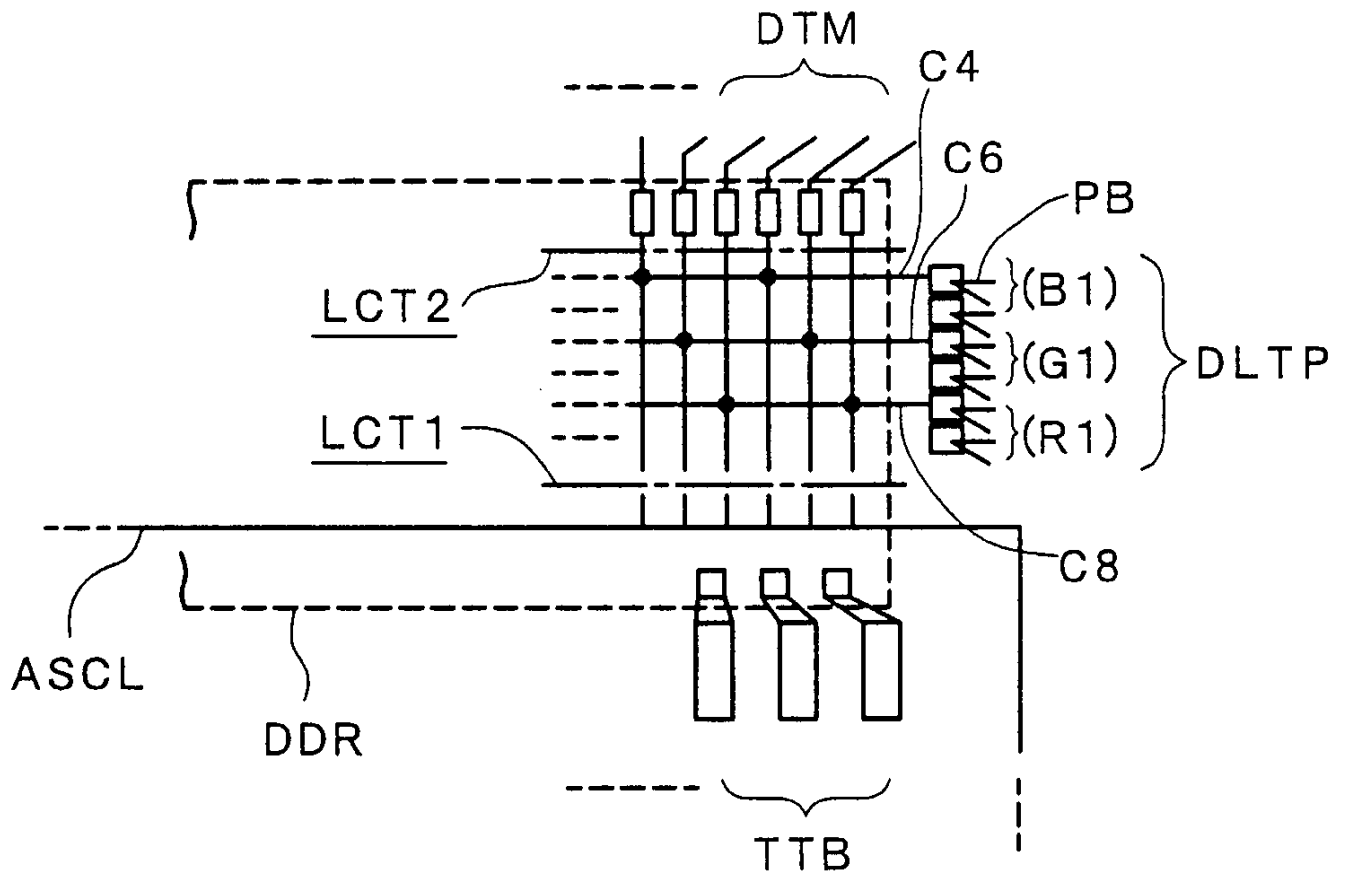
14a



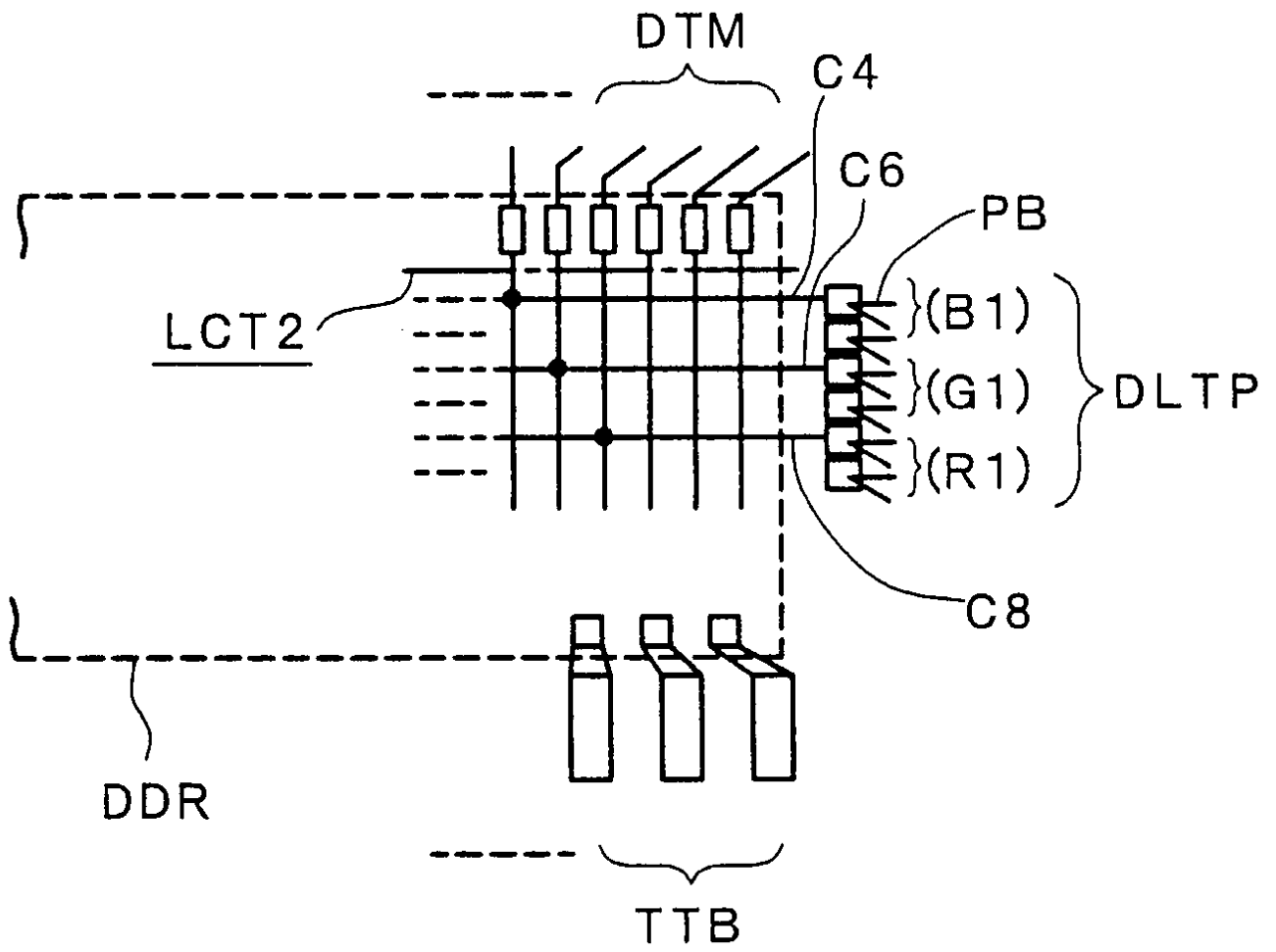
14b



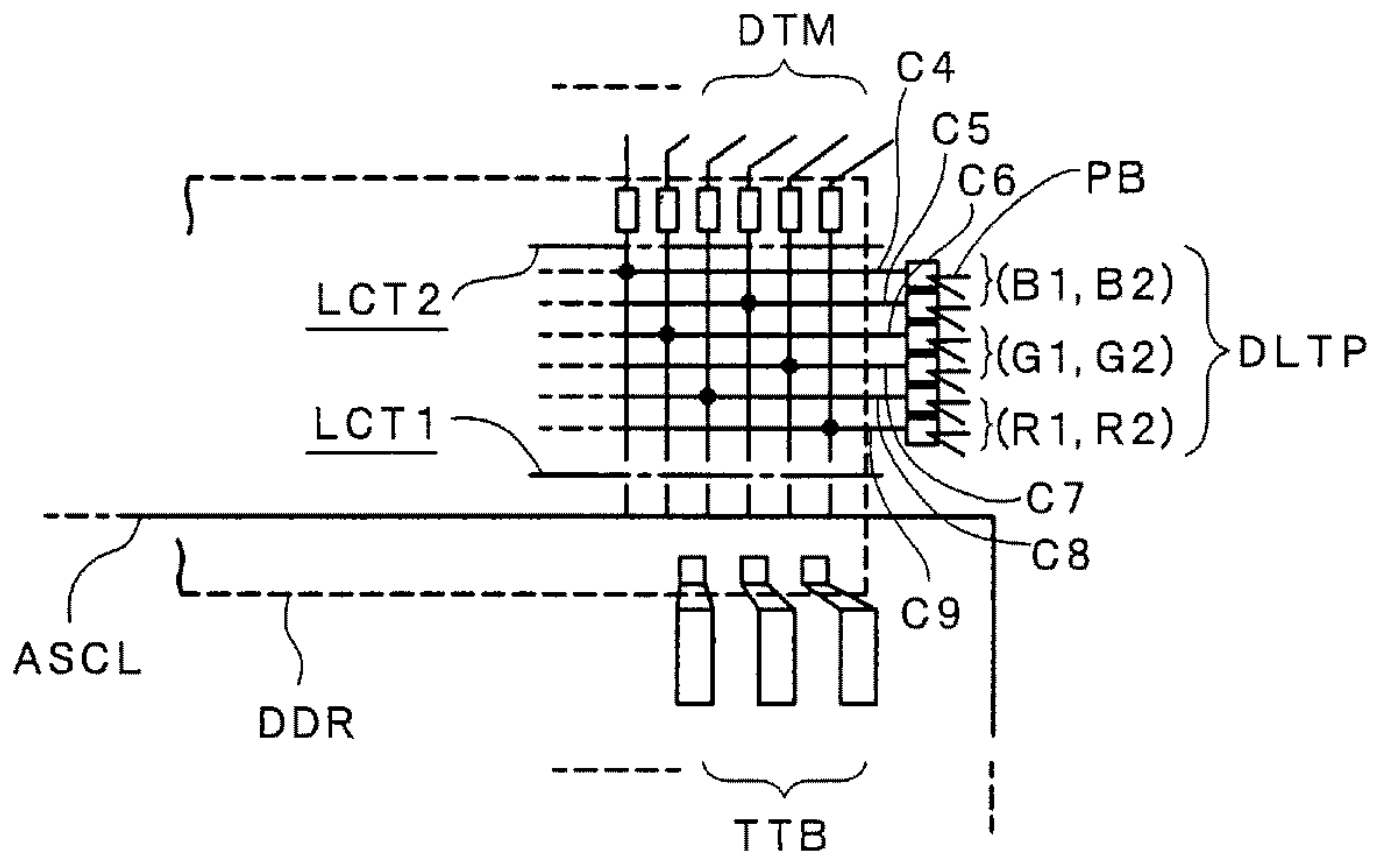
15a



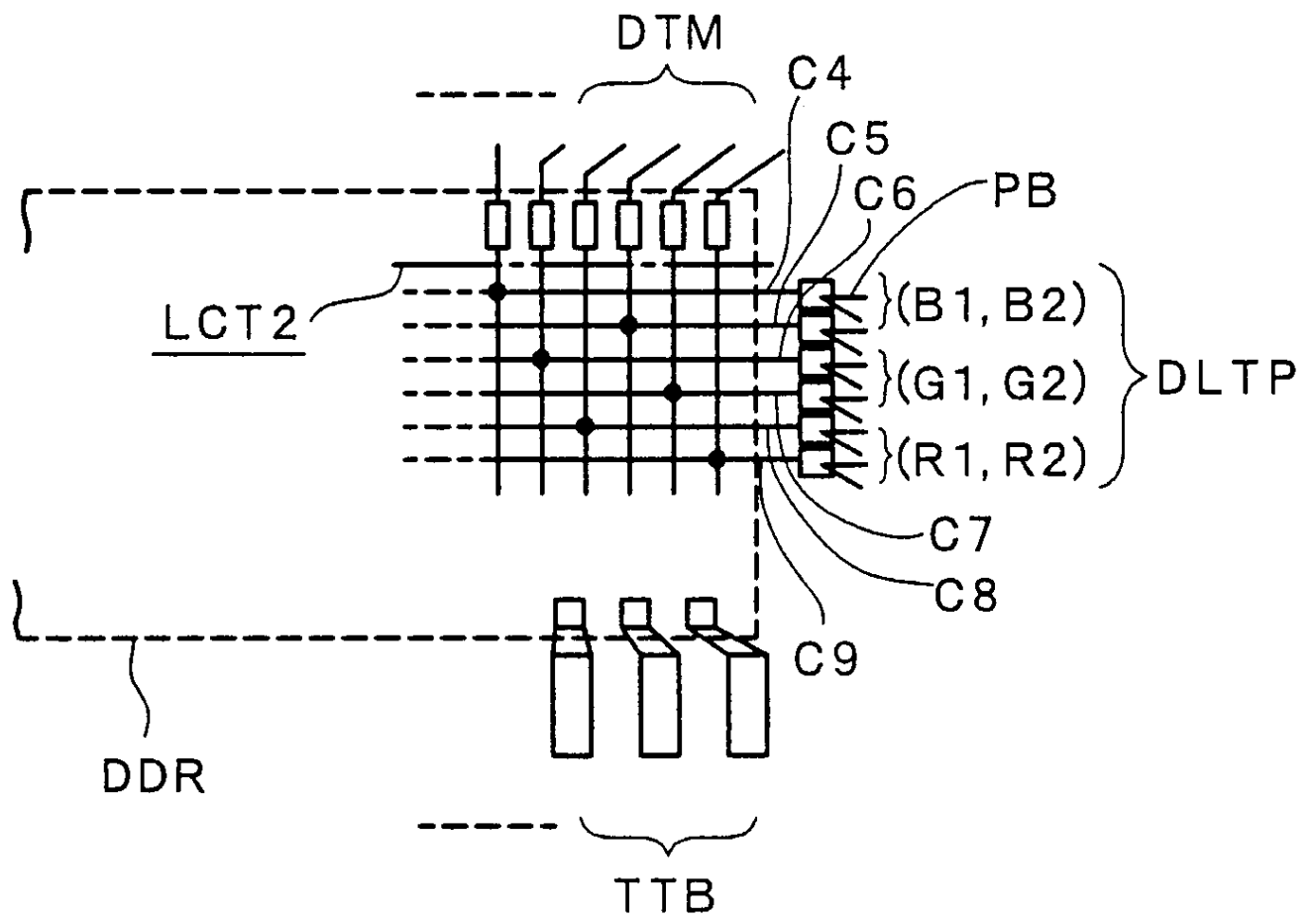
15b



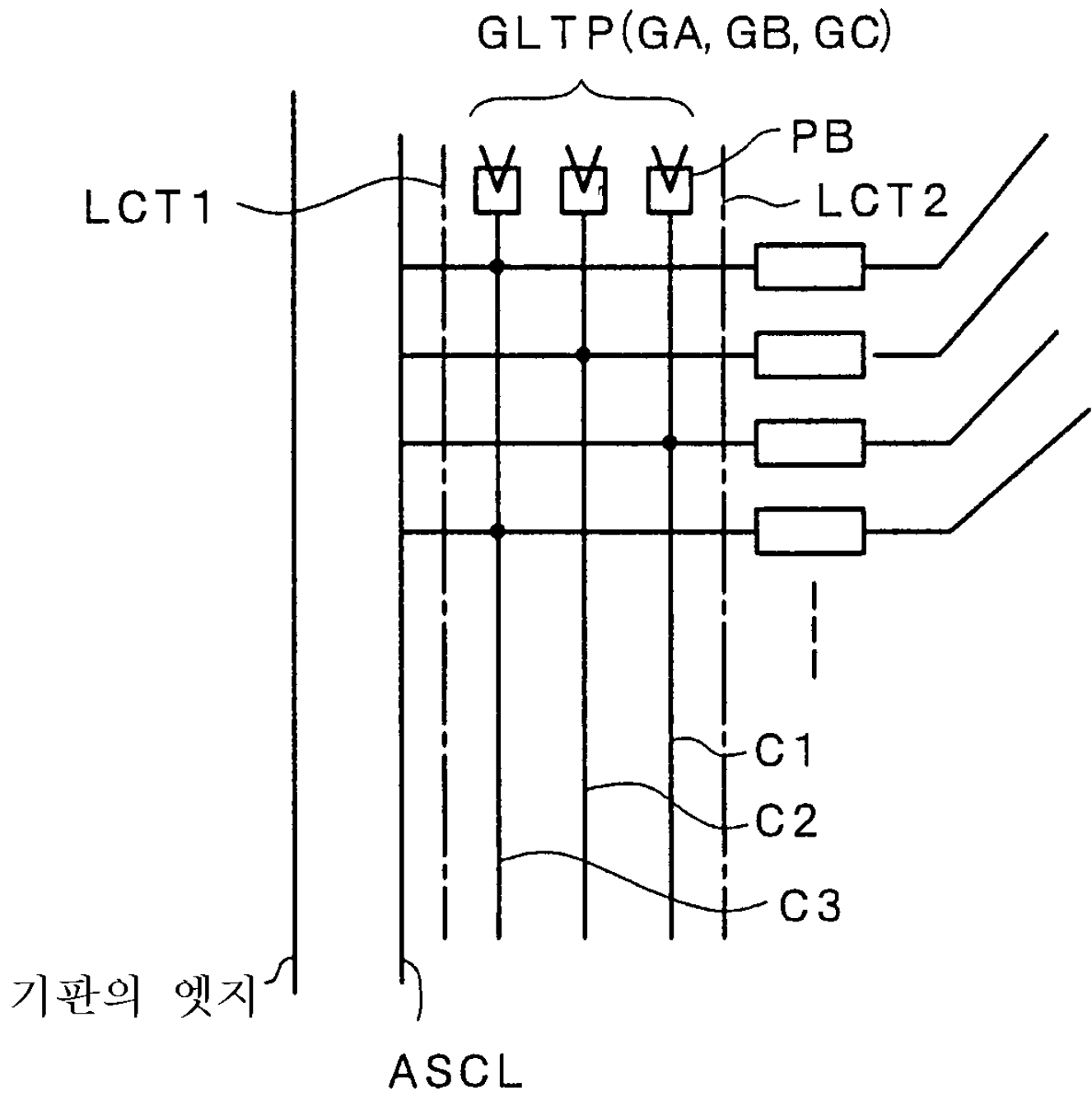
16a



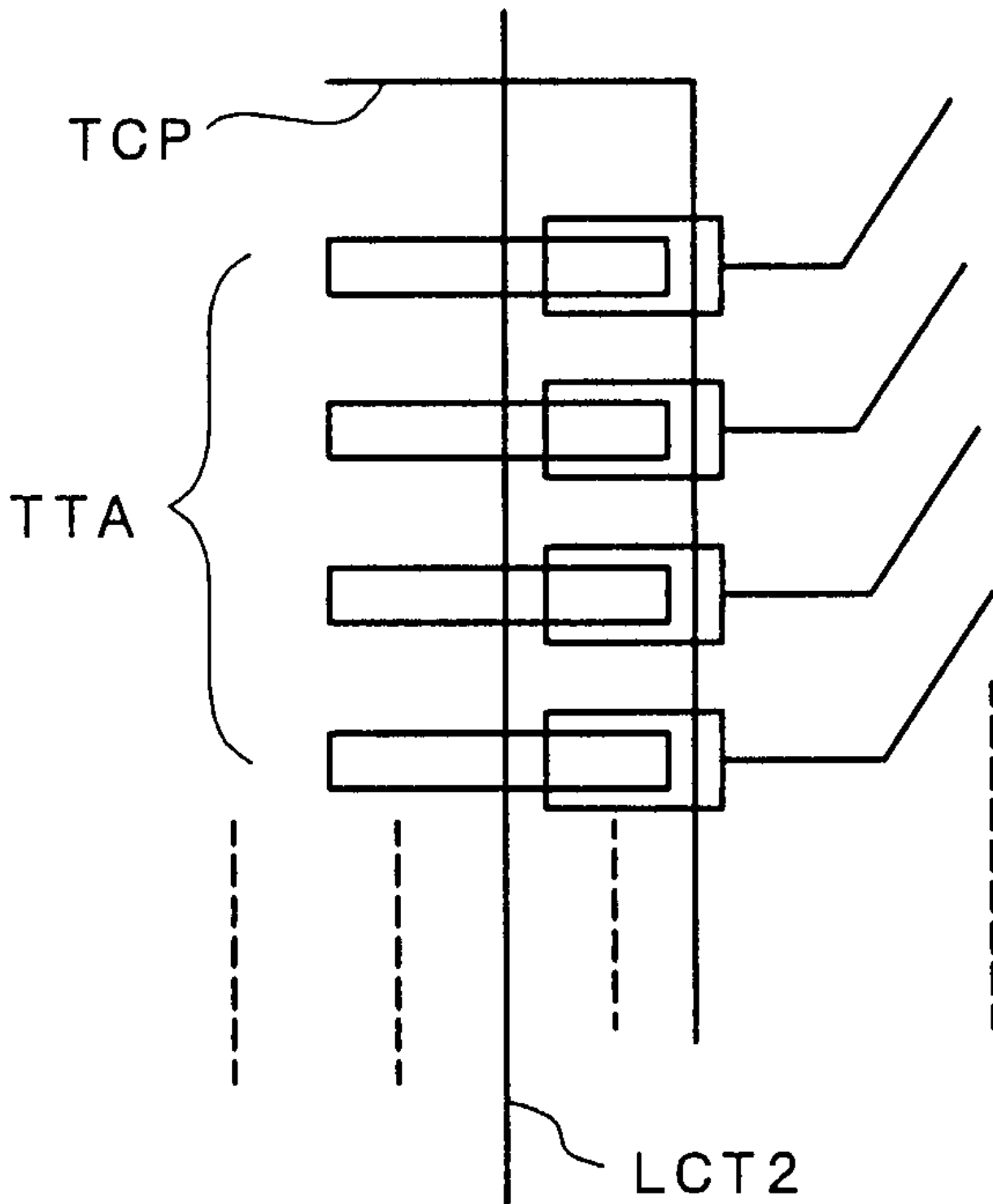
16b



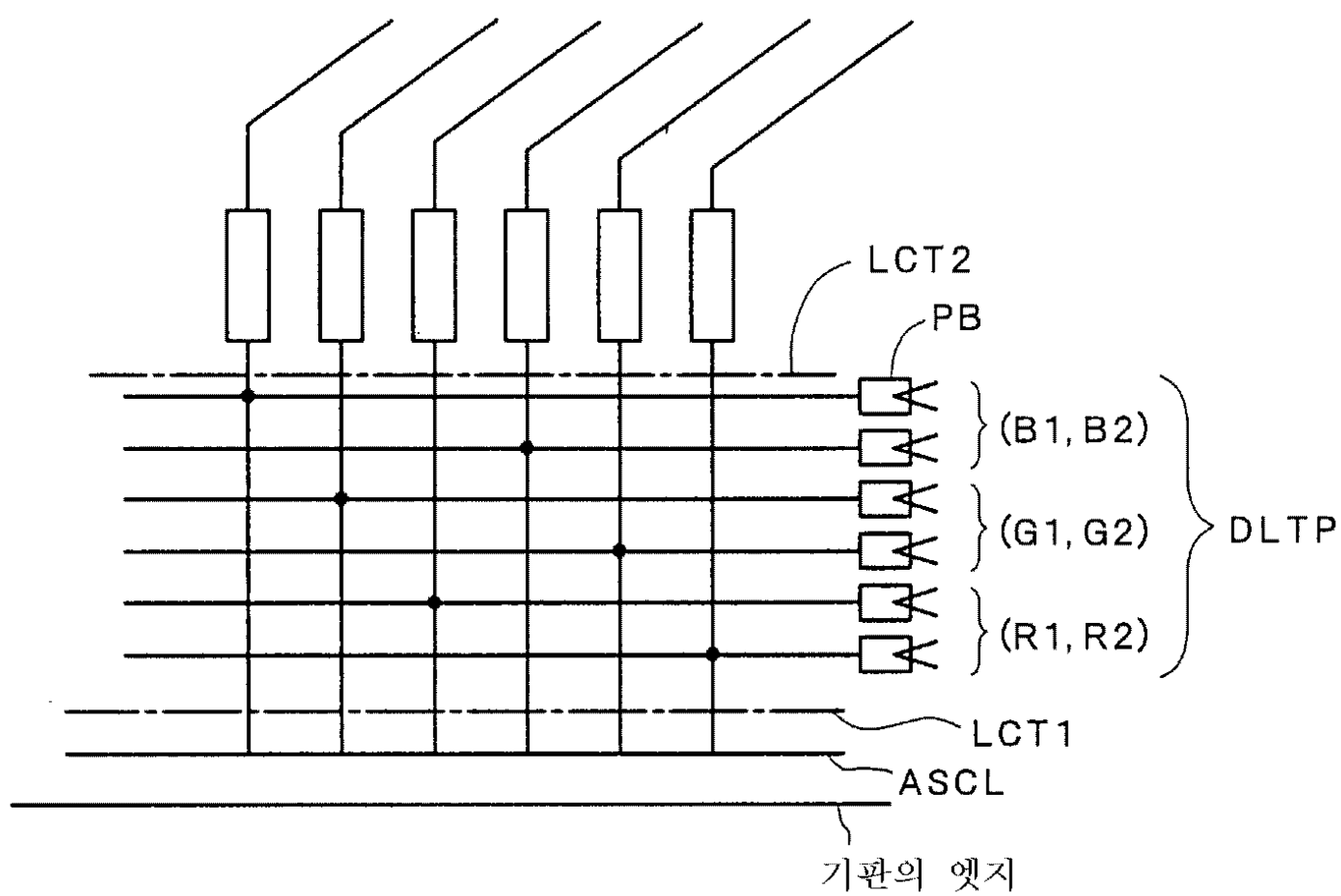
17a



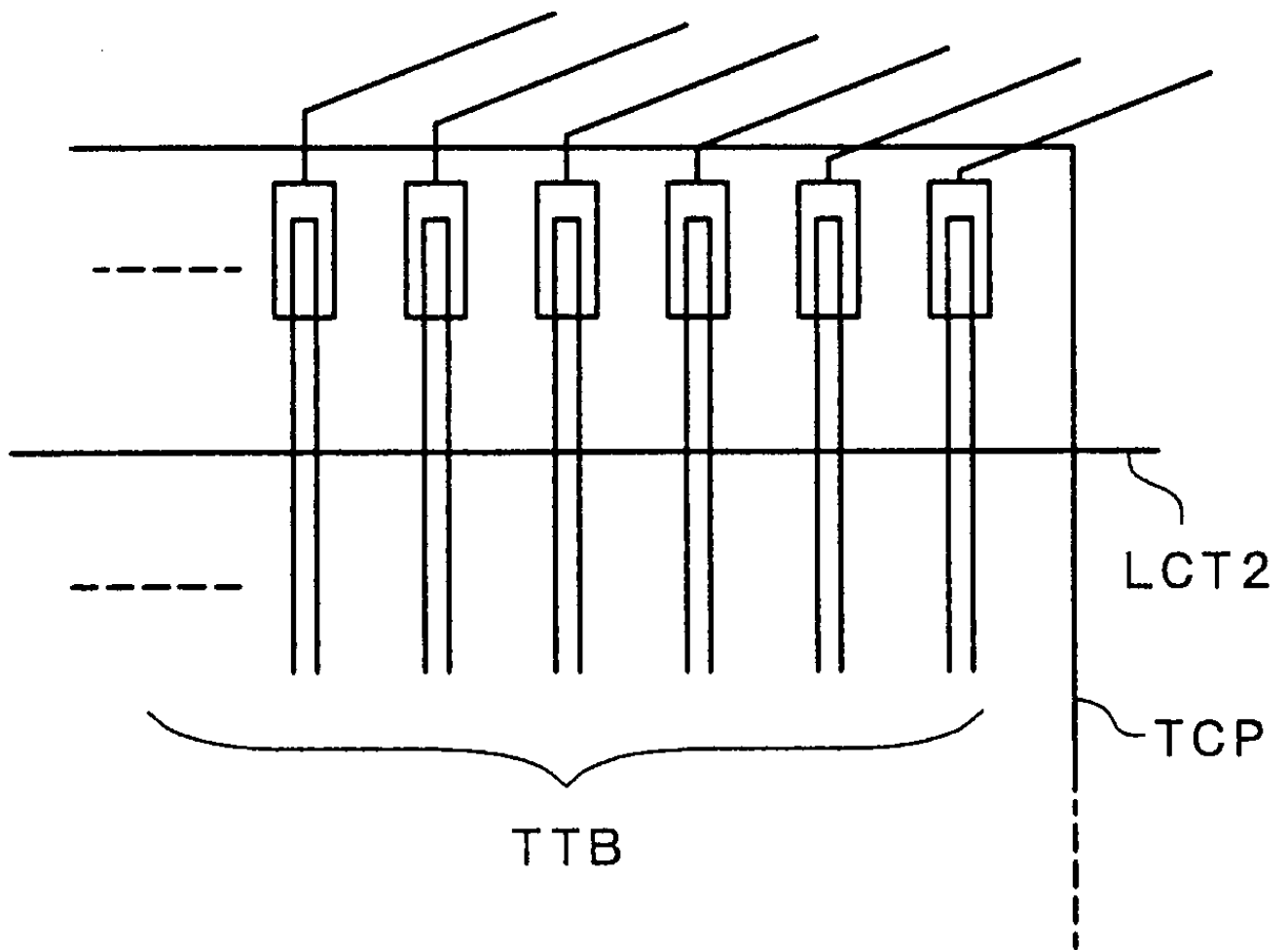
17b



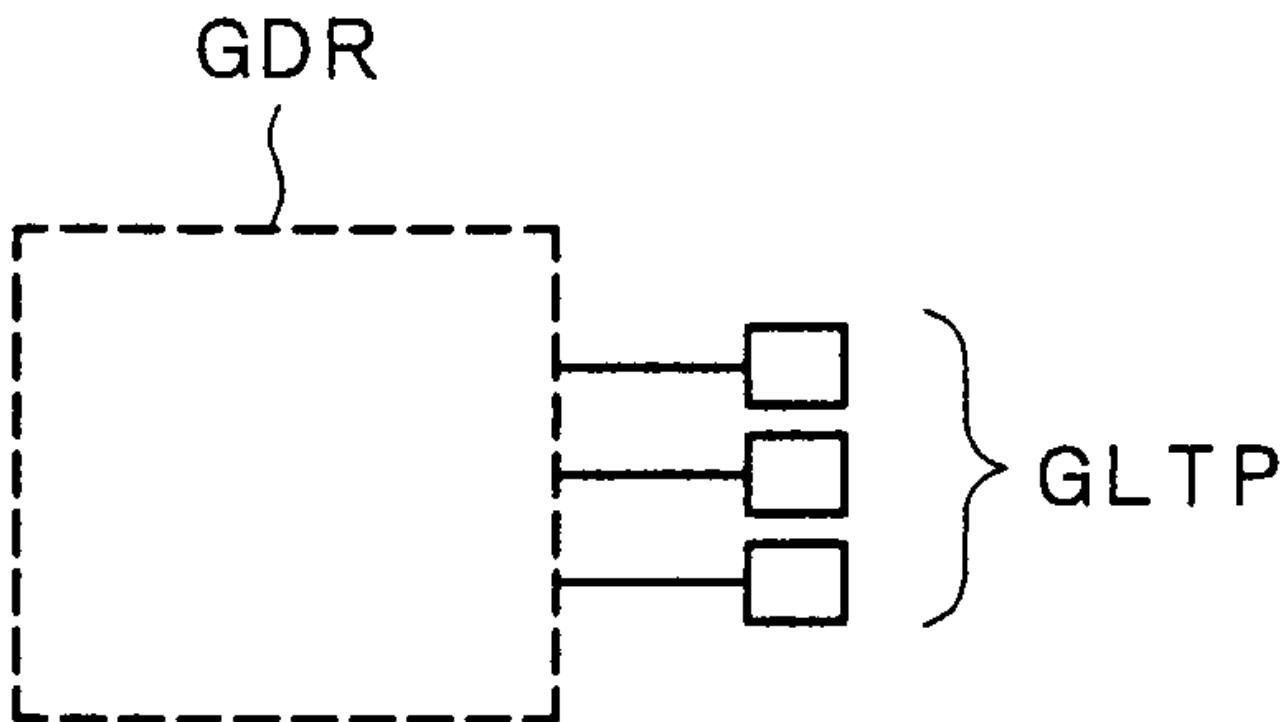
18a



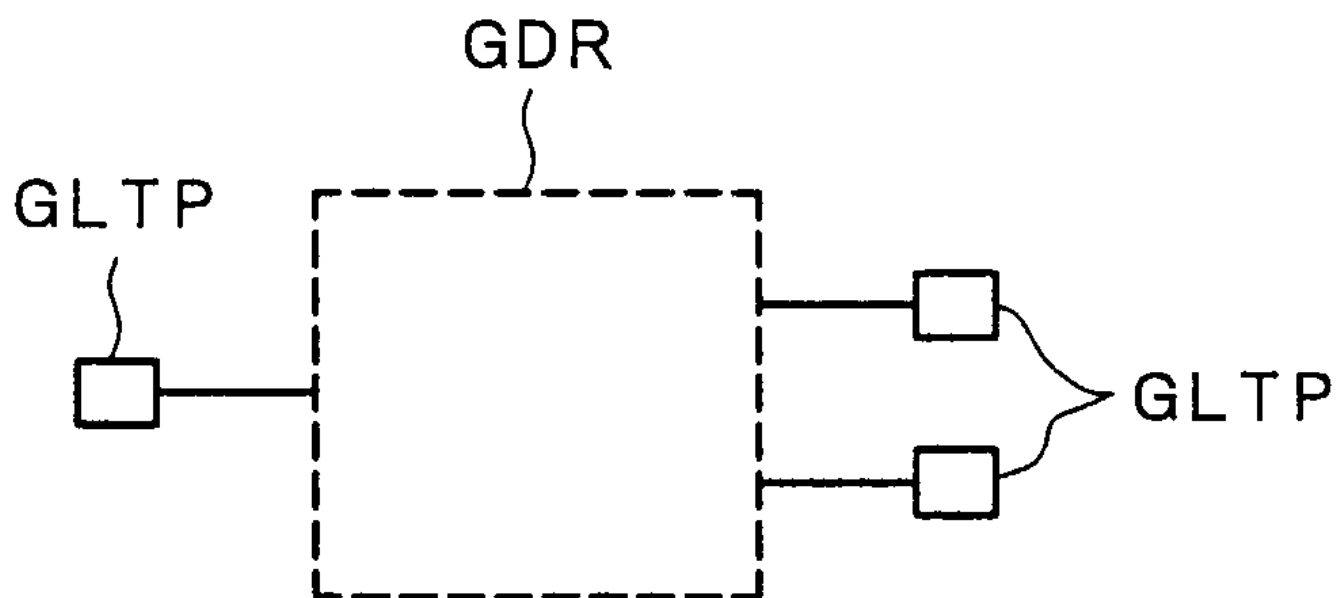
18b



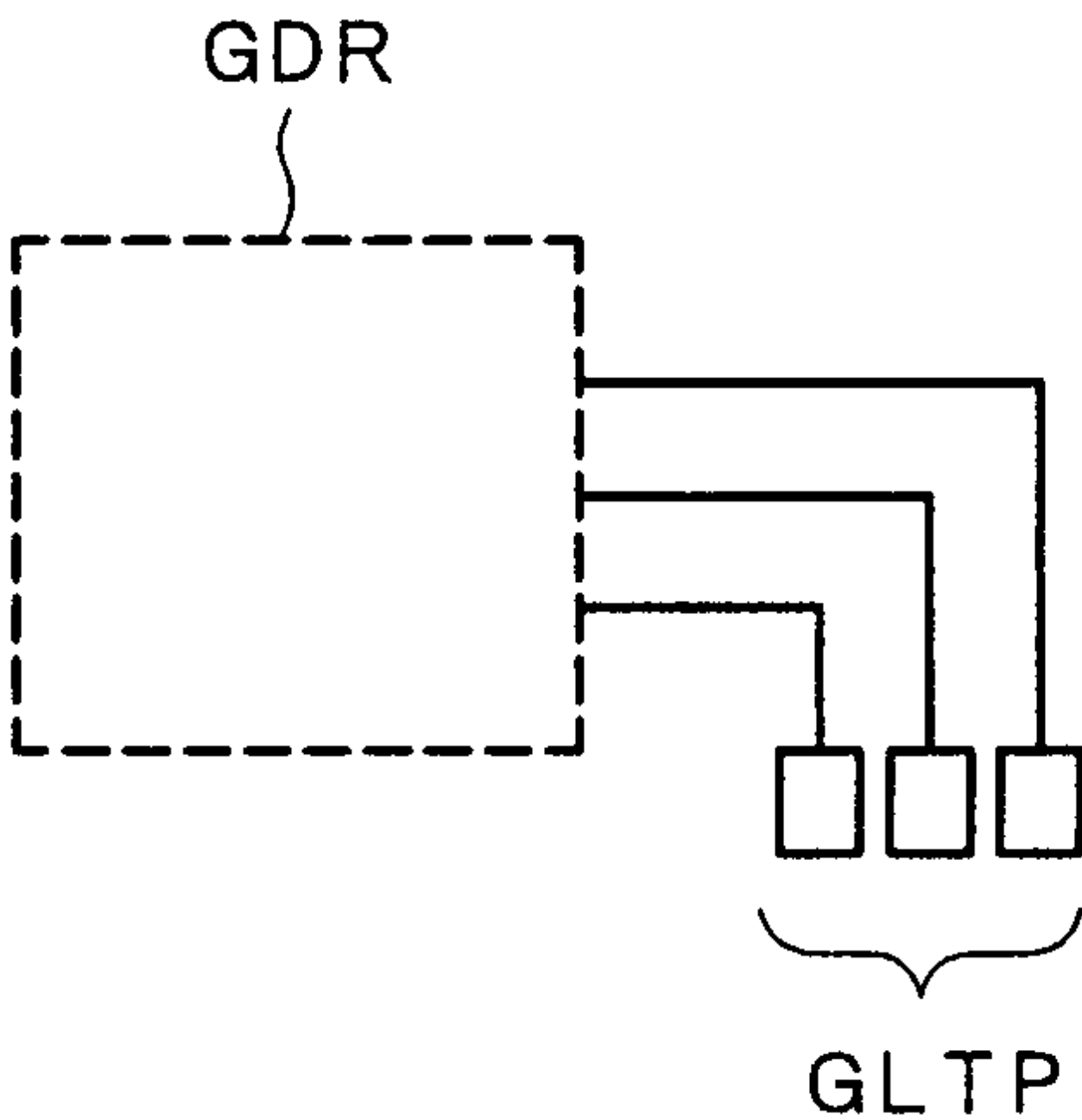
19a



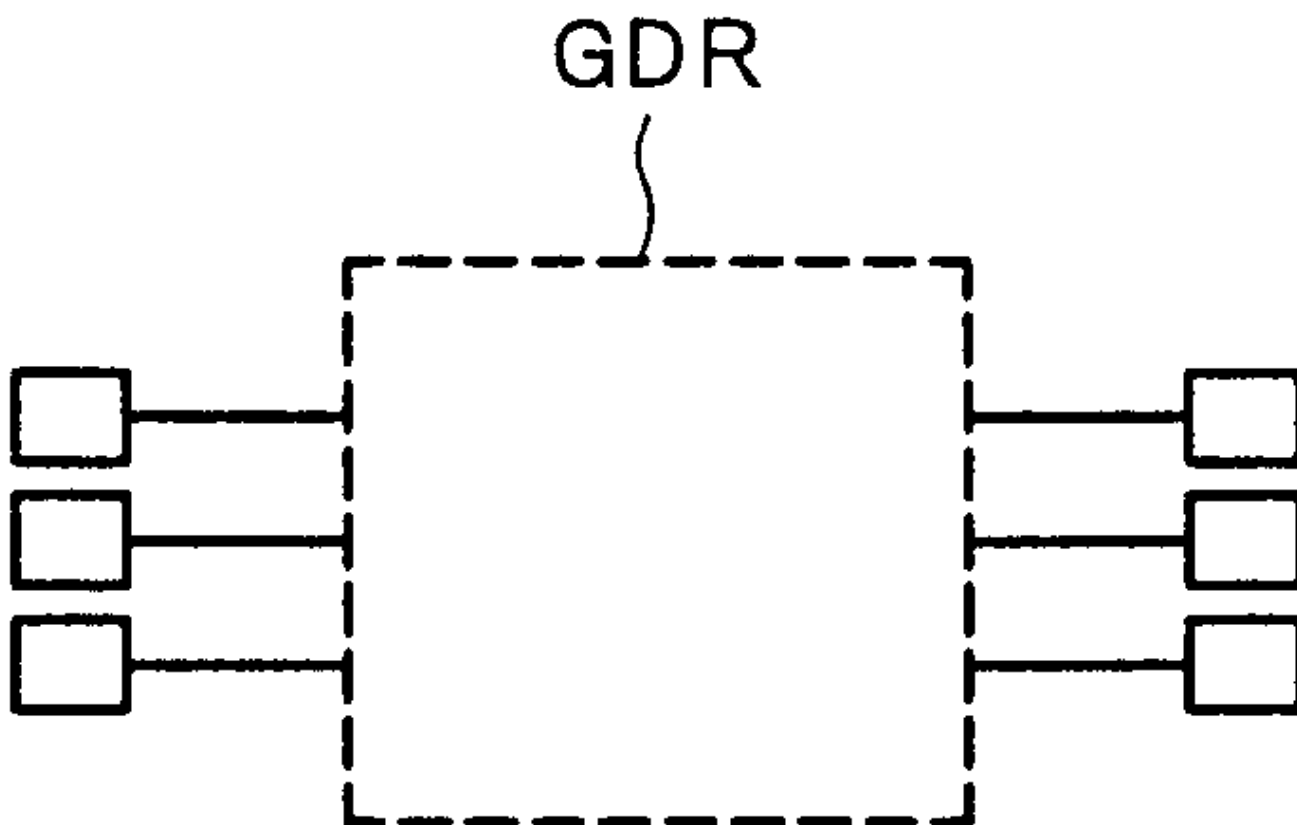
19b



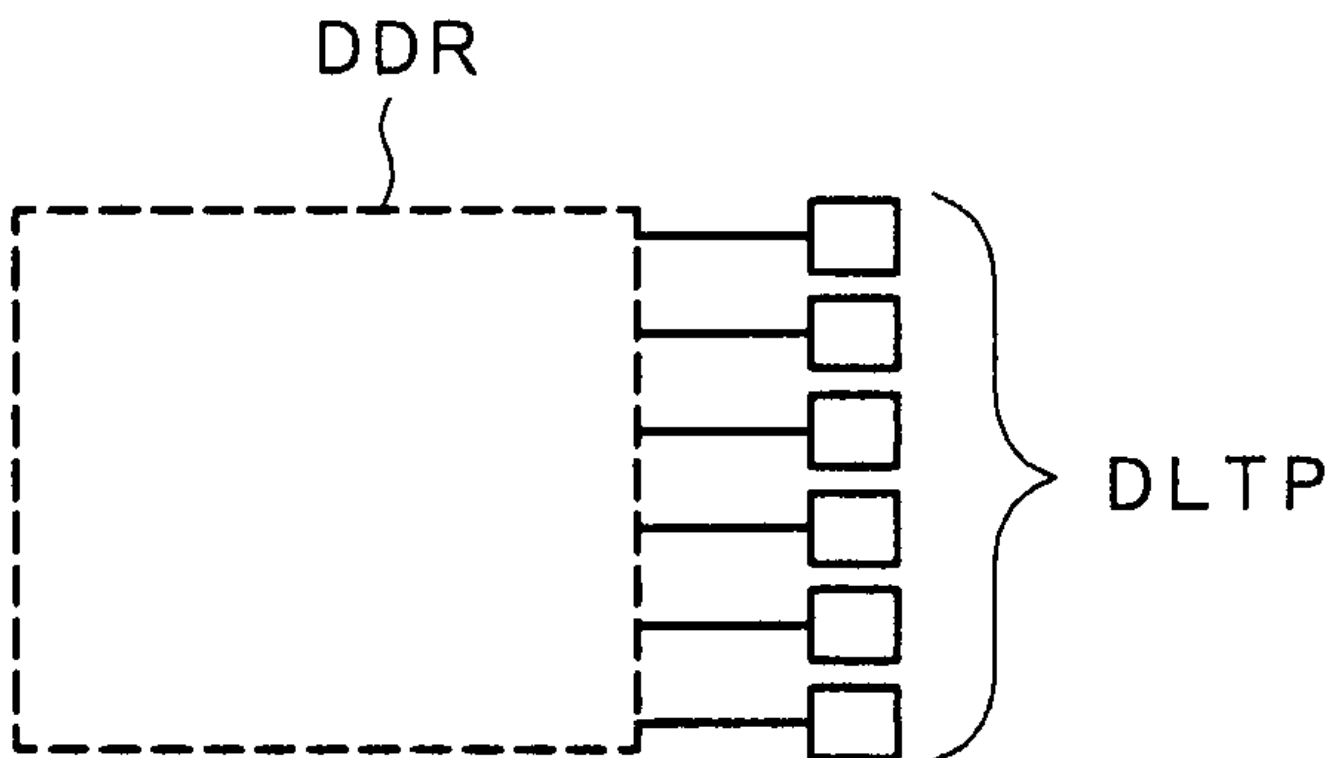
19c



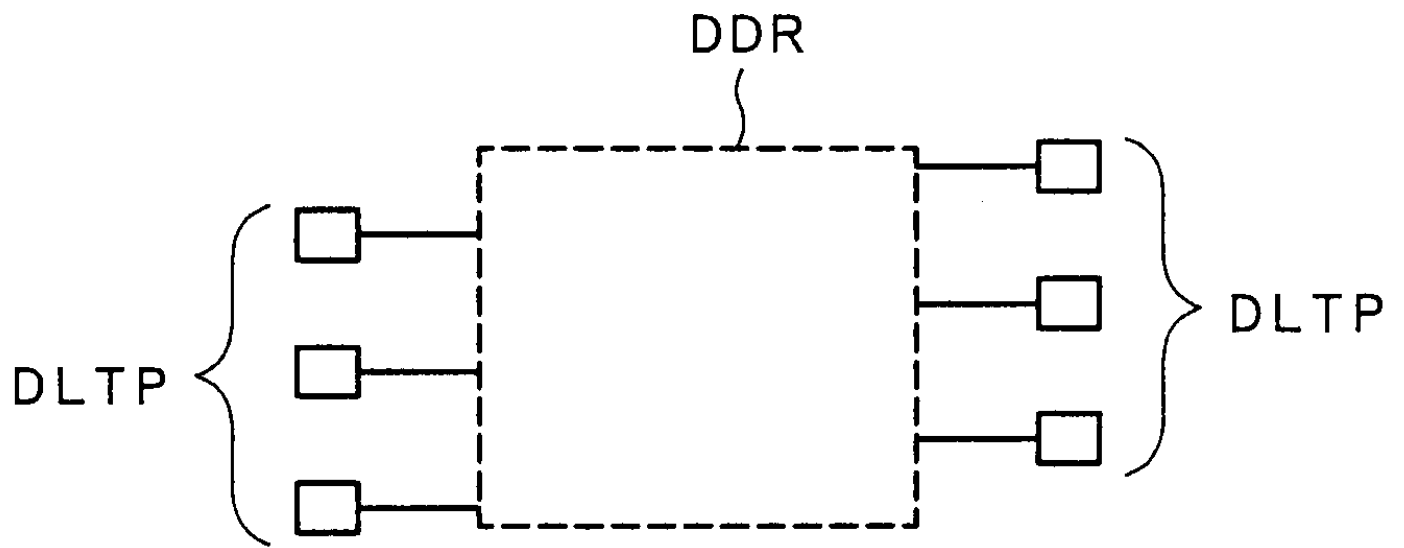
19d



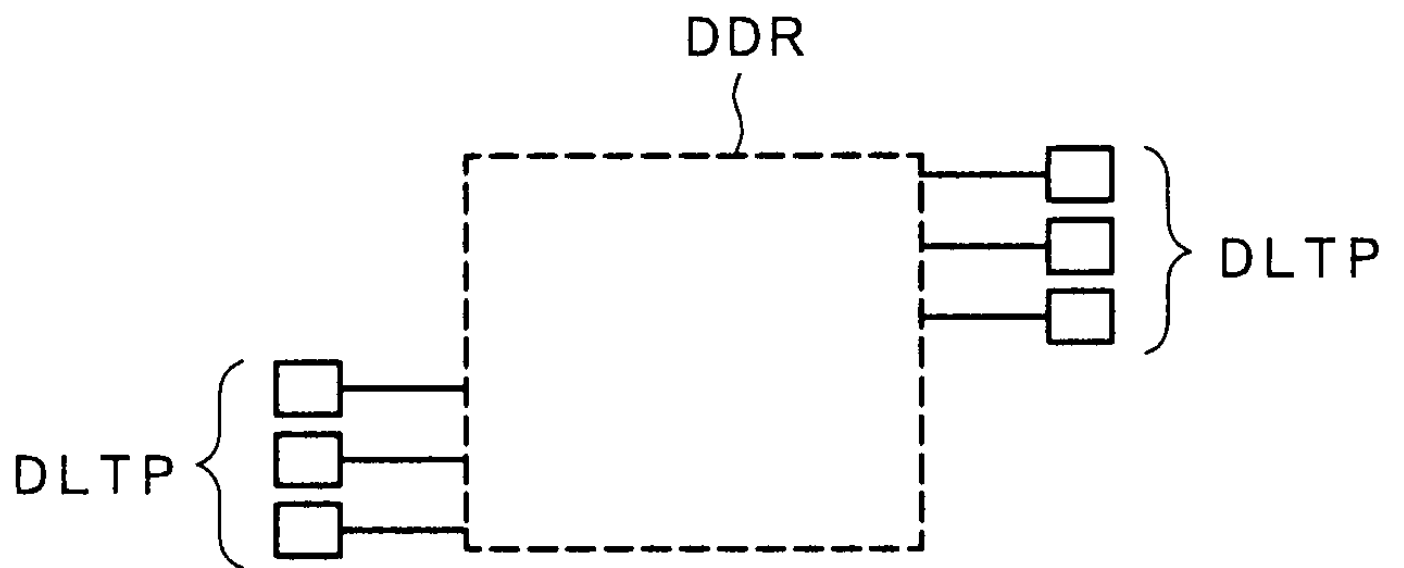
20a



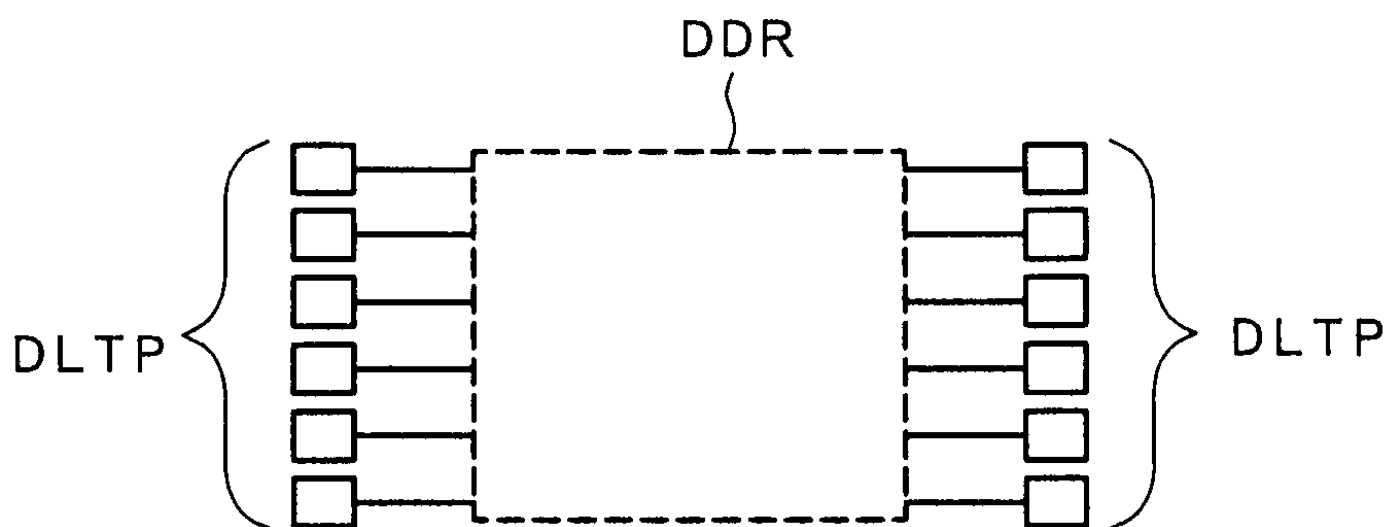
20b



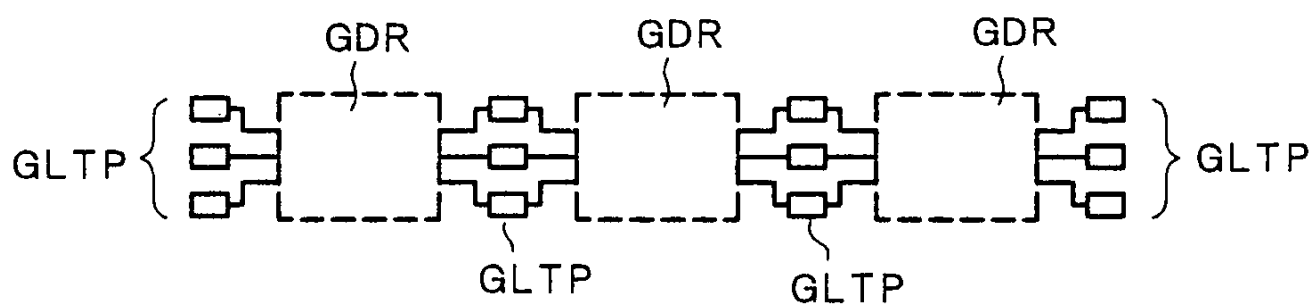
20c



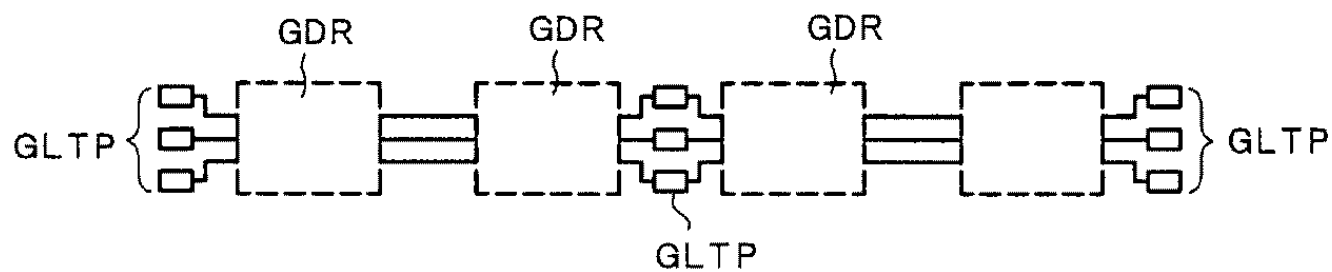
20d



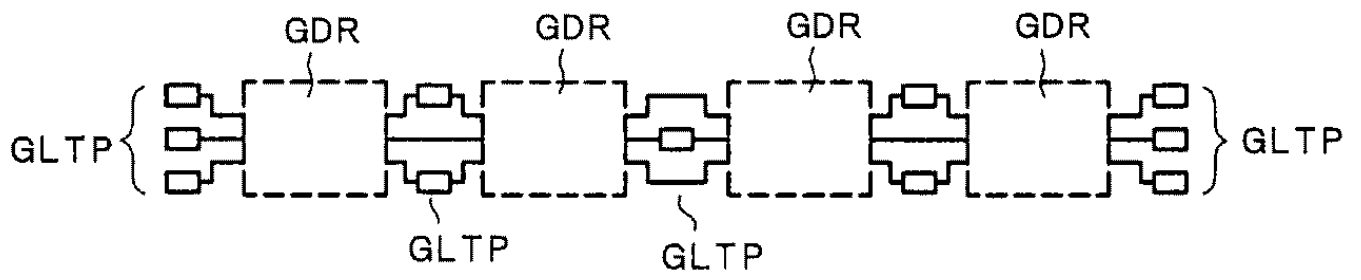
21a



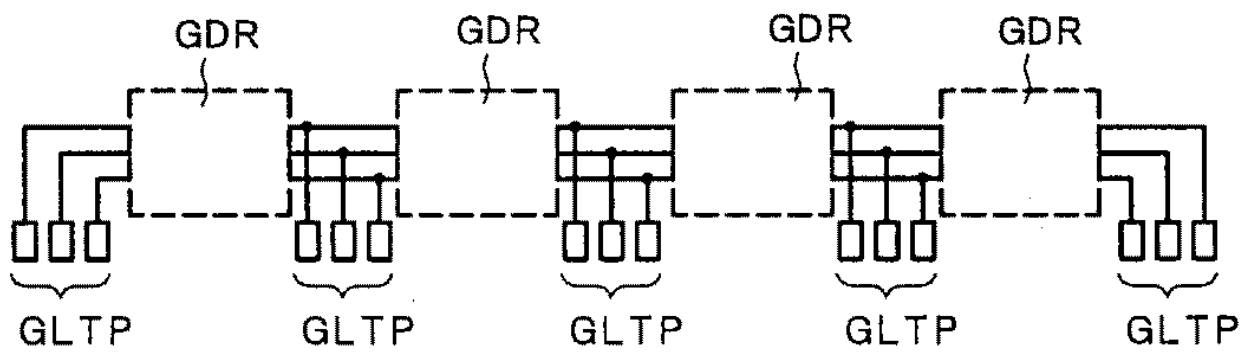
21b



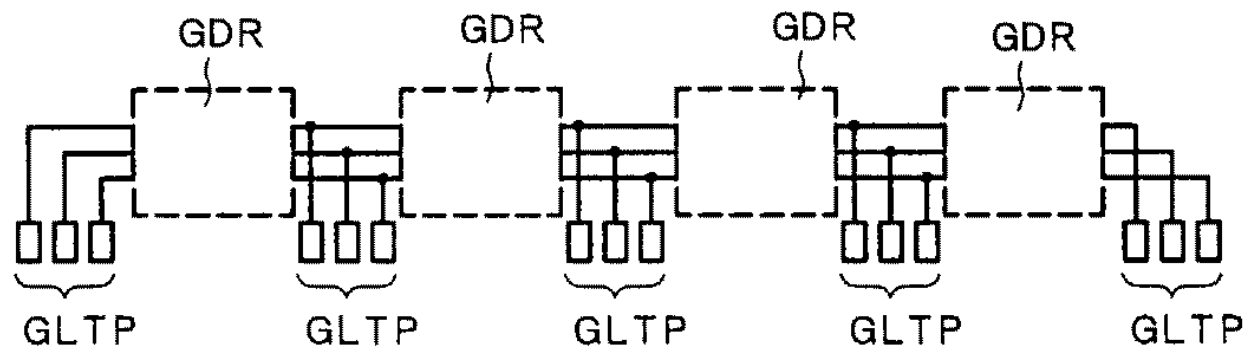
21c



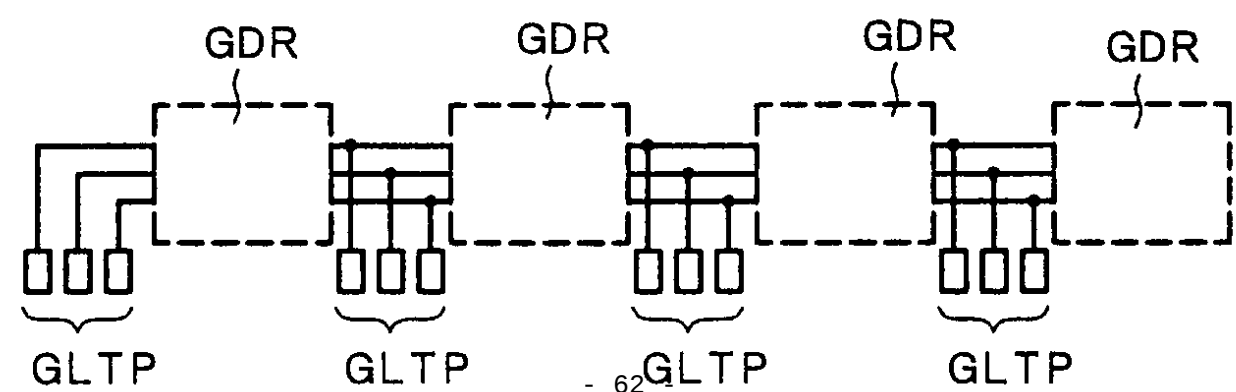
21d



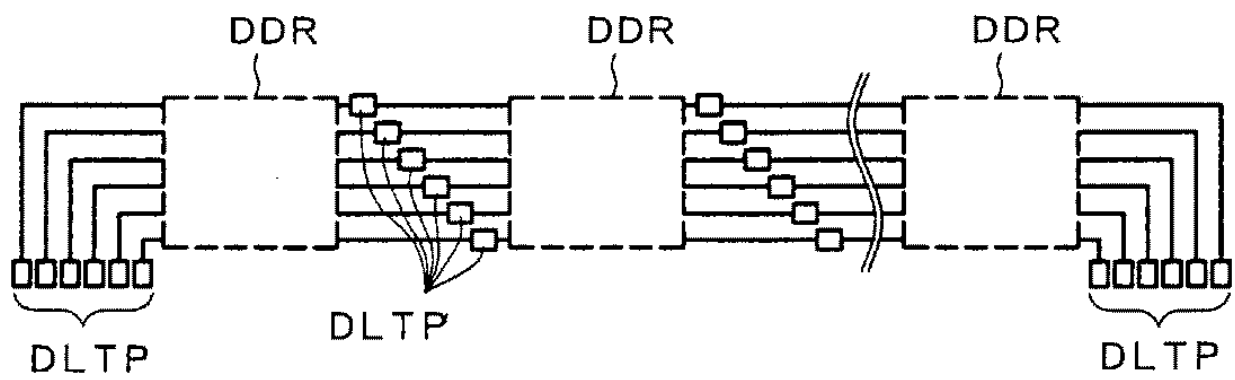
21e



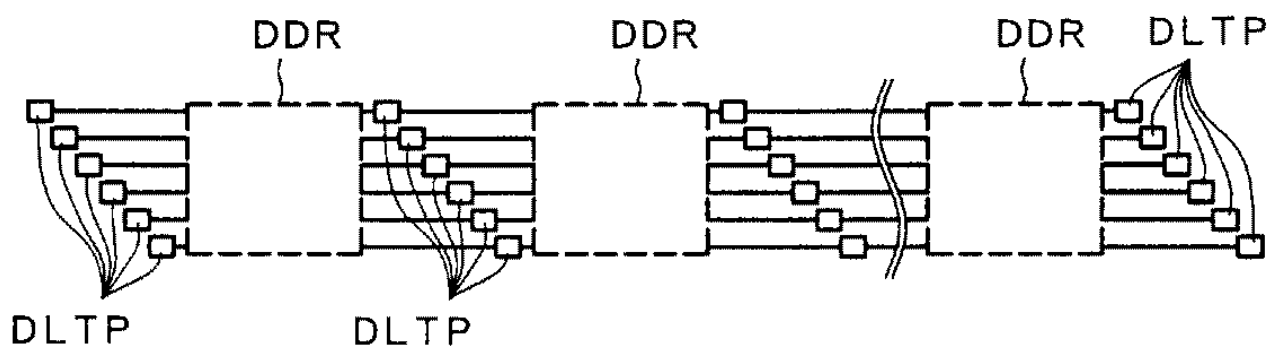
21f



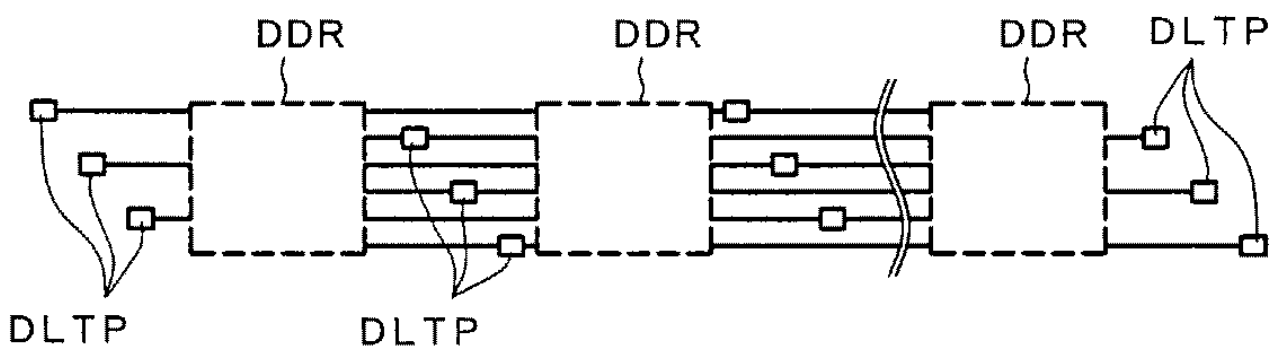
22a



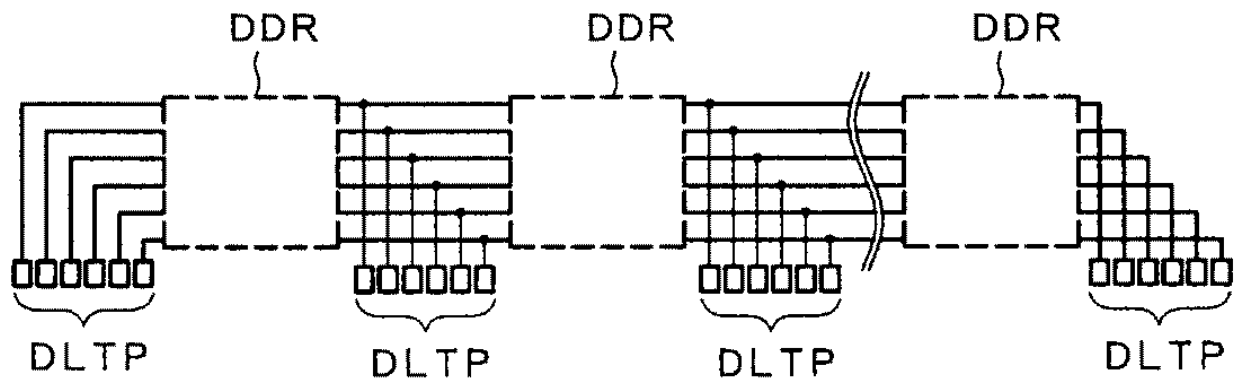
22b



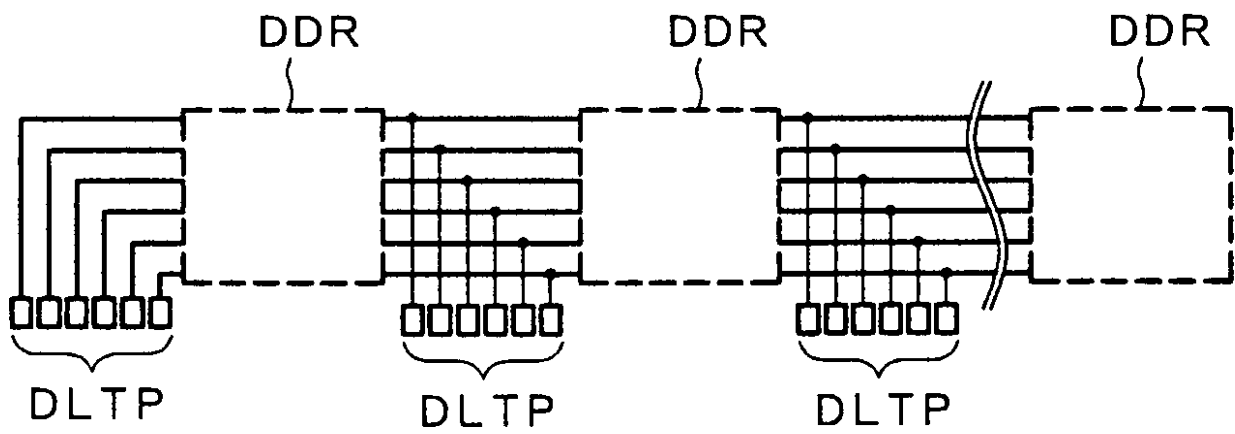
22c



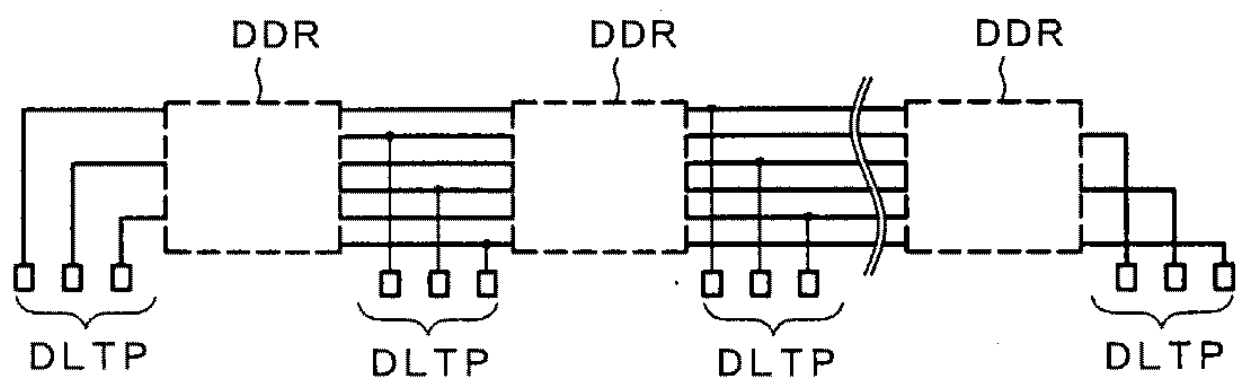
22d

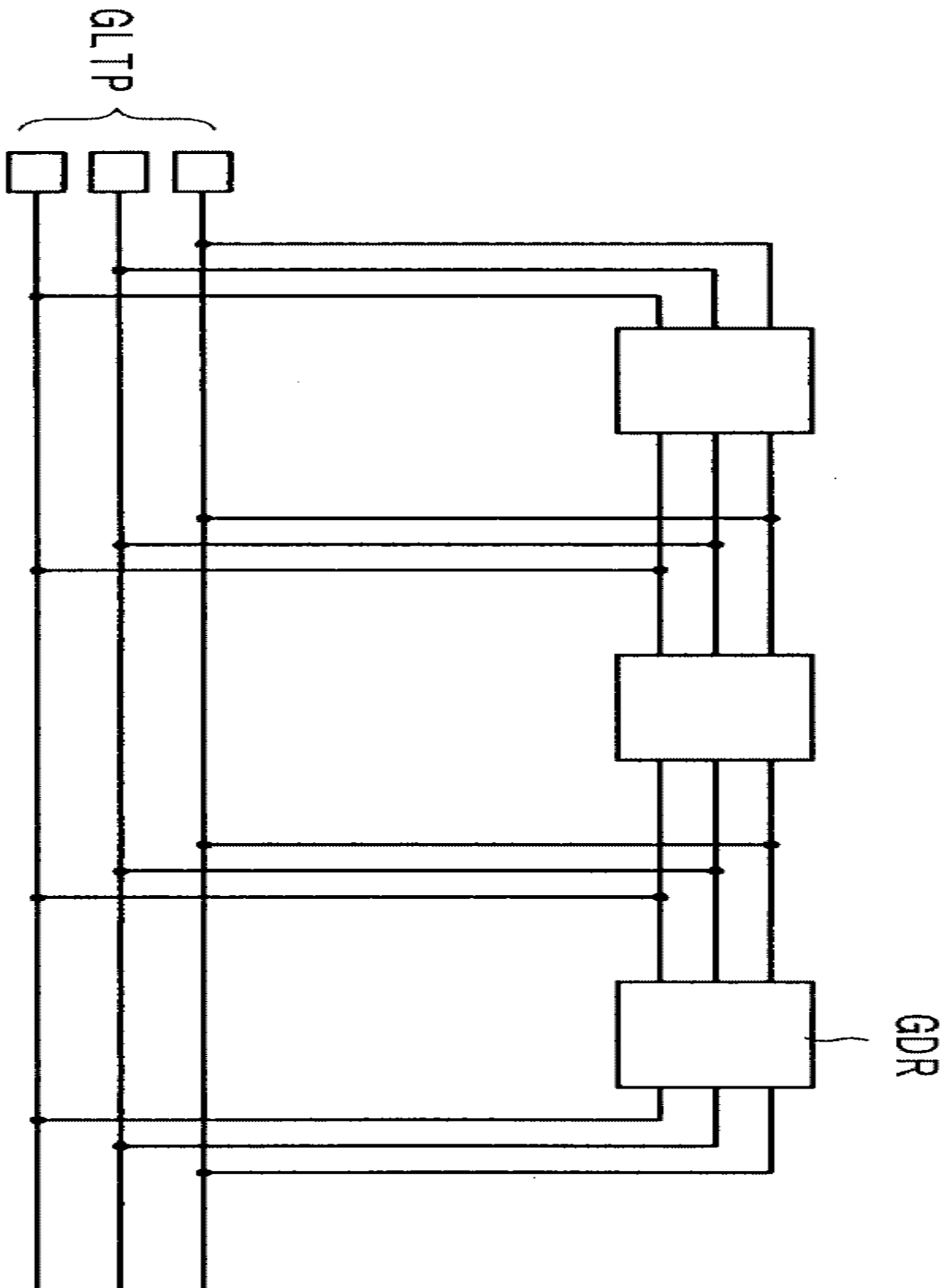


22e

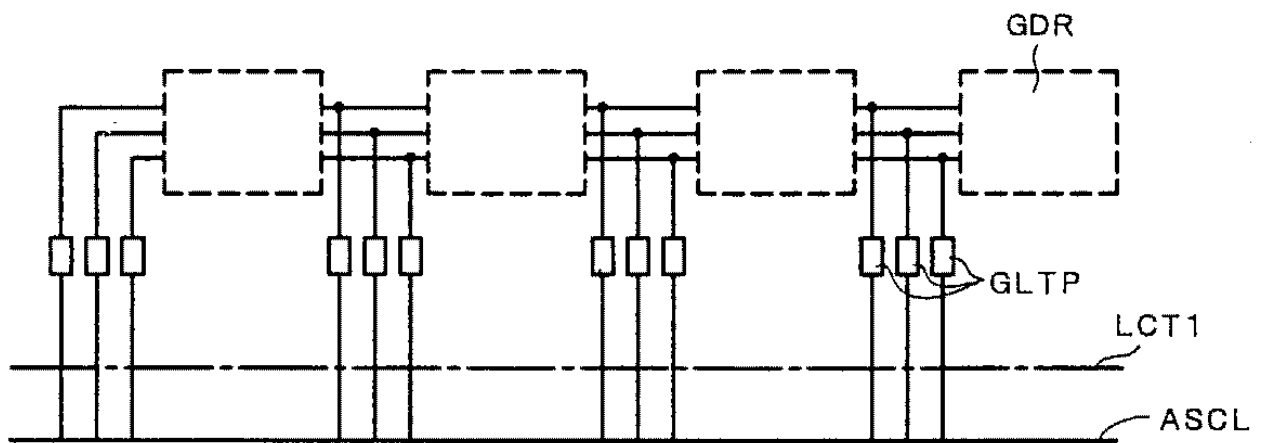


22f

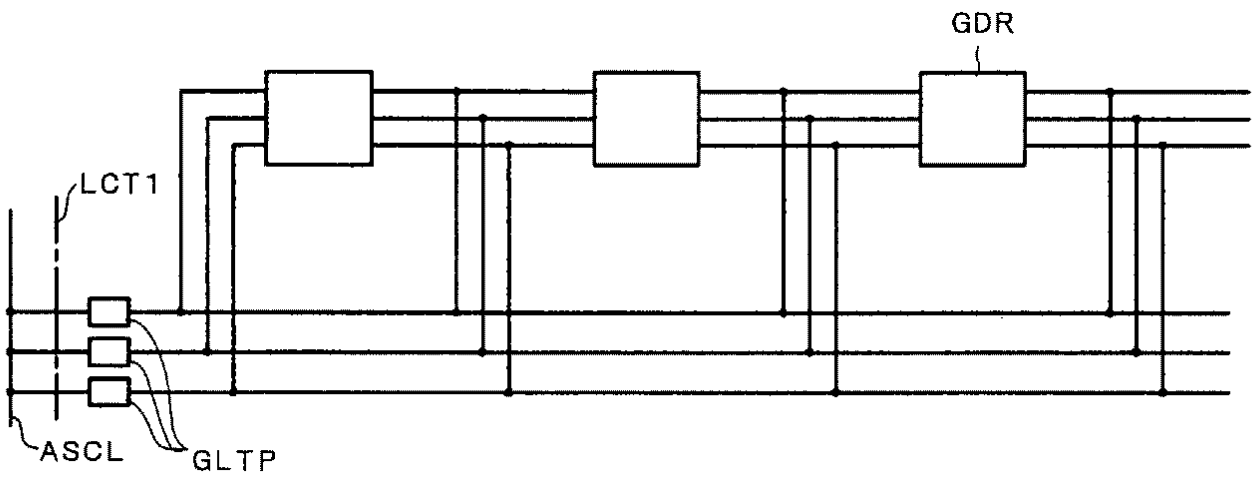




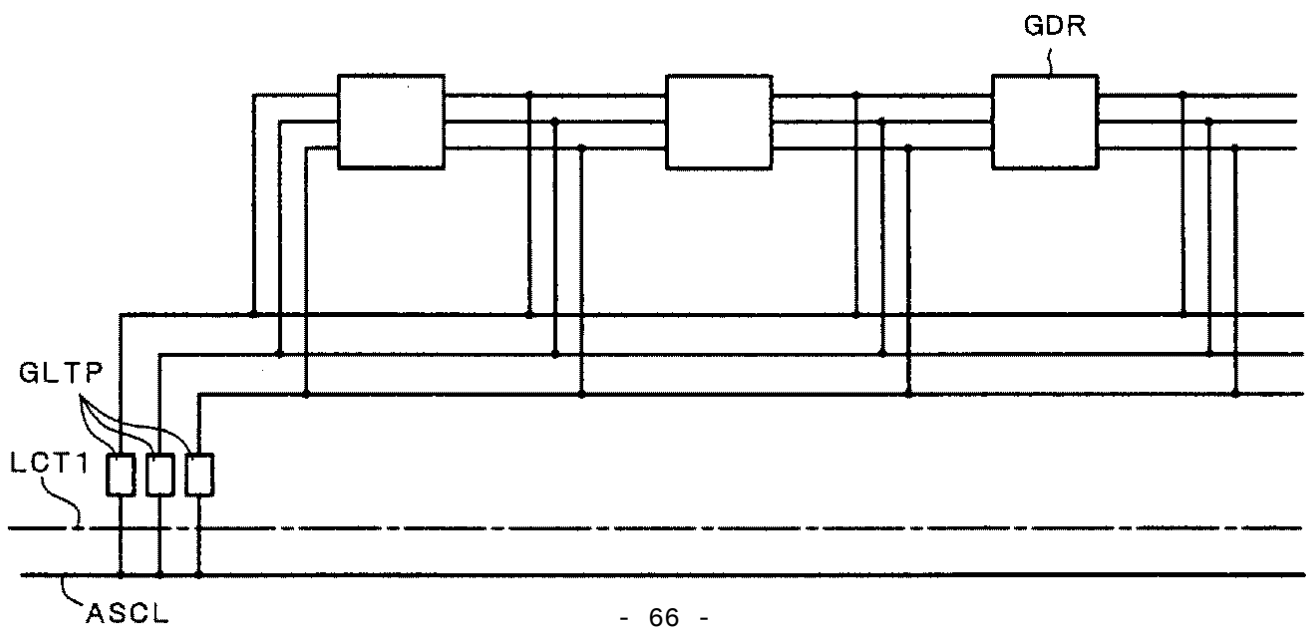
24a



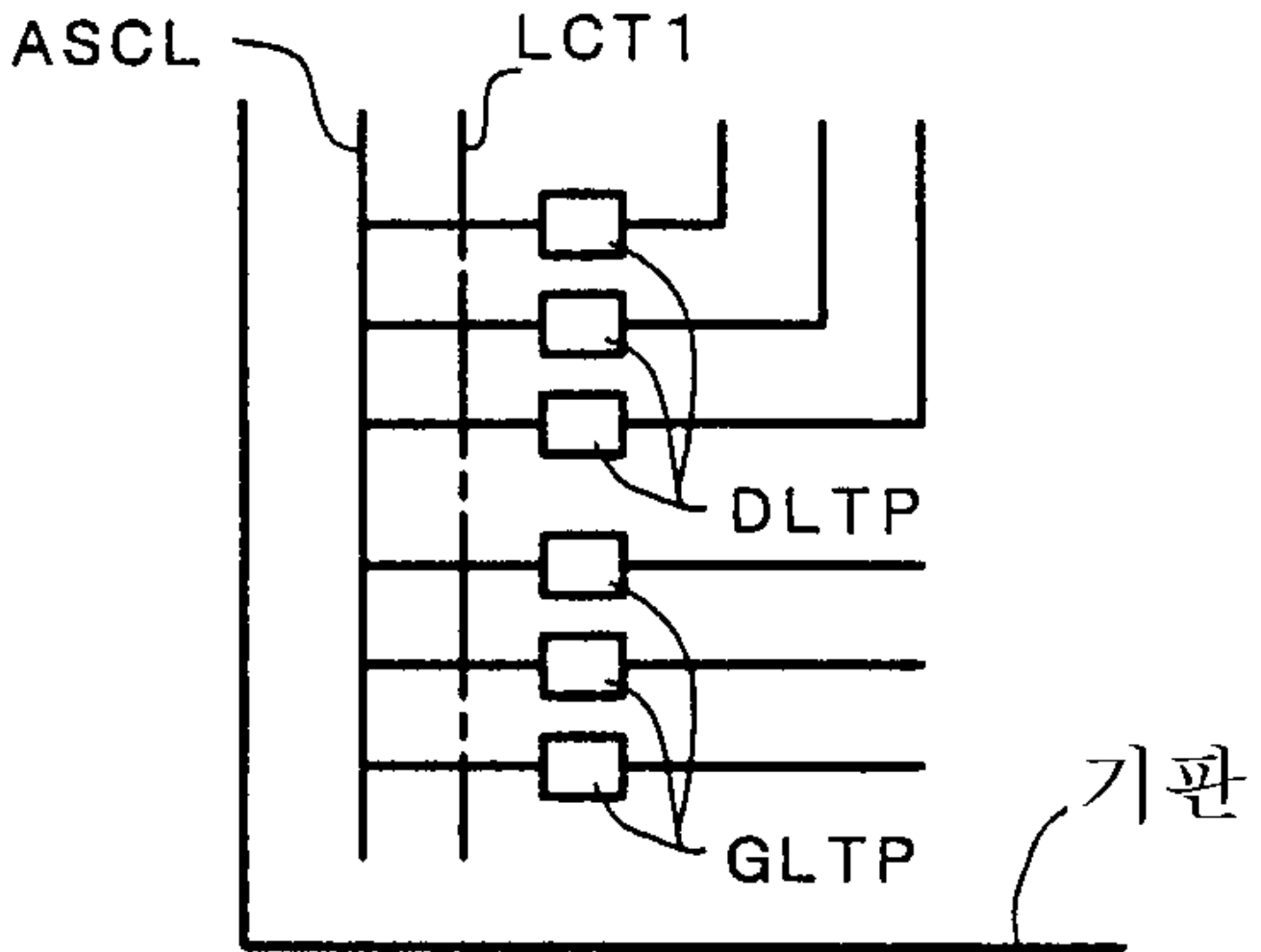
24b



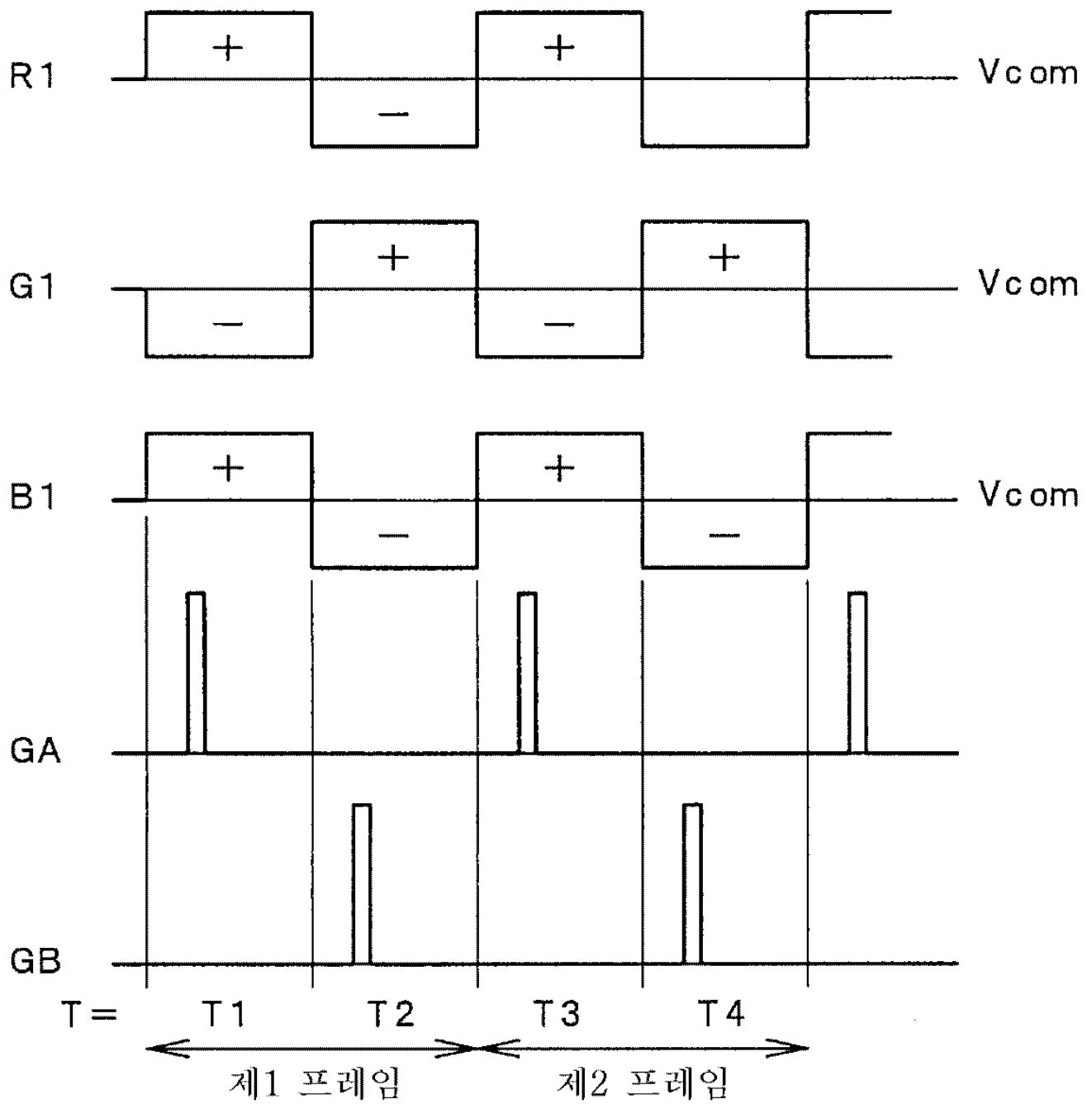
24c



24d



25a



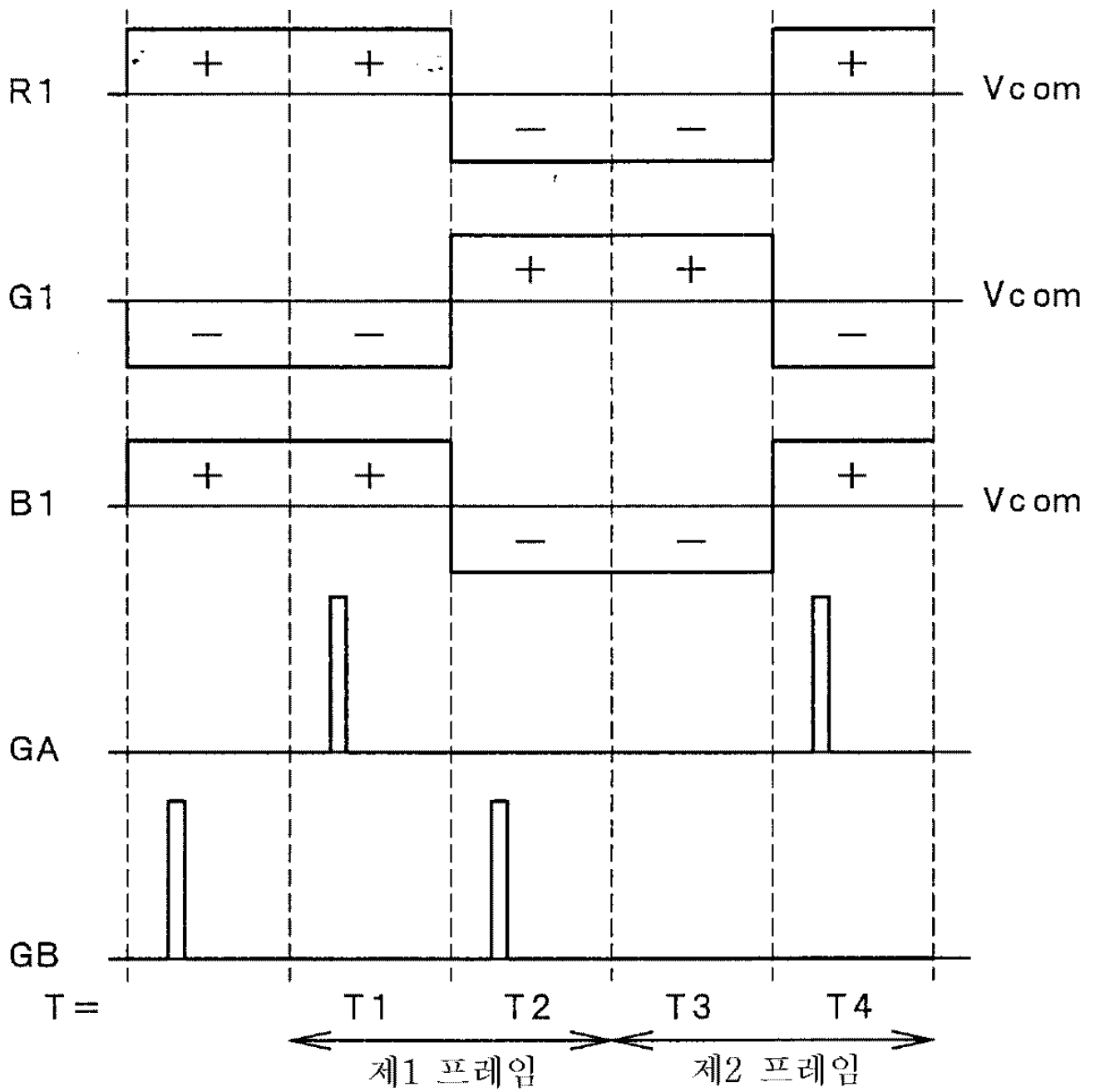
25b

	R	G	B
G A	+	—	+
G B	—	+	—

25c

	R	G	B
G A	+	—	+
G B	—	+	—

26a



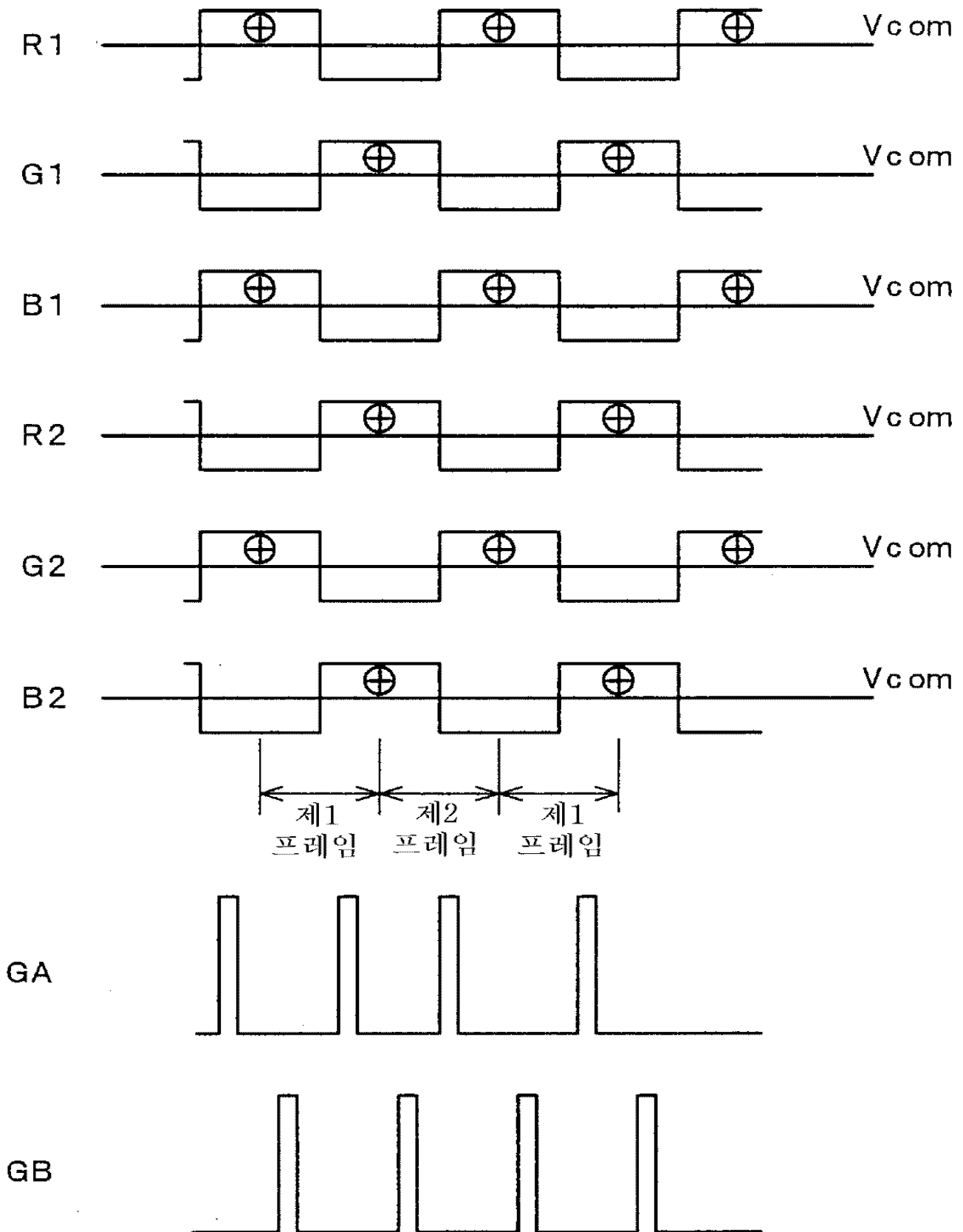
26b

	R	G	B
G A	+	—	+
G B	—	+	—

26c

	R	G	B
G A	—	+	—
G B	+	—	+

27a



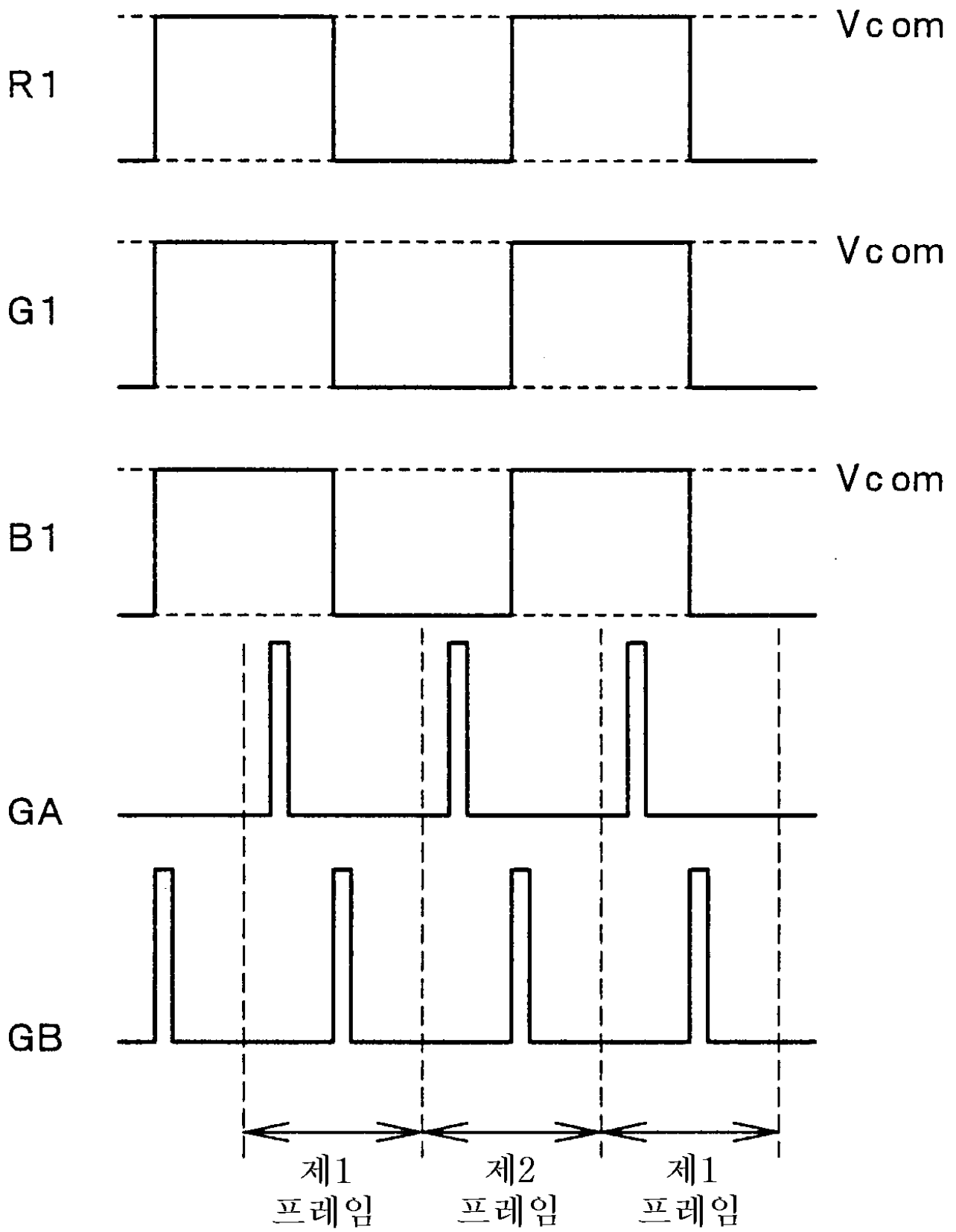
27b

	R1	G1	B1	R2	G2	B2
GA	—	+	—	+	—	+
GB	+	—	+	—	+	—

27c

	R1	G1	B1	R2	G2	B2
GA	+	—	+	—	+	—
GB	—	+	—	+	—	+

28a



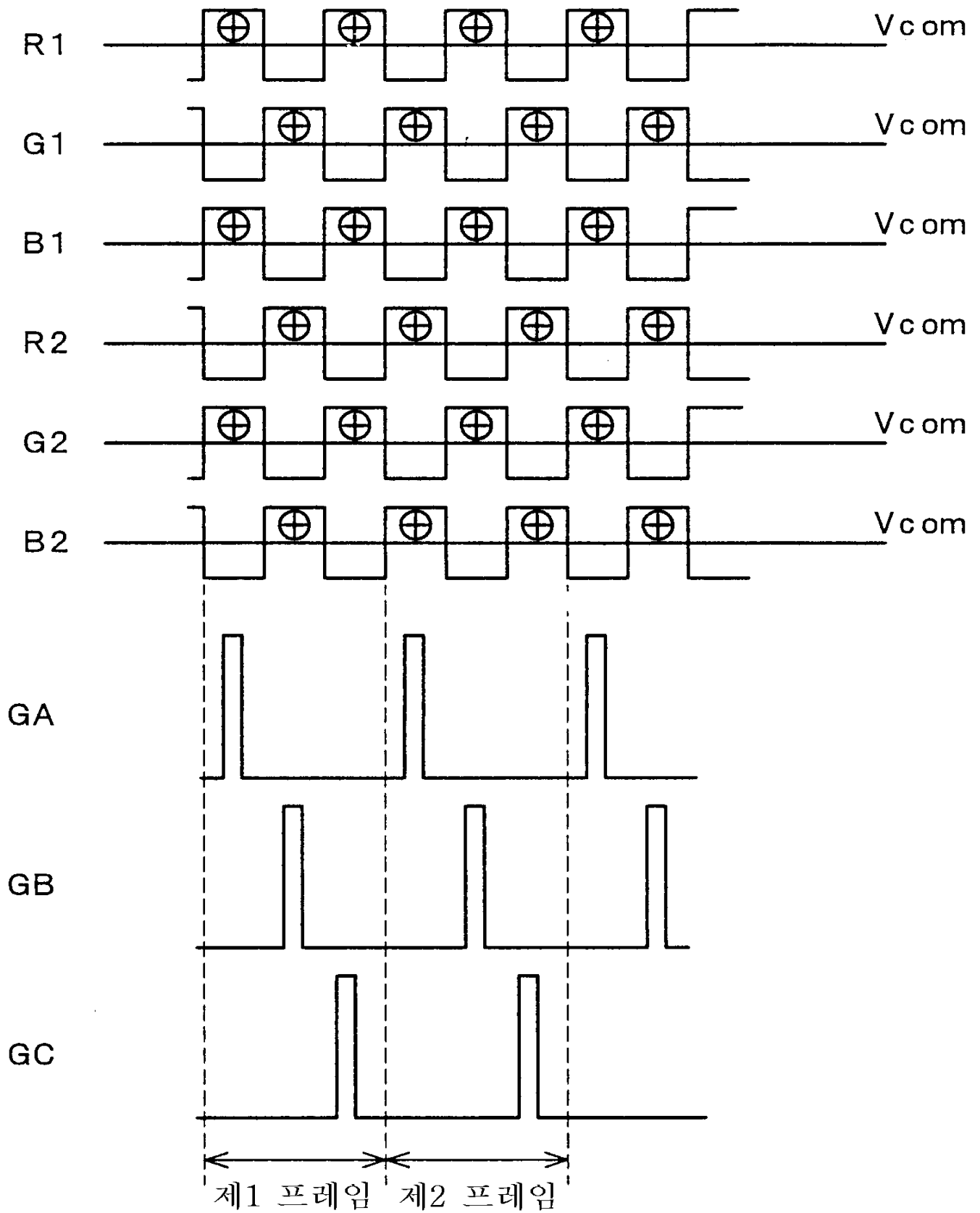
28b

	R	G	B
G A	+	+	+
G B	—	—	—

28c

	R	G	B
G A	—	—	—
G B	+	+	+

29a



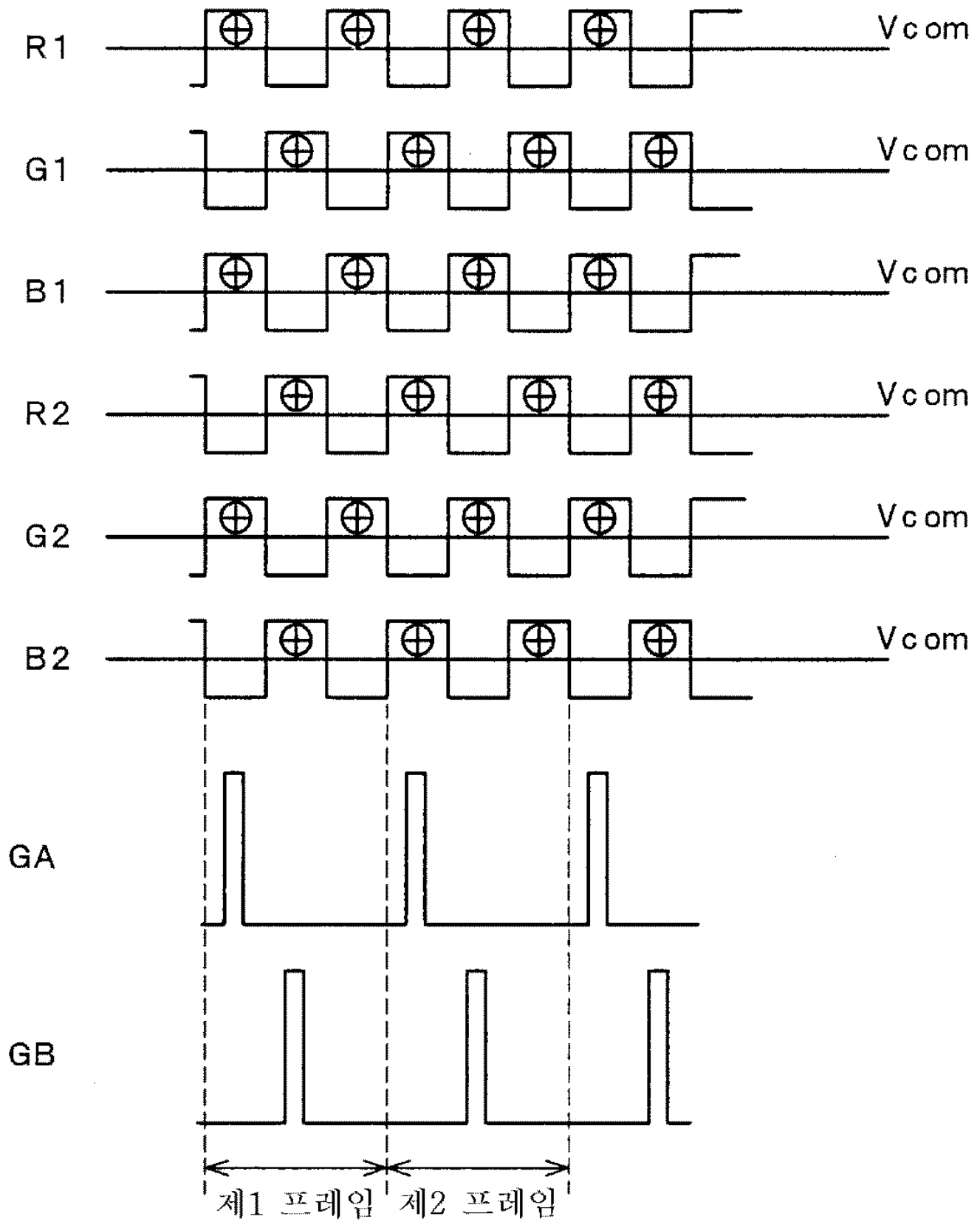
29b

	R1	G1	B1	R2	G2	B2
GA	+	—	+	—	+	—
GB	—	+	—	+	—	+
GC	+	—	+	—	+	—

29c

	R1	G1	B1	R2	G2	B2
GA	—	+	—	+	—	+
GB	+	—	+	—	+	—
GC	—	+	—	+	—	+

30a



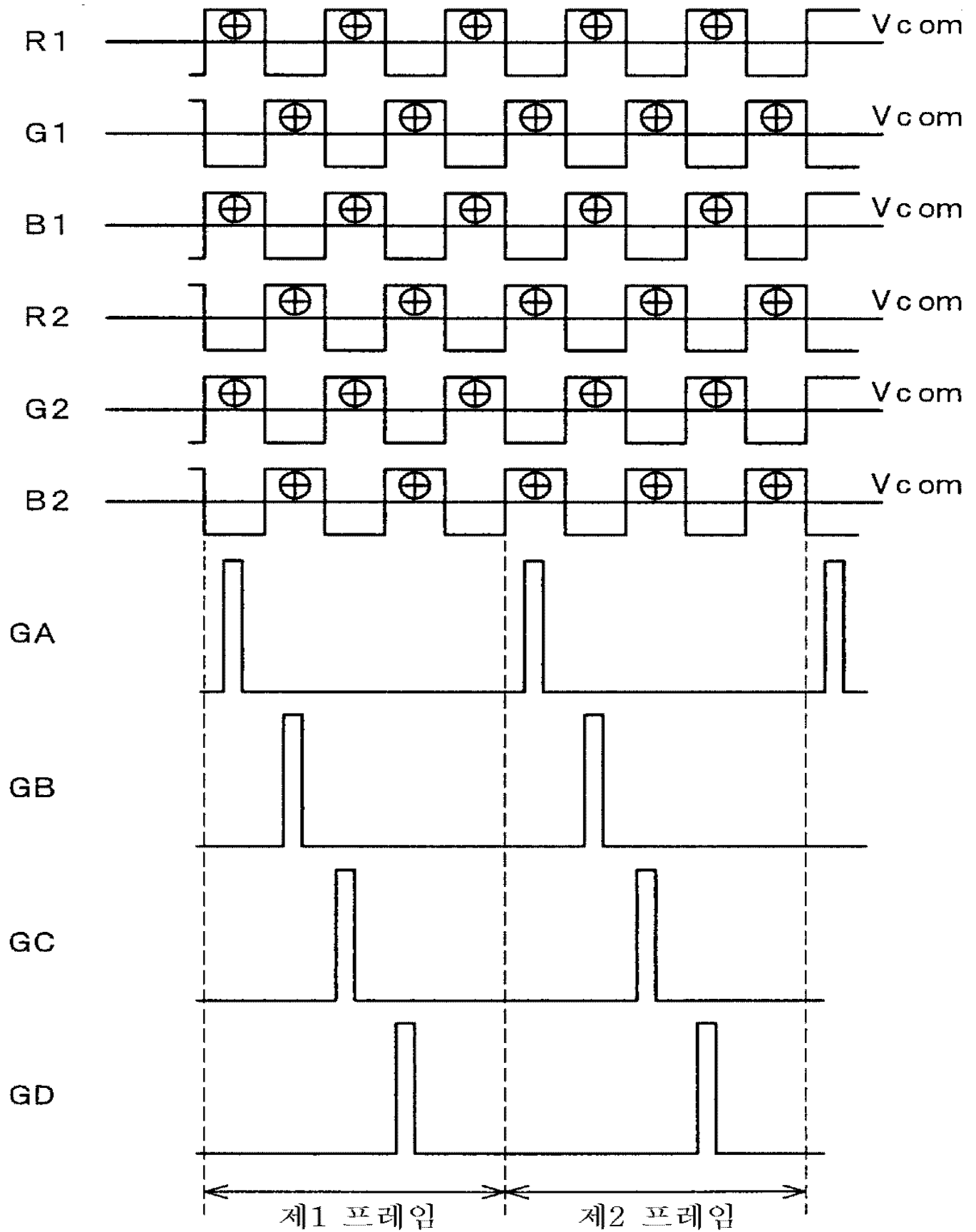
30b

	R1	G1	B1	R2	G2	B2
GA	+	−	+	−	+	−
GB	−	+	−	+	−	+

30c

	R1	G1	B1	R2	G2	B2
GA	−	+	−	+	−	+
GB	+	−	+	−	+	−

31a



31b

	R1	G1	B1	R2	G2	B2
GA	+	−	+	−	+	−
GB	−	+	−	+	−	+
GC	+	−	+	−	+	−
GD	−	+	−	+	−	+

31c

	R1	G1	B1	R2	G2	B2
GA	−	+	−	+	−	+
GB	+	−	+	−	+	−
GC	−	+	−	+	−	+
GD	+	−	+	−	+	−

专利名称(译)	液晶显示装置及其制造方法		
公开(公告)号	KR1020010087355A	公开(公告)日	2001-09-15
申请号	KR1020010011559	申请日	2001-03-06
[标]申请(专利权)人(译)	日立HITACHI SEISAKUSHODBA 日立器件工程株式会社		
申请(专利权)人(译)	株式会社日立制作所 地伤装置工程可否让这个夏		
当前申请(专利权)人(译)	株式会社日立制作所 地伤装置工程可否让这个夏		
[标]发明人	OUGIICHI KIMITOSHI 오기이찌기미또시 OOSHIRI RYOICHI 오시리료이찌 MIYATA KAZUSHI 미야따가즈시 TSURUOKA SHINICHI 쯔루오까신이찌 NIWA SUSUMU 니와스스무		
发明人	오기이찌기미또시 오시리료이찌 미야따가즈시 쯔루오까신이찌 니와스스무		
IPC分类号	G02F1/1362 G02F G02F1/13 G02F1/133		
CPC分类号	G02F1/136204 G09G3/2003 G09G3/006 G02F1/13452 G02F1/1345 G02F2001/136254 G09G3/3614 G09G3/3648 Y10S345/904 G09G2300/0426		
代理人(译)	CHANG, SOO KIL		
优先权	2000061197 2000-03-06 JP		
其他公开文献	KR100392575B1		
外部链接	Espacenet		

摘要(译)

(R1 , R2 , G1 , G2 , B1) 负极性, 负极性, 铁锈的正极性, 铁锈的负极性, 蓝色的正极性和蓝色的负极性相对于红色的三种颜色, , B2) 通过分割, 整合, 分别连接到漏极线公共线, 并撤销在漏极驱动器的安装区域的外侧上的漏极线公共线, 并且该测试符合探测到设置在漏极线公共线的测试端子我知道。在栅极驱动器侧, 栅极驱动器的输出端子 (引线) 连接到前端, 下一端, 栅极线公共线被引出到栅极驱动器安装区域的外部, 并且栅极线公共线连接到栅极线公共线, 然后检查探头。 1 指数方面 漏极驱动器, 漏极线公共线, 栅极驱动器, 栅极线公共线, 检查端子, 探针

