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(71) .
20

(72)
1 401-36

LG B 610

LG B 615

(74)
:

(54)

6

1

2a 2b

3a	3b	.
4a	4b	.
5a	5b	.
6		1 .
7	6	.
8a	8b	6 .
9a	9b	6 .
10	6	.
11a	11b	6 .
12		2 .
13a	13b	12 .
14		3 .
15a	15b	14 .
16a	16b	14 .
17a	17b	14 .
18		4 .
19		5 .
20a	20b	19 .
21		6 .
22		7 .
23a	23b	22 .
24a	24b	22 .
25a	25b	22 .
26		8 .
27a	27b	26 .

< >

2,12,112,132,172,252 :

4,14,114,134,174,254 :

6,16,116,136,176,256 :

18,118,138,178,256 :

71,121,141,181,261 :

72,122,142,182,262 :

73,123,143,183,263 : 74,124,144,184,264 :

101 : 102 :

103 : DAC 104 : MUX

105 : 145,185 :

146,186 :

Im Transistor; 'TFT')가 (Thin Fi
(Passive Matrix) (Active Matrix)

1 (2) (2) (DL1 D
Lm) (4) (6) (2) (GL1 GLn)

(2) (2) m×n (Clc)
(GL1 GLn) (DL1 DLm) n
TFT가 TFT
(DL1 DLm) (GL1 GLm) TFT (Clc) (Clc)

(4) (4) (4)
(GL1 GLn) (Clc) TFT (DL1 DL

m) (4) (Clc) TFT (DL1 DLm)

(6) (6) 가 (DL1 DLm)

1 1 (6) (DL1 DLm) 가 (Inversion System)

가

), (Line Inversion System), (Column Inversion System) (Frame Inversion System) (D

(even) 2a (odd) (flicker)가 가 2b

3a

3b

(Crosstalk)가

가

4a

4b

가

가

5a

5b

가

(6)

가 가

; 1 ; 2 2

; 2 ;

1 ;

1 1 ;

TFT(11) (14) 가

(Clc)

(16) (18) (SSC), (SSP), (P

OL) (SOE) (18) m (16

) m 가 ,

(18) (16)

(16) m+1 (DL1 DLm) m+1 , m+1

m m (RGB) 1

(12)

1

(12) 6

2 2 (DL2) 3 (DL3) (G21) n . n

3 (DL3) (16) (G22) . n

(DL2) (16) (G23) 2

(n+1) 2 (DL2) (G21)

. (n+1) 3 (DL3) (16) (G22)

. (n+1) 2 (DL2) (16) (G23)

, n (12) (DL1,DL3,DL5...)

, (DL2,DL4,DL6...) (DL1,DL3,DL5...) . (n+1)

, (DL2,DL4,DL6...)

, 1 (BK) m 가 1 (DLm+1) (BK) n

(DL1) m+1 가 (DL1) m+1 (DLm+1)

, 가 1 가 (DL1) (n+1) (DL1)

, (BK) 가 m+1 가 (DLm+1) 1 (DL1)

(18) (16)

7

7 가 , (18) / (H,V)가 (71) ,

가 (, 'MUX')(74) (72) , (72) (73)

(71) / (V,H) (MCLK) (14)
 (GSP), (GSC) (GOE)
 (SSP), (POL) (16) (DE), (SSC),
 (71) (72) (SOE) MUX(74)
 (72) (71)
 72) 3 6
 MUX(74) (73) (72) (DE)
 (DE) MUX(74) (BK) (BK) (BK) (72) (DE)
 [m/()]+1 (72) (BK)
 (73) (72) 3 6 (R,G,B) (BK)
 MUX(74) (71) /
 (72) m (72) 1 m
 , MUX(74) (BK)가 (73)
 8a 8b 3 (16)
 8a (18) 1 (DOB1) m/3
 (R1,R2,R3,...,Rm/3) (16) 2 (DOB2)
) m/3 (G1,G2,G3,...,Gm/3) (16) (B1,B2,
 B3,...,Bm/3) (18) 3 (DOB3) m/3 가 1 3
 (DOB1,DOB2,DOB3) (16) m (18) 1
 (DOB1) (BK) (16) (DOB1,DOB2,DOB3) m
 (16) (DE) , 1 3 (R1,R2,R3,...,Rm/3, G1,G2,G3,...,Gm/3, B1,B2,B3,...,Bm/3)가
 , 1 (DOB1) (BK)가
 (18) 8b 가
 (73) , 1 (DOB1)
 8b (18) 1 (DOB1) (73)
) (BK) (16) (73) m/3 (1
 (B1,B2,B3,...,Bm/3) (16) (R1,R2,R3,...,Rm/3)
 8) 2 (DOB2) m/3 (G1,G2,G3,...,
 Gm/3) (16) 3 (DOB3) m/3 (DE)
 1 (DOB1) (73) (BK)가
 2 3 (DOB2,DOB3) (R1)
 (G1)가 (16) 1 (DOB1)
 (73) m/3 (B1,B2,B3,...,Bm/3)가
 2 3 (DOB2,DOB3) (R2,R3,...,Rm/3, G2,
 G3,...,Gm/3)가
 (18) 3 3

(16)

(16)

1/2

9a 9b 6 (16)

9a (18) 1 (ODOB1) m/6
 (OR1,OR2,OR3,...,ORm/6) (16) 2
 (ODOB2) m/6 (OG1,OG2,OG3,...,OGm/6)
 (16) (ODOB3) m
 /6 (OB1,OB2,OB3,...,OBm/6) (16) 3
 (18) 1 (EDO B1) m/6
 (ER1,ER2,ER3,...,ERm/6) (16) 2 (E
 DOB2) m/6 (EG1,EG2,EG3,...,EGm/6) (16)
 (18) 3 (EDO B3) m/6
 (EB1,EB2,EB3,...,EBm/6) (16) m/2
 ODOB3) 1 3 (EDO B1,EDO B2,EDO B3) (16)
 (18) 1 (ODOB1) (BK)
 (16) (DE) m
 (OR1,OR2,OR3,...,ORm/6, OG1,OG2,OG3,...,OGm/6, OB1,OB2,OB3,...,OBm/6, ER
 1,ER2,ER3,...,ERm/6, EG1,EG2,EG3,...,EGm/6, EB1,EB2,EB3,...,EBm/6,)가 (B
 K)가

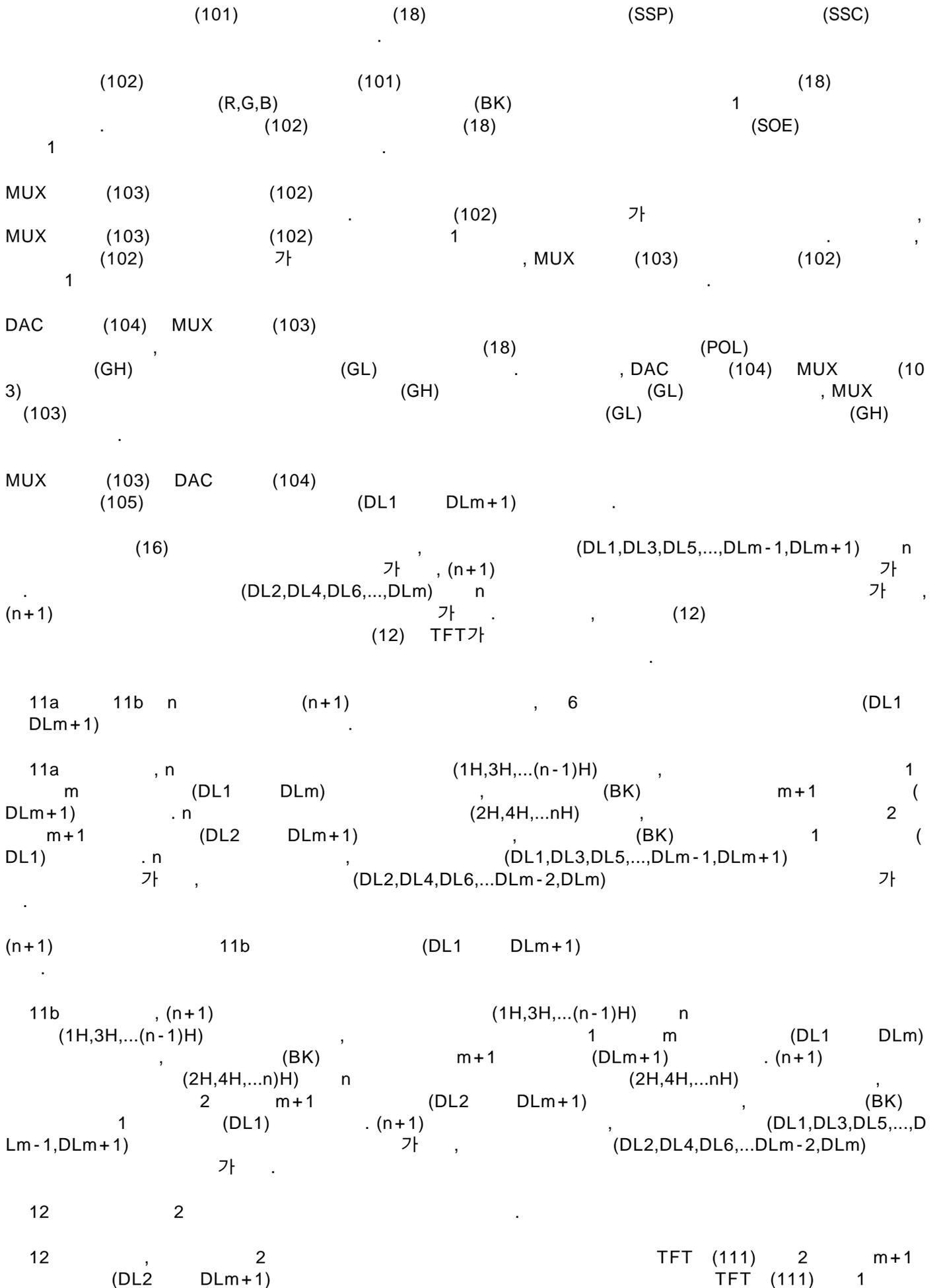
(18) 9b 가
 (73) 1 (ODOB1)

9b (18) 1 (ODOB1)
 (73) (BK) (16) (73) m/
 6 (EB1,EB2,EB3,...,EBm/6) (16) (OR
 1,OR2,OR3,...,ORm/6) (18) 2 (ODOB2) m/6
 (16) 3 (ODOB3) m/6
 (OG1,OG2,OG3,...,OGm/6) (16)
 (OB1,OB2,OB3,...,OBm/6) (16) (EDO B1) m/6
 (EDO B2) m/6 (ER1,ER2,ER3,...,ERm/6) (18) 2
 (16) 3 (EDO B3) m/6
 (EG1,EG2,EG3,...,EGm/6) (16) (16)
 (BK)가 1 (ODOB1) (73)
 2 3 (ODOB2,ODOB3)
 (OR1,OG1)가 1 3 (EDO B1,EDO B2,E
 DOB3) (OB1)
 (ER1,EG1)가 (16) 1 (ODOB1) ((73)
 3 m/6 (EB1,EB2,EB3,...,EBm/6)가 2
 (ODOB2,ODOB3) 1 3 (EDO B1,EDO B2,EDO B3)
 (OR2,OR3,...ORm/6,OG2,OG3,...OGm/6,OB2,OB3,...OBm/6)
 (ER2,ER3,...ERm/6,EG2,EG3,...EGm/6)가

8a 9b (16) 6 8

10 6 (16)

10 (16) (101) (DL1 DLm+1)
 (102), MUX (103), / (, 'DAC'
)(104) (105)



m (DL1 DLm) TFT (112) (112) (GL1 GLn) (114)
 , (112) (DL1 DLm+1) (116) (118) (116) , (114)
 114) (116)

(112) m+1 (DL1 DLm+1) n (GL1 GLn)
 (Clc) TFT (111) TFT (111)
 (DL2 DLm+1) (GL1,GL3,GL5,...,GLn-1)
 TFT (111) (DL1 DLm) (GL2,GL4,GL6,...,GLn)
 TFT (111) TFT (111) (GL1 GLm)
 TFT (111) 2 m+1 (DL2 DLm+1)
 TFT (111) 1 m (DL1 DLm)
 TFT (111) (113) (113)
 TFT (111) (Clc) (DL2 DLm+1)
 (DL1 DLm) (Clc)

(DL1 DLm) TFT (111)
 TFT(111) (Clc)

(118) (121), (122), (123) MUX(124)
 / (H,V) (MCLK) (116)
 (14)

(118) (121) / (V,H) (MCLK)
 (114) (GDC) (GSP), (GSC) (GOE)
 (SSC), (SSP), (POL) (SOE) (DE),
 (DDC) / (121) (122) MUX(124)
 (OESW)

(118) (122) (RGB) (121)
 (BK) (122) (BK) (BK)
 (122) 8a 8b 3 9a 9b 6

MUX(124) (123) MUX(124)
 MUX(124) (122) m (RGB)
 (123)
 (OESW) MUX(124) (122) m (122) / (RG

B) 1

(118) 3 (DOB1,DOB2,DOB3)
 , 8b m (RGB)
 (DOB1) (123) (BK)
 (B1,B2,...,Bm/3) (118) 3 (DOB1,DOB2,DOB3)
 , 8a m

1), (G) 2 (DOB2) (R) 1 (DOB
 B3) (BK) (B) 3 (DO
 1) (DOB1)

6 (ODOB1,ODOB2,ODOB3,EDOB1,EDOB2,EDOB3) 가
 , (118) 9b m (RGB)
) 1 (ODOB1) (123) (BK)
 (EB1,EB2,...EBm/6) (118) 6
 , 9a m (ODOB1,ODOB2,ODOB3,EDOB1,EDOB2,EDOB3) (RGB)
 (BK) 1 (ODOB1)
 (114) (118) (GSP), (GSC)
 (GOE) (GL1 GLn)
 TFT(111) 가
 (Clc) (114)
 (116) 10 , MUX , DAC
 (SSP), (POL) (116) (118) (SSC),
 m (SOE) (118)
 (BK) (116) m (RGB)
 (116) m+1
 m+1 (DL1 DLm)
 13a 13b n (n+1) , 12 (DL1
 DLm+1)
 13a , n (1H,3H,...(n-1)H) , 2
 m+1 (DL2 DLm+1) (BK) 1
 (DL1) . n (2H,4H,...nH) , 1
 m (DL1 DLm) (BK) m+1 (DL
 1) . n (DL1,DL3,DL5,...,DLm-1,DLm+1)
 가 , (DL2,DL4,DL6,...DLm-2,DLm) 가
 (n+1) 13b (DL1 DLm+1)
 13b , (n+1) (1H,3H,...(n-1)H) n
 m+1 (1H,3H,...(n-1)H) , 2 m+1 (DL2 DL
 (BK) 1 (DL1) . (n+1)
 (2H,4H,...nH) n (2H,4H,...nH)
 m+1 1 m (DL1 DLm) (BK)
 m-1,DLm+1) (DLm+1) . (n+1) (DL1,DL3,DL5,...,DL
 가 , (DL2,DL4,DL6,...DLm-2,DLm)
 가
 (BK)
 '000000' '00000000' 가 (BK) (16,116)
 (Vcom) 가 가
 (Clc) 가 (BK) (Clc) 가
 (Black gray scale) (BK) (Clc) 가 (Normally white)
 (Clc) 가 (Normally whit
 e) (White gray scale)

2 (DD2) 2 (143) (146) (DD2)

MUX(144) (142) m (141) / (146) 1 (DD1)

, MUX(144) MUX(144) (142) m 15a 16a

b 16b 2 (DD2) MUX(144) (143) 15

(134) (138) (GSP), (GSC)

(GOE) (GL1 GLn) 가

TFT(131) (134)

(Clc)

(136) 10 (136) (136)

) (138) (DDC) (DL1 DLm)

1 (DD1) m+1 (DLm+1) (136)

(138) m (RGB) 2 m+1 (DL2

DLm+1) (DD2) 1 (DL1) (13)

6) m (RGB) (DD1,DD2) (DD1,DD2)

(RGB)

(116) m+1 (DL1 DLm) m+1

15a 15b 3 (136) (R

GB) (DD1,DD2)

15a (R1,R2,R3,...,Rm/3) (138) 1 (DOB1) m/3

B2) m/3 (G1,G2,G3,...,Gm/3) (16) 2 (DO

1,B2,B3,...,Bm/3) (138) 3 (DOB3) m/3 (136) (B

(DOB1,DOB2,DOB3) (136) m 가 1 3

(DOB1) 1 (DD1) (136) (Bm/3) (138) 1

6) (DOB1,DOB2,DOB3) (136) (DE) (R1,R2,R3,...,Rm/3, G1,G2,G3

,...,Gm/3, B1,B2,B3,...,Bm/3)가 (DOB1)

(Bm/3)가

15a (Bm/3) 1 (DD1) 3 (DOB3) (Bm/3)

15b (DD2) (R1) m/3 (138) 1 (DOB1) 2

(136) (R1,R2,R3,...,Rm/3) (138) 2 (DOB2) m/3

B3) m/3 (G1,G2,G3,...,Gm/3) (136) 3 (DO

(136) (DE) 1 (DOB1)

(R1)가 2 3 (DOB2,DOB3)

(R1) (G1)가 (136)

1 (DOB1) (143) m/3 (B1,B2

,B3,...,Bm/3)가
 (R2,R3,...,Rm/3, G2,G3,...,Gm/3)가

15b , 2 (DD2) 2 (DOB2)
 (R1)가

16a 16b 6 (136) (R)
 GB) (D1,D2)

16a , (138) 1 (ODOB1) m/6
 (OR1,OR2,OR3,...,ORm/6) (136) 2
 (ODOB2) m/6 (OG1,OG2,OG3,...,OGm/6)
 (136) (ODOB3)
 m/6 (OB1,OB2,OB3,...,OBm/6) (136)
 (138) 1 (EDOB1) m/6
 (ER1,ER2,ER3,...,ERm/6) (136) 2
 (EDOB2) m/6 (EG1,EG2,EG3,...,EGm/6) (

136) (EDOB3) m/6
 (EB1,EB2,EB3,...,EBm/6) (136) m/2
 m/2 가 1 3 (ODO
 B1,ODOB2,ODOB3) 1 3 (EDOB1,EDOB2,EDOB3) (16)
 (138) 1 (ODOB1) 1 (DD1)
 (EBm/6) (136) (136)
 (DE) , m (OR1,OR2,OR3,...,ORm/6, OG1,OG
 2,OG3,...,OGm/6, OB1,OB2,OB3,...,OBm/6, ER1,ER2,ER3,...,ERm/6, EG1,EG2,EG3,...,EGm/6, EB1,EB2,EB3,...,
 EBm/6)가 , 1 (DD1) (EBm/6)가

(138) 16b 가
 2 (DD2) 1 (ODOB1)

16b (138) 1 (ODOB1)
 2 (DD2) (136) m/6
 (EB1,EB2,EB3,...,EBm/6) (136) (73)
 8) 2 (ODOB2) m/6 (OR1,OR2,OR3,...,OR
 m/6) (136) 3 (ODOB3) m/6 (13)
 (OG1,OG2,OG3,...,OGm/6) (136)
 (138) 1 (EDOB1) m/6 (OB1,
 OB2,OB3,...,OBm/6) (136) (138) 2
 (EDOB2) m/6 (ER1,ER2,ER3,...,ERm/6)
 (136) 3 (EDOB3) m/6 (EG1
 ,EG2,EG3,...,EGm/6) (136)
 , 1 (ODOB1) 2 (DD2)가 2 3
 (ODOB2,ODOB3) (ER1,EG1)가 (OR1,OG1)가
 , 1 3 (EDOB1,EDOB2,EDOB3)
 (OB1) (ODOB1) (143) m/6 (

136) (EB1,EB2,EB3,...,EBm/3)가 , 2 3 (ODOB2,ODOB3)
 1 3 (EDOB1,EDOB2,EDOB3)
 (OR2,OR3,...ORm/6,OG2,OG3,...OGm/6,OB2,OB3,...OBm/6) (ER2,
 ER3,...ERm/6,EG2,EG3,...EGm/6)가

17a 17b n (n+1) , 14 (132) (

DL1 DLm+1)

17a , n (1H,3H,...(n-1)H) , (R1,G1,
 ...,Bm/3) 1 m (DL1 DLm) (Bm/3) m+1
 (DLm+1) m+1 (DLm+1) (Bm/3) m (

(DLm) (Bm/3) . n (

2H,4H,...nH) , (R1,G1,...,Bm/3) 2 m+1 (DL2 DLm+1
 1) , (R1) 1 (DL1) 1 (DL1)
 (R1) 2 (DL2) (R1) . n
 , (DL1,DL3,DL5,...,DLm-1,DLm+1) 가 .
 , (DL2,DL4,DL6,...DLm-2,DLm) 가 .

(n+1) 17b (DL1 DLm+1)

17b , (n+1) (1H,3H,...(n-1)H) n
 (1H,3H,...(n-1)H) , (R1,G1,...,Bm/3) 1 m
 (DL1 DLm) , (Bm/3) m+1 (DLm+1) . (n+
 1) (2H,4H,...nH) n (2H,4H,...nH)
 , (R1,G1,...,Bm/3) 2 m+1 (DL2 DLm+1)
 , (R1) 1 (DL1) . (n+1) ,
 (DL1,DL3,DL5,...,DLm-1,DLm+1) 가 , (DL2,DL4,D
 L6,...DLm-2,DLm) 가 .

18 4

18 가 , 4 (153,163) TFT (151,153)
 / 가 (162)

(162) m+1 (DL1 DLm+1) n (GL1 GLn)
 TFT TFT (161) (DL1 DLm+1)
 (GL1,GL3,GL5,...,GLn-1) TFT TFT
 (151) (DL1 DLm+1) (GL2,GL4,GL6,...,GLn) TFT
 L3,...,GLn-1) TFT 가 TFT (161) (GL1,G
 (GL2,GL4,...,GLn) TFT (151) TFT (161)
 TFT (151) (DL1 DLm) TFT
 (163) TFT TFT (161)
 (DL1 (153) TFT TFT (151)
 (Clc) (DL1 DLm+1) (Clc)
 (DL1 DLm+1)

(Bm/3) (Clc) (163) 17a 17b
) (Clc) (153) 17a 17b (Bm/3) (R1)
 가 (Clc) 가 (C
 lc)

(DL1) m+1 (DLm+1)
 (DL1) m+1 (DLm+1)
 (DL2 DLm) 가 1 (DL1) m+1 (DLm+1)
 , 1 (DL1) m+1 (DLm+1)
 , 1 (DL1) m+1 (DLm+1)

19 5

19 , 5 TFT (171) 2 m+1

(DL2 DLm+1) TFT (171) 1
 m (DL1 DLm) TFT (171)
 (174) , (172) , (172) (DL1 DLm+1) (GL1 GLn) (176) ,
 (174) (172) (176) (178) .
 (172) m+1 (DL1 DLm+1) n (GL1 GLn)
 (Clc) TFT (171) TFT (171)
 (DL2 DLm+1) (GL1,GL3,GL5,...,GLn-1) ,
 TFT (171) (DL1 DLm) (GL2,GL4,GL6,...,GLn)
 . TFT (171) (GL1 GLm) .
 TFT (171) 2 m+1 (DL2 DLm+1) ,
 TFT (171) 1 m (DL1 DLm) (173) ,
 TFT (171) (173) ,
 , (Clc) (DL2 DLm+1)
 (DL1 DLm) (Clc)
 / (178) (H,V) (MCLK) (176) , (174)
 (DDC,GDC) (DD1,DD2) (178) (DD1,DD2) (RGB)
 (178) (181) , 가
 (182) , (185) , (182)
 (186), (183) MUX(184) .
 (181) / (V,H) (MCLK) (174)
 (GSP), (GSC) (GOE) (GDC)
) (SSP), (POL) (176) (SOE) (DE), (SSC),
 , (181) (182) MUX(184) /
 (OESW) .
 (182) (182) (RGB) (181)
 (182) (183) MUX(184) ,
 MUX(184) (182) (SSP)
) , m (182) 가 (185) m (186) (RGB)
 (186) 2 (DD2) (182) 2 (DD2) (183) ,
 (146) 1 (DD1) (182) 1 (DD1) MUX(183) .
 (183) (182)
 2 (DD2) , 2 (183) (186)
 (DD2)
 MUX(184) (182) m (181) / (OESW)
 (DD2) . (183)
 MUX(184) , m MUX(184) 15b 16b 2
 D1) . MUX(144) (186) 15a 16a 1 (D)

(174) (GOE) TFT(171) (174) (Clc)

(178) (GL1 GLn) (GSP), (GSC)

(176) 10 (178) (DDC) (176) (178)

m (RGB) 2 m+1 (DL2 DLm+1)

2 (DD2) 1 (DL1) (176) (178) m

m+1 (RGB) 1 m (DL1 DLm) 1 (DD1) (RGB)

(DLm+1) (176) m (DD1,DD2) (DD1,DD2)

(RGB) (DD1,DD2)

(176) m+1 (DL1 DLm) m+1

20a 20b n (n+1) 19 (172) (

DL1 DLm+1)

20a , n (1H,3H,...(n-1)H) (R1,G1, ...,Bm/3) 2 m+1 (DL2 DLm+1) (R1) (R1) (DL2)

1 (DL1) 1 (DL1) (R1) 2 (DL2)

m (R1)가 (R1,G1,...,Bm/3) 1 n (DL1 DLm) (DLm+1)

(Bm/3) m+1 (DLm+1) m+1 (DLm+1)

(Bm/3) m (DLm) (Bm/3)가 n

(DL1,DL3,DL5,...,DLm-1,DLm+1) 가

(DL2,DL4,DL6,...DLm-2,DLm) 가

(n+1) 20b (DL1 DLm+1)

20b , (n+1) (1H,3H,...(n-1)H) n (R1,G1,...,Bm/3) 2 m+1 (DL2 DLm+1) (R1) 1 (D1) (n+1) (2H,4H,...nH) n (2H,4H,...nH)

(R1,G1,...,Bm/3) 1 m (DL1 DLm) (DLm+1)

(Bm/3) m+1 (DLm+1) (n+1) (DL2,DL4

(DL1,DL3,DL5,...,DLm-1,DLm+1) 가 , (DL2,DL4 ,DL6,...DLm-2,DLm) 가

21 6

21 / 가 6 (192) (193,203) TFT (191,203)

(192) m+1 (DL1 DLm+1) n (GL1 GLn) TFT (191) (DL1 DLm+1) TFT

(GL1,GL3,GL5,...,GLn-1) (DL1 DLm+1) TFT (GL2,GL4,GL6,...,GLn) TFT

(201) TFT 가 TFT (191) (GL1,G L3,...,GLn-1) TFT 가 TFT (201) TFT (191)

(GL2,GL4,...,GLn) TFT (191)

TFT (201) (DL1 DLm+1) (DL1 DLm) TFT
 (193) TFT TFT (191) TFT (151)
 (Clc) (DL1 DLm+1) (DL1 DLm+1) (Clc)
 (R1) (Clc) (193) 20a 20b
 (Clc) (203) 20a 20b (R1) (Bm/3)
 가 (Clc) 가 (C)
 (DL1) m+1 (DLm+1)
 (DL1) (DL2 DLm) m+1 가 1 (DLm+1)
 m+1 (DLm+1) (DL1)
 22 7
 22 7 TFT (211) 1 m
 (DL1 DLm) TFT (211) 2 m+1
 (DL2 DLm+1) TFT (211)
 214) (212) (212) (212) (DL1 DLm+1) (GL1 GLn) (216) (218)
 (214) (216) (218)
 (212) m+1 (DL1 DLm+1) n (GL1 GLn)
 (Clc) TFT (211) TFT (211)
 (DL1 DLm) (GL1, GL3, GL5, ..., GLn-1)
 TFT (211) (DL2 DLm+1) (GL2, GL4, GL6, ..., GLn)
 TFT (211) TFT (211) (GL1 GLm)
 T (211) 1 m (DL1 DLm) TF
 T (211) 2 m+1 (DL2 DLm+1)
 TFT (211) (213)
 TFT (211) (213) (DL1 DLm)
 (Clc) (Clc)
 (DL2 DLm+1)
 (218) (RGB) (216)
 / (H,V) (MCLK) (216) (214)
 (DDC,GDC) (218) (216) (RGB)
 (DD1,DD2)
 (218) (221) 가
 (222) (225) (222)
 (226), (223) MUX(224)
 (221) / (V,H) (MCLK) (214)
 (GSP), (GSC) (GOE) (GDC)
 (136) (DE), (SSC),

(SSP), (POL) (SOE) (DDC) /

(221) (222) MUX(224)

(OESW)

(222) (RGB) (221)

(222) (RGB) (225)

MUX(224) (223) MUX(224) (222) 가 m

(RGB) (226) (222)

(SSP) (22) 6)

(226) (222) m 1

(226) 1 (DD1) 1 (DD1) MUX(224)

2 (DD2) (222) 2 (DD2) 1 (223)

(223) (222)

2 (DD2) 2 (223) (226) (DD2)

MUX(224) (221) / (OESW)

(222) m (RGB) (226) 23a 24

(DD1) MUX(224) (222) m (223)

a 2 (DD2) MUX(224)

23b 24b

(214) (218) (GSP), (GSC)

(GOE) (GL1 GLn) 가

TFT(211) (214)

(Clc)

(216) 10 (216) (218)

(218) (RGB) 1 m (DDC) (218)

m (DL1 DLm)

1 (DD1) m+1 (DLm+1) (216)

(218) m (RGB) 2 m+1 (DL2)

DLm+1) 2 (DD2) 1 (DL1) (21

6) m (RGB) (DD1,DD2) (DD1,DD2)

(216) m+1

m+1 (DL1 DLm)

23a 23b 3 (216) (RGB)

(DD1,DD2)

23a (218) 1 (DOB1) m/3

(R1(H),R2(H),R3(H),...,Rm/3(H)) (16) 2

(DOB2) m/3 (G1(H),G2(H),G3(H),...,Gm/3(H))

(216) (218) 3 (DOB3) m/3

(B1(H),B2(H),B3(H),...,Bm/3(H)) (216) m
 가 1 3 (DOB1,DOB2,DOB3) (216)
 (218) 1 (DOB1) 1 (DD1)
 (216) 1 (DD1) (Bm/3(H-1))가 (B
 m/3(H-1)) (216) (DE) , 1 3
 (DOB1,DOB2,DOB3) m (R1(H),R2(H),R3(H),...,R
 m/3(H), G1(H),G2(H),G3(H),...,Gm/3(H), B1(H),B2(H),B3(H),...,Bm/3(H))가 (D
 OB1) (Bm/3(H-1))가 .

23b (218) 1 (DOB1) 2
 (DD2) m/3 (B1(H+1),B2(H+1),B3(H+1),...,Bm/3(H+1))
 (216) 2 (DD2) (R1(H-1))가 (R1(H)
 (218) (226) 1 (R1(H+1),R2(H+1),R3(H+1),...,Rm/3(H+1)) (DOB2) m/3
 (DOB3) m/3 (216) 3 (G1(H+1),G2(H+1),G3(H+1),...,Gm/3(H+1))
 (216) (216) (DE) , 1
 (DOB1) (R1(H))가 2
 3 (DOB2,DOB3) (R1(H+1))
 (G1(H+1))가 (216) 1 (DOB1)
 (223) m/3 (B1(H+1),B2(H+1),B3(H+1),...,Bm/3(H+1))가
 2 3 (DOB2,DOB3) (R2(H+1),
 R3(H+1),...,Rm/3(H+1), G2(H+1),G3(H+1),...,Gm/3(H+1))가 .

24a 24b 6 (216) (RG
 B) (DD1,DD2) .

24a (218) 1 (ODOB1) m
 /6 (OR1(H),OR2(H),OR3(H),...,ORm/6(H)) (216)
 2 (ODOB2) m/6 (OG1(H),OG2(
 H),OG3(H),...,OGm/6(H)) (216) 3
 6(H) (ODOB3) m/6 (OB1(H),OB2(H),OB3(H),...,OBm/
 6(H)) (216) 1 (ER1(H),ER2(H),ER3(H),...,ERm/6(H))
 (EDOB1) m/6 (EDOB2) m/6
 (216) 2 (EG1(H),EG2(H),EG3(H),...,EGm/6(H)) (216)
 (218) 3 (EDOB3) m/6 ((

EB1(H),EB2(H),EB3(H),...,EBm/6(H)) (216) m/2
 m/2 가 1 3 (ODOB1,ODOB2,ODOB3)
 1 3 (EDOB1,EDOB2,EDOB3) (216)
 (218) 1 (ODOB1) 1 (DD1) (216)
 (218) 1 (DD1) (EBm/6(H-1))가 (B
 m/6(H-1)) (216) (DE) , m
 (OR1(H),OR2(H),OR3(H),...,ORm/6(H), OG1(H),OG2(H),OG3(H),...,OGm/6(H), OB1(H)
 ,OB2(H),OB3(H),...,OBm/6(H), ER1(H),ER2(H),ER3(H),...,ERm/6(H), EG1(H),EG2(H),EG3(H),...,EGm/6(H), EB1
 (H),EB2(H),EB3(H),...,EBm/6(H))가 , 1 (DD1)가 .

(218) 24b 가
 2 (DD2) 1 (ODOB1)
 (216) (223) m/6
 (EB1(H+1),EB2(H+1),EB3(H+1),...,EBm/6(H+1)) (216) 2
 (DD2) (OR1(H))가 (218)
 (226) 1 (OR1(H))
 (218) 2 (ODOB2) m/6

(OR1(H+1),OR2(H+1),OR3(H+1),...,ORm/6(H+1)) (216) , 3
 (ODOB3) m/6 (OG1(H+1),OG2(H+1),OG3(H+1),...,OG
 m/6(H+1)) (216) (218) 1
 (EDOB1) m/6 (OB1(H+1),OB2(H+1),OB3(H
 +1),...,OBm/6(H+1)) (216) , (218) 2
 (EDOB2) m/6 (ER1(H+1),ER2(H+1),ER3(H+1),...,ERM
 /6(H+1)) (216) (EDOB3) m/6
 (EG1(H+1),EG2(H+1),EG3(H+1),...,EGm/6(H+1)) (216)
 (DD2)가 (216) , 1 (ODOB1) 2
 (OR1(H+1),OG1(H+1))가 (ODOB2,ODOB3)
 DOB1,EDOB2,EDOB3) (OB1(H+1)) (E
 (ER1,EG1)가 (216) 1 (ODO
 B1) (223) m/6 (EB1(H+1),EB2(H+1),EB3(
 H+1),...,EBm/3(H+1))가 (ODOB2,ODOB3) 1 3
 (EDOB1,EDOB2,EDOB3) (OR2(H+1),
 OR3(H+1),...ORm/6(H+1),OG2(H+1),OG3(H+1), ...OGm/6(H+1),OB2(H+1),OB3(H+1),...OBm/6(H+1))
 (ER2(H+1),ER3(H+1),...,ERM/6(H+1),EG2(H+1),EG3(H+1),..., EGm/6(H+
 1))가

25a 25b n (n+1) , 22 (212) (

DL1 DLm+1)

25a , n (1H,3H,...(n-1)H) , (R1(1H)
 ,G1(1H),...,Bm/3(1H),R1(31H),G1(3H),...,Bm/3(3H),..., R1((n-1)H),G1((n-1)H),...,Bm/3((n-1)H)) 1
 m (DL1 DLm) (Bm/3(2H),Bm/3(4H),..., B
 m/3((n-2)H)) m+1 (DLm+1) , m+1 (DLm+1)
 (Bm/3(2H),Bm/3(4H),..., Bm/3((n-2)H)) m+1 (DLm+1) (B
 m/3(2H),Bm/3(4H),..., Bm/3((n-2)H)) 1 (1H) , m+1
 (DLm+1) (218) , (n-1)
 (nH) (Bm/3) , (BK)
 . n (2H,4H,...nH) , (R1(2H),G1(2H),...,B
 m/3(2H),R1(4H),G1(4H),...,Bm/3(4H),..., R1(nH),G1(nH),...,Bm/3(nH)) 2 m+1 (DL2
 DLm+1) (R1(1H),R1(3H),...,R1((n-1)H) 1
 (DL1) (DL1) (DL1) (R1(1H),R1(3H),...,R1((n-1)H)
 1 (DL1) (R1(1H),R1(3H),...,R1((n-1)H)
 . n (DL1,DL3,DL5,...,DLm-1,DLm+1)
 가 , (DL2,DL4,DL6,...DLm-2,DLm) 가

(n+1) 25b (DL1 DLm+1)

25b , (n+1) (1H,3H,...(n-1)H) n
 (1H,3H,...(n-1)H) , (R1(1H),G1(1H),...,Bm/3(1H), R1(31H),G1(3H
),...,Bm/3(3H),..., R1((n-1)H),G1((n-1)H),...,Bm/3((n-1)H)) 1 m (DL1 DLm)
 (Bm/3(2H),Bm/3(4H),..., Bm/3((n-2)H)) m+1 (DLm+1)
 DLm+1) 1 (1H) m+1 (DLm+1) (21
 8) n (nH) (Bm/3)
 , (BK) . (n+1) (2H,4H,...nH) n
 (2H,4H,...nH) , (R1(2H),G1(2H),...,Bm/3(2H)
 , R1(4H),G1(4H),...,Bm/3(4H),...,R1(nH),G1(nH),...,Bm/3(nH)) 2 m+1 (DL2 DLm+
 1) (R1(1H),R1(3H),...,R1((n-1)H) 1 (DL1)
 . (n+1) (DL1,DL3,DL5,...,DLm-1,DLm+1)
 가 , (DL2,DL4,DL6,...DLm-2,DLm) 가

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m+1 (DLm+1)

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(DL2 DLm) 가 1 (DL1) m+1 (DLm+1)
 (DL1) m+1 (DLm+1)
 26 9
 26 9 TFT (251) 2 m+1
 (DL2 DLm+1) TFT (251) 1
 m (DL1 DLm) TFT (251)
 (254) (252) (252) (DL1 DLm+1) (GL1 GLn) (256)
 (254) (256) (258)
 (252) m+1 (DL1 DLm+1) n (GL1 GLn)
 (Clc) TFT (251) TFT (251)
 (DL2 DLm+1) (GL1,GL3,GL5,...,GLn-1)
 TFT (251) (DL1 DLm) (GL2,GL4,GL6,...,GLn)
 TFT (251) TFT (251) (GL1 GLm)
 TFT (251) 2 m+1 (DL2 DLm+1)
 TFT (251) 1 m (DL1 DLm) (253)
 TFT (251) (253) (DL2 DLm+1)
 (Clc) (Clc)
 (DL1 DLm)
 (258) (RGB) (256)
 / (H,V) (MCLK) (256) (254)
 (DDC,GDC) (DD1,DD2) (258) (DD1,DD2)
 (RGB)
 (258) (261) 가
 (262) (265) (262)
 (266), (263) MUX(264)
 (261) / (V,H) (MCLK) (254)
 (GSP), (GSC) (GOE) (GDC)
 (SSP), (POL) (256) (SOE) MUX(264) (DDC) (SSC),
 (OESW) (262) MUX(264) /
 (262) (RGB) (261)
 (262) (RGB) (261)
 MUX(264) (263) MUX(264) (262) (SSP)
 (262) (265) m (266)
 (RGB) , m 가 m (266)
 (266) (262) 1
 2 (DD2) MUX(264)
 (266) 2 (DD2) m
 1 (DD1) 1 (DD1)

(263) 2 (DD2) (262) (DD2) (263) 2 (266) (DD2)

MUX(264) (262) m (261) / (OESW)

(DD2) MUX(264) (DD1) (263) MUX(264) (RGB) MUX(264) 23b (266) 24b 23a 24 2 1 24

a

(254) (GOE) TFT(251) (254) (Clc)

(258) (GL1 GLn) (GSP), (GSC)

(256) 10 (258) m (DDC) (RGB) 2 m+1 (DL2 (256) (258) DLm+1) (256) (258) m (DD1) (RGB)

m+1 (DLm+1) (DD1,DD2) (RGB) (DD1,DD2)

(256) m+1 (DL1 DLm) m+1

27a DL1 27b DLm+1 n (n+1) , 26 (252) (

27a , n (1H,3H,...(n-1)H) (R1(1H) ,G1(1H),...,Bm/3(1H),R1(31H),G1(3H),...,Bm/3(3H),..., R1((n-1)H),G1((n-1)H),...,Bm/3((n-1)H)) 2 (R1(2H),R1(4H),..., R1((n-2)H)) 1 (DL2 DLm+1) (DL1) 1 (DL1) (R1(2H),R1(4H),..., R1((n-2)H)) 1 (DL1) (DL1) (R1(2H),R1(4H),..., R1((n-2)H)) 1 (DL1) (1H) , 1 (DL1) (nH)

(258) (R1) , (n-1) (BK) . n (2H,4H,...nH) , (R1(2H),G1(2H),...,Bm/3(2H),R1(4H),G1(4H),...,Bm/3(4H),...,R1 (nH),G1(nH),...,Bm/3(nH)) 1 m (DL1 DLm) , m (Bm/3(1H),Bm/3(3H),...,Bm/3((n-1)H)) m+1 (DLm+1) . m+1 (DLm+1) (DLm+1) (Bm/3(1H),Bm/3(3H),...,Bm/3((n-1)H)) m+1 (DLm+1) (DLm+1) (Bm/3(1H),Bm/3(3H),..., Bm/3((n-1)H)) . n (DL1,DL3,DL5,...,DLm-1,DLm+1) 가 , (DL2,DL4,DL6,...DLm-2,DLm) 가 .

(n+1) 27b (DL1 DLm+1)

27b , (n+1) (1H,3H,...(n-1)H) n (R1(1H),G1(1H),...,Bm/3(1H), R1(31H),G1(3H)

),...,Bm/3(3H),..., R1((n-1)H),G1((n-1)H),...,Bm/3((n-1)H))² m+1 (DL2 DLm+1)
 (R1(2H),R1(4H),..., R1((n-2)H))¹ (DL1) (DL1)
 (218)
 n (1H) , 1 (nH) (DL1) (R1)
 (BK) . (n+1) (2H,4H,...n)H n
 (2H,4H,...nH) (R1(2H),G1(2H),...,Bm/3(2H), R1(4H),G1(4H))
 ,...,Bm/3(4H),..., R1(nH),G1(nH),...,Bm/3(nH))¹ m (DL1 DLm)
 (Bm/3(1H),Bm/3(3H),...,Bm/3((n-1)H))^{m+1} (DLm+1)
 (DL1,DL3,DL5,...,DLm-1,DLm+1)
 (DL2,DL4,DL6,...DLm-2,DLm) 가 .

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21 1 (DL1)¹
 m+1 (DLm+1)²¹ 1 (DL1)¹
 (DL2 DLm) 가 1 (DL1) m+1 (DLm+1)
 (DL1) m+1 (DLm+1)

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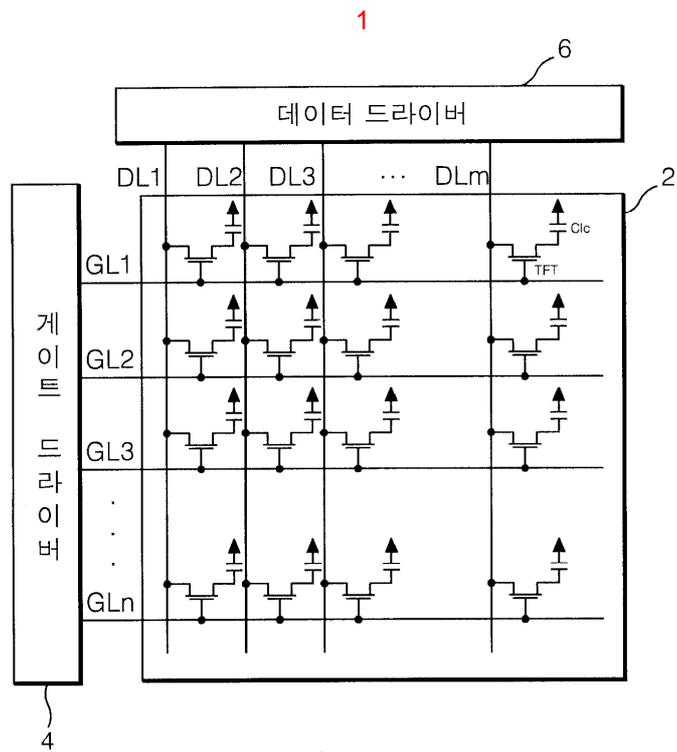
13

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26.

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2a

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+	+	+	+	+	+	+	+
+	+	+	+	+	+	+	+
+	+	+	+	+	+	+	+
+	+	+	+	+	+	+	+

기수 프레임(프레임 인버전)

2b

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-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

우수 프레임(프레임 인버전)

3a

+	+	+	+	+	+	+	+
-	-	-	-	-	-	-	-
+	+	+	+	+	+	+	+
-	-	-	-	-	-	-	-
+	+	+	+	+	+	+	+
-	-	-	-	-	-	-	-
+	+	+	+	+	+	+	+
-	-	-	-	-	-	-	-

기수 프레임(라인 인버전)

3b

-	-	-	-	-	-	-	-
+	+	+	+	+	+	+	+
-	-	-	-	-	-	-	-
+	+	+	+	+	+	+	+
-	-	-	-	-	-	-	-
+	+	+	+	+	+	+	+
-	-	-	-	-	-	-	-
+	+	+	+	+	+	+	+

우수 프레임(라인 인버전)

4a

+	-	+	-	+	-	+	-
+	-	+	-	+	-	+	-
+	-	+	-	+	-	+	-
+	-	+	-	+	-	+	-
+	-	+	-	+	-	+	-
+	-	+	-	+	-	+	-
+	-	+	-	+	-	+	-
+	-	+	-	+	-	+	-

기수 프레임(컬럼 인버전)

4b

-	+	-	+	-	+	-	+
-	+	-	+	-	+	-	+
-	+	-	+	-	+	-	+
-	+	-	+	-	+	-	+
-	+	-	+	-	+	-	+
-	+	-	+	-	+	-	+
-	+	-	+	-	+	-	+
-	+	-	+	-	+	-	+

우수 프레임(컬럼 인버전)

5a

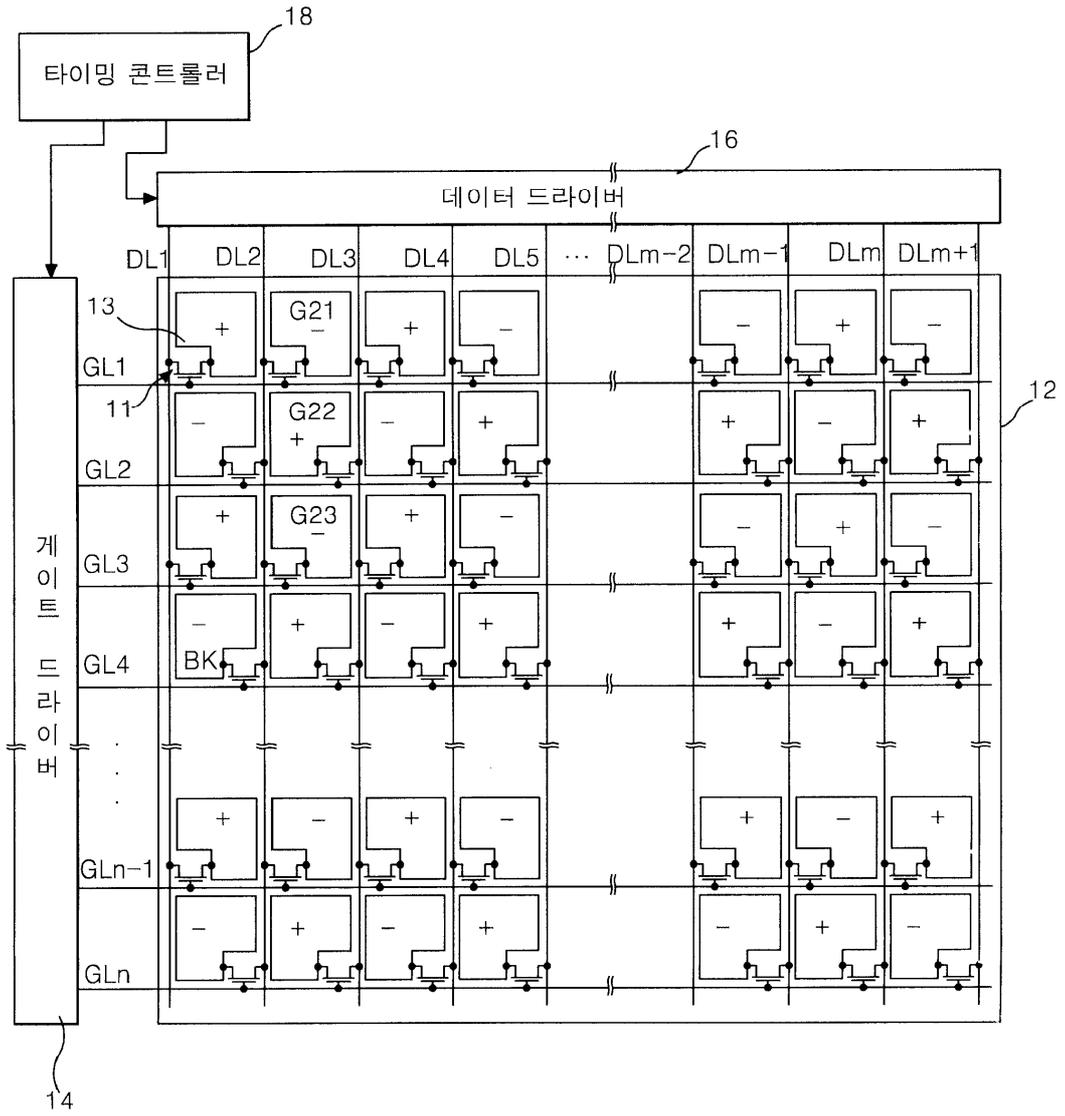
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+	-	+	-	+	-	+	-
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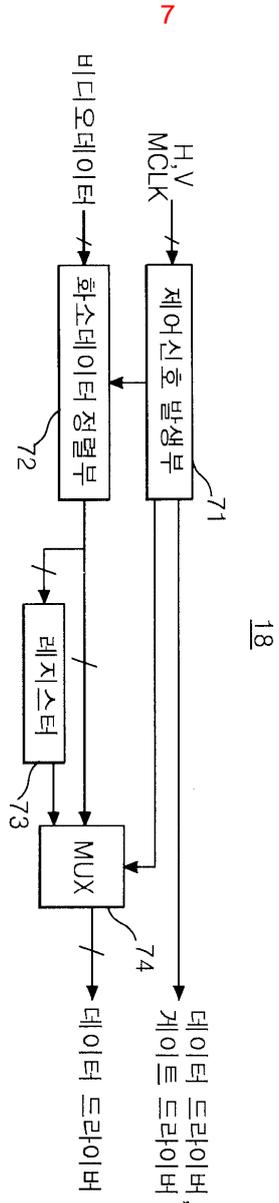
기수 프레임(도트 인버전)

5b

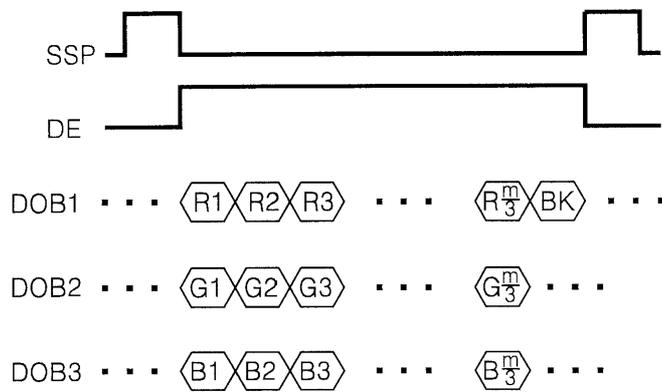
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-	+	-	+	-	+	-	+
+	-	+	-	+	-	+	-
-	+	-	+	-	+	-	+
+	-	+	-	+	-	+	-

우수 프레임(도트 인버전)

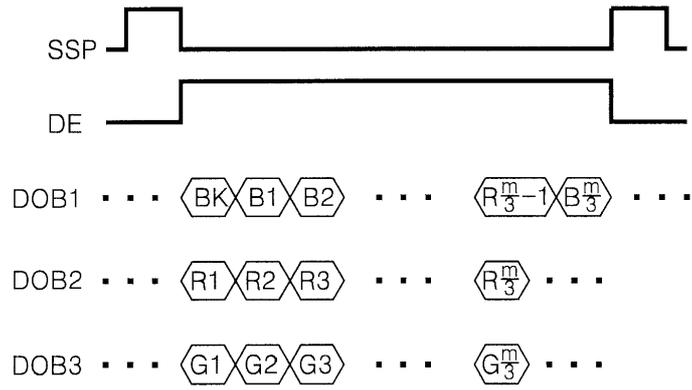




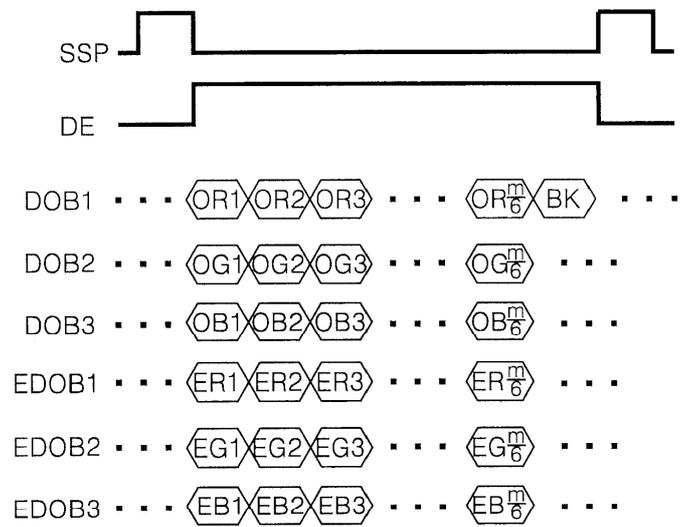
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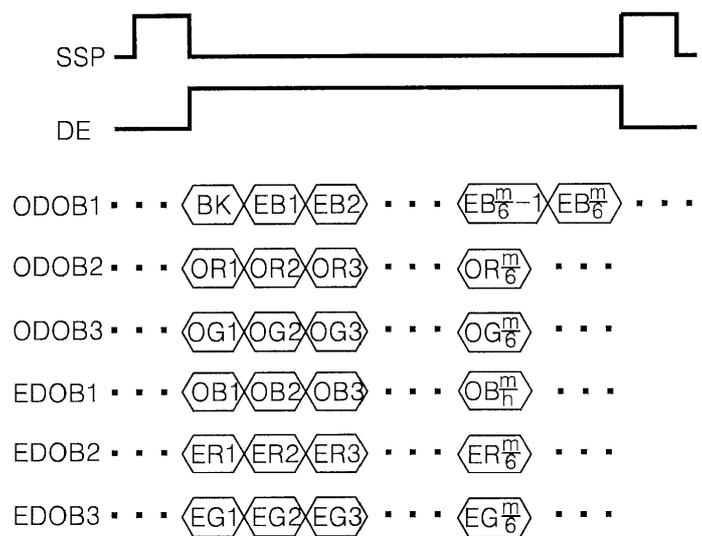
8b



9a

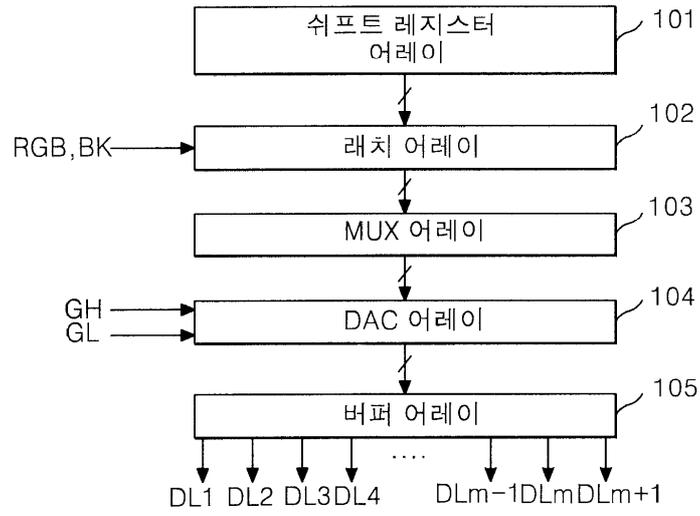


9b

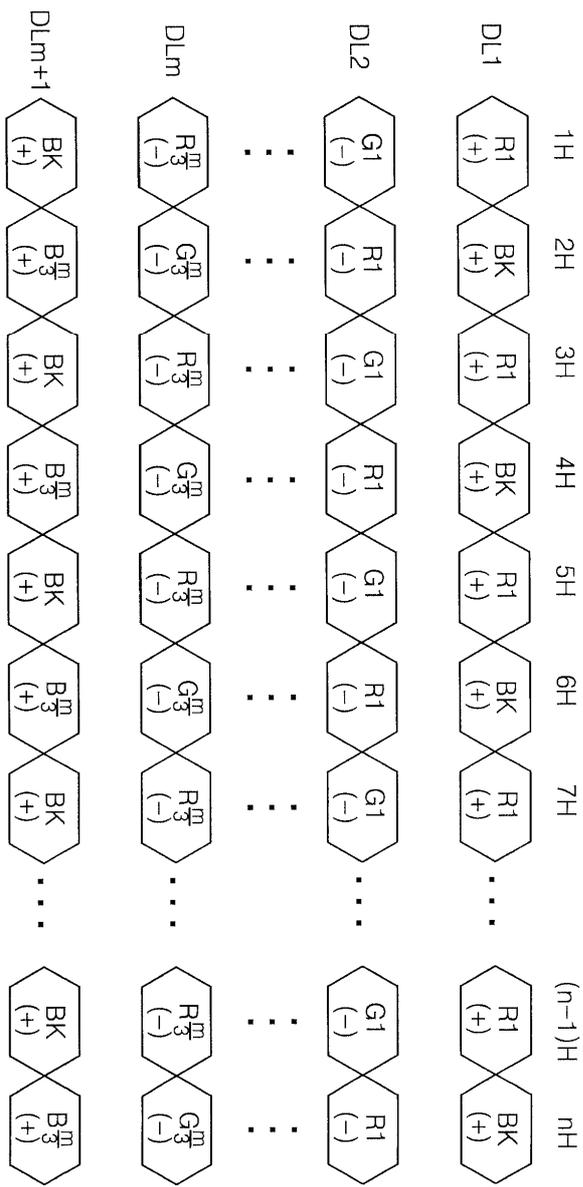


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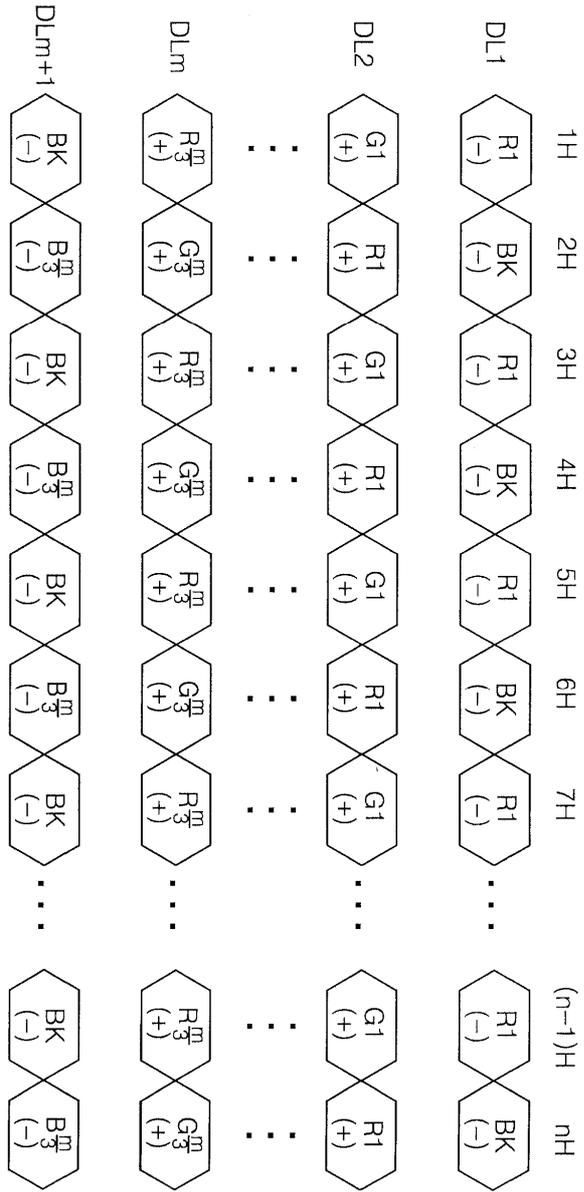


11a

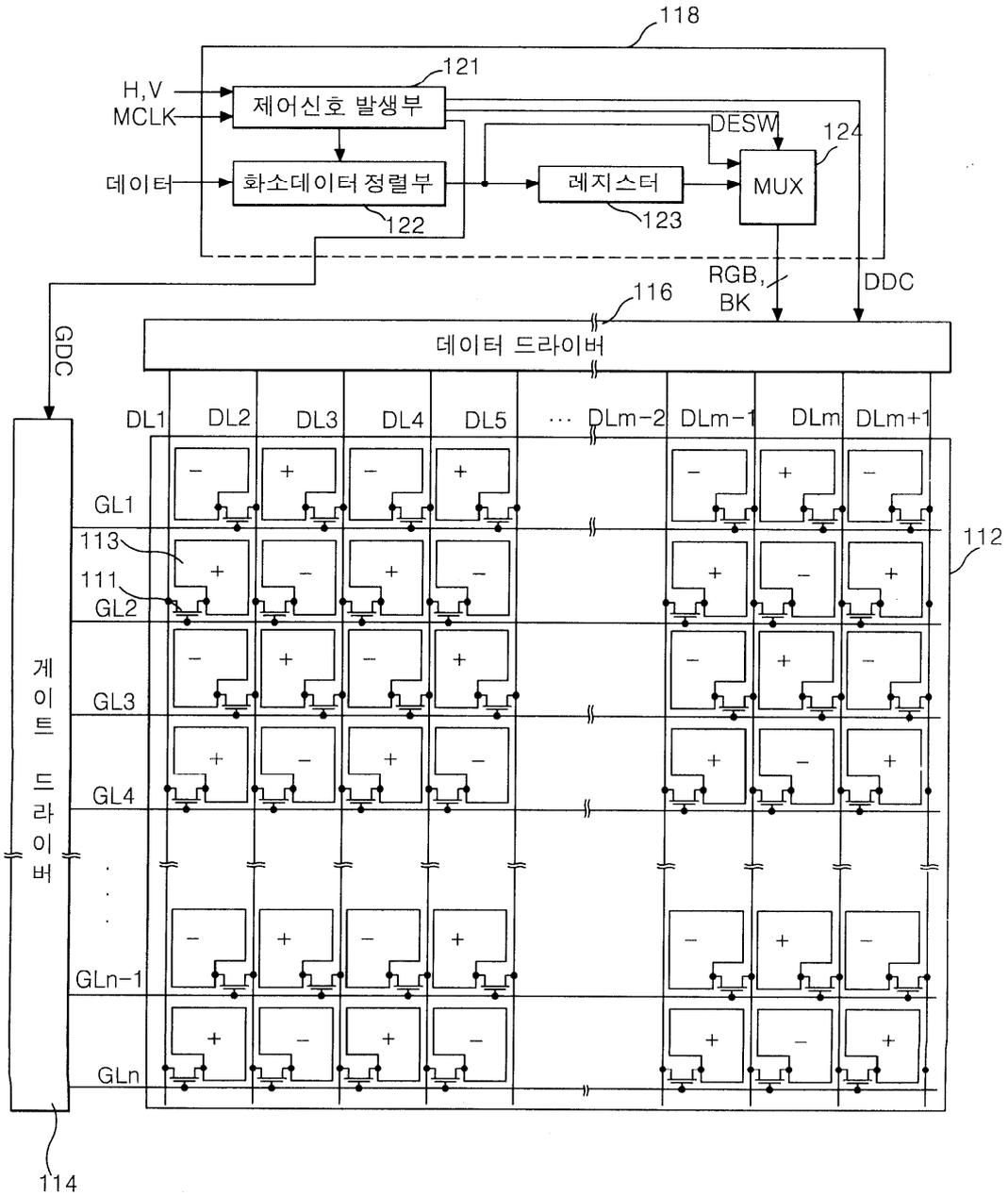


nth 프레임

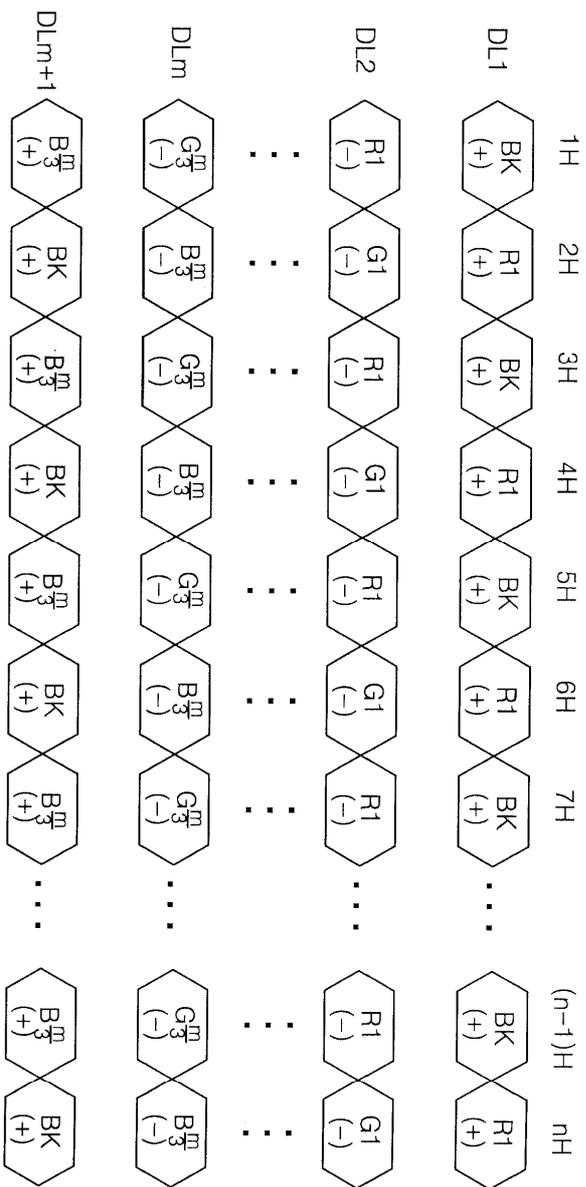
11b



12

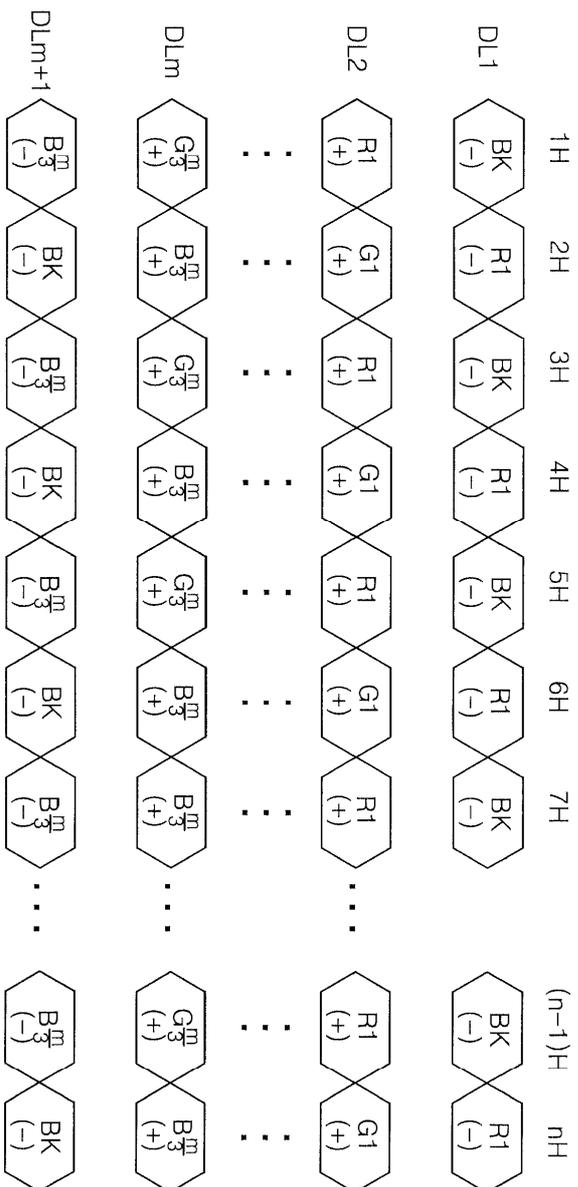


13a

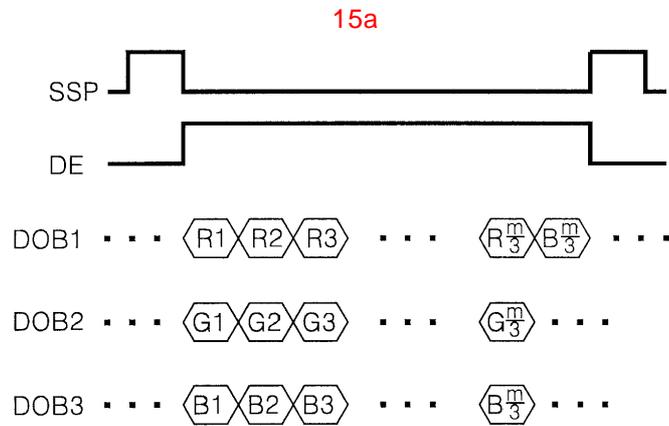
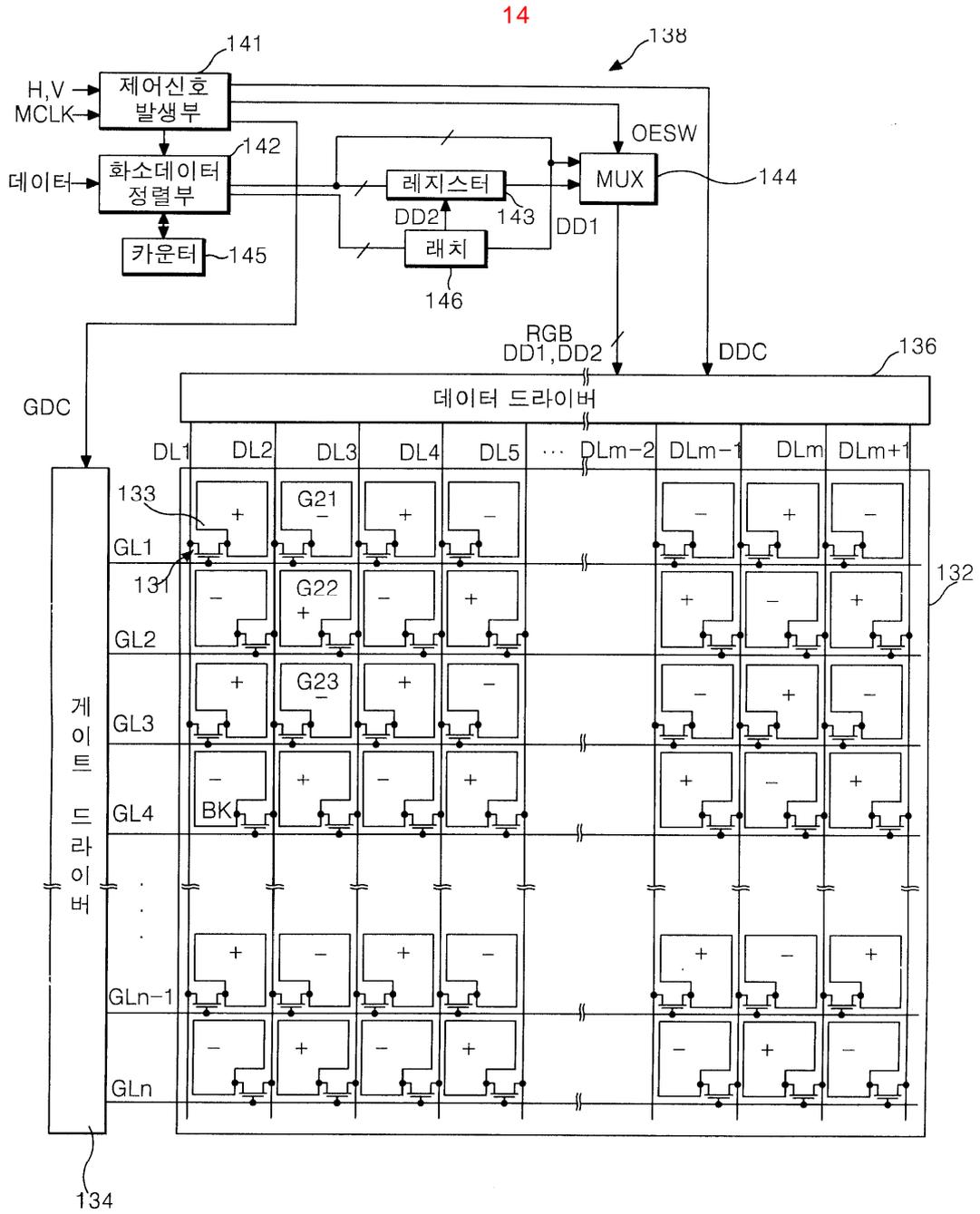


nth 프레임

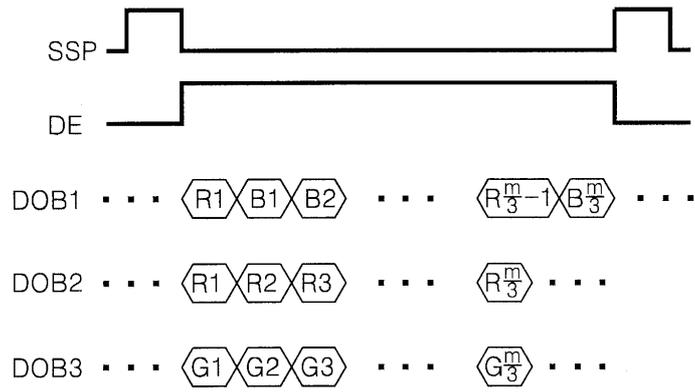
13b



(n+1)th 프레임



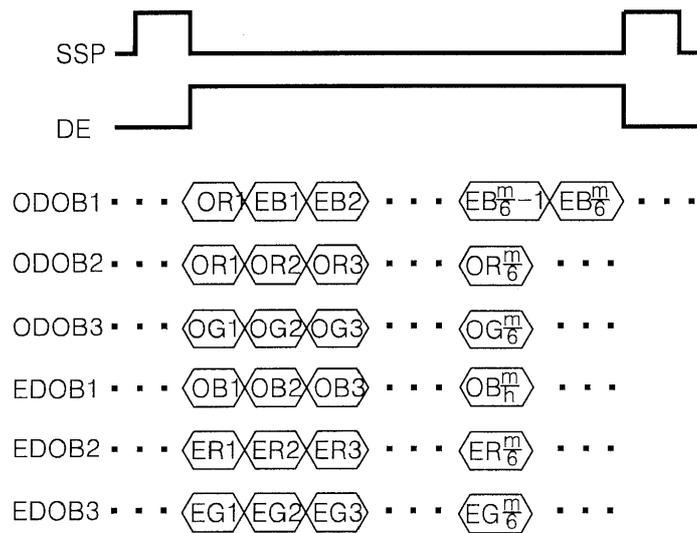
15b



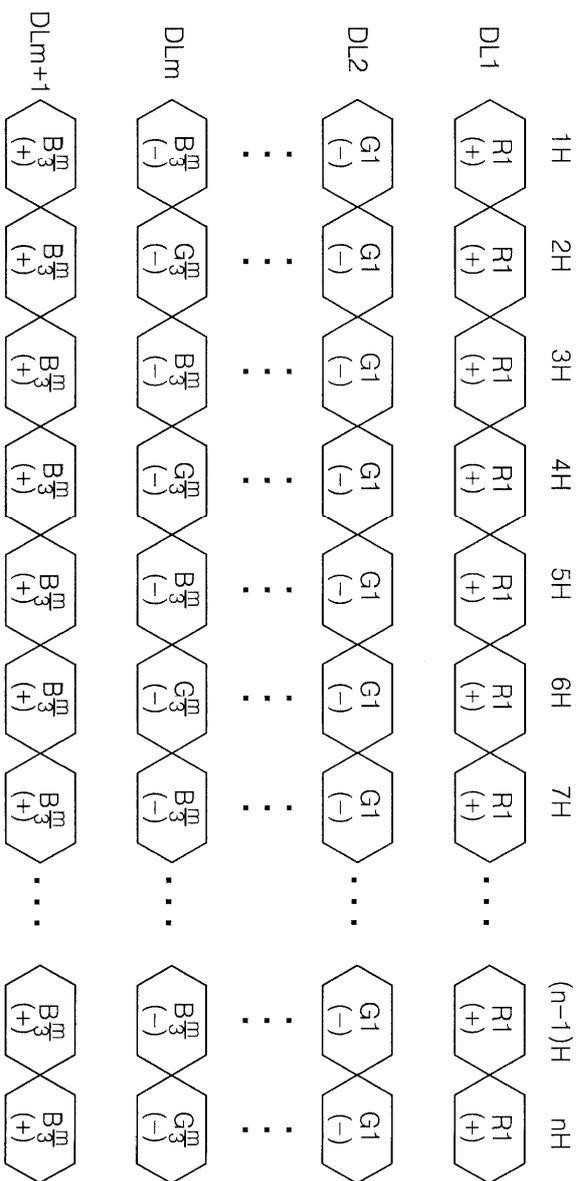
16a



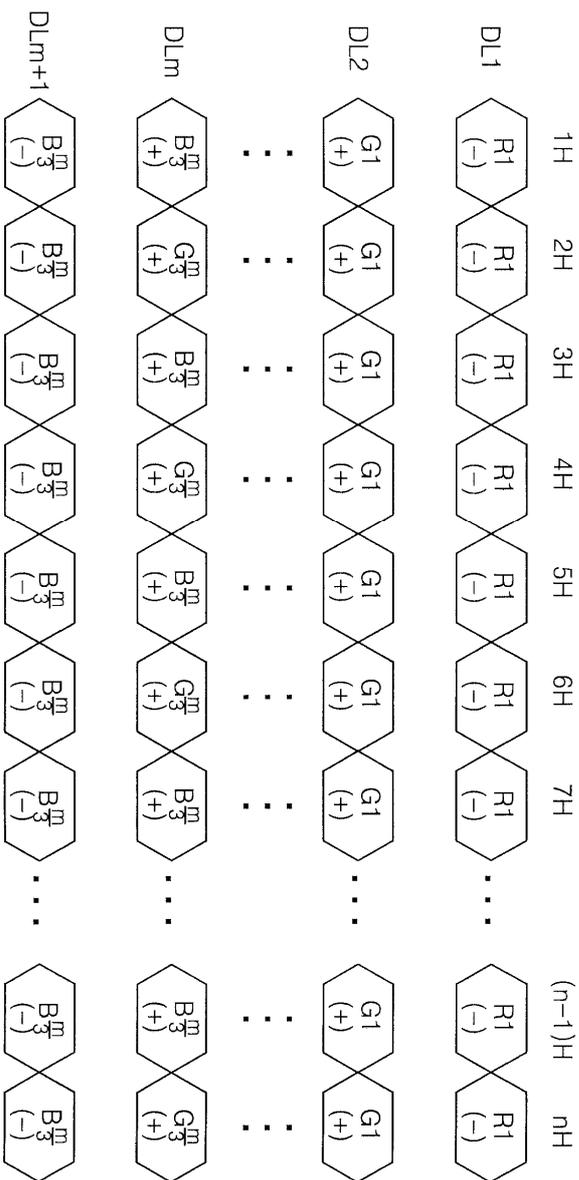
16b

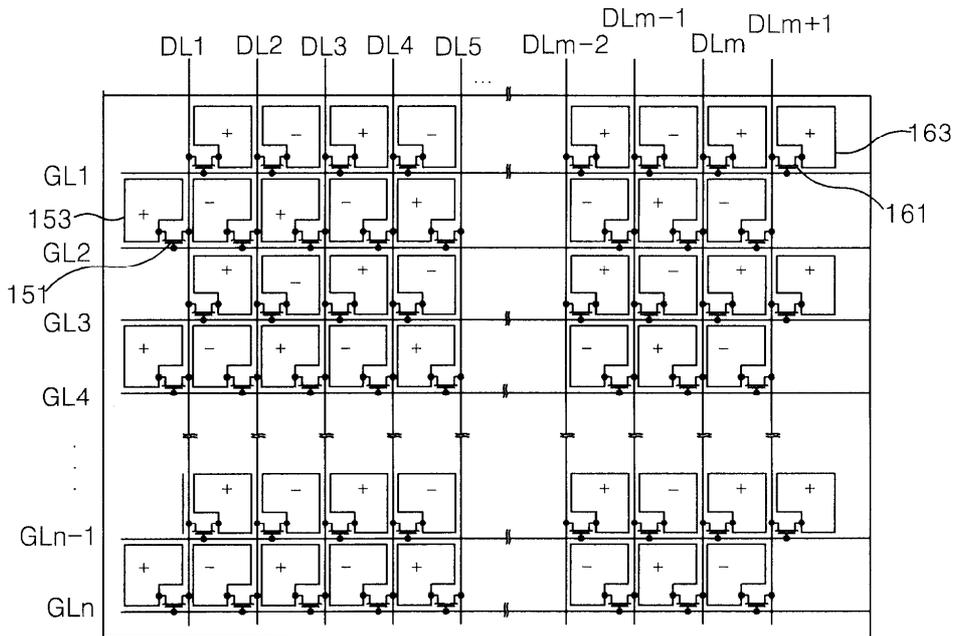


17a

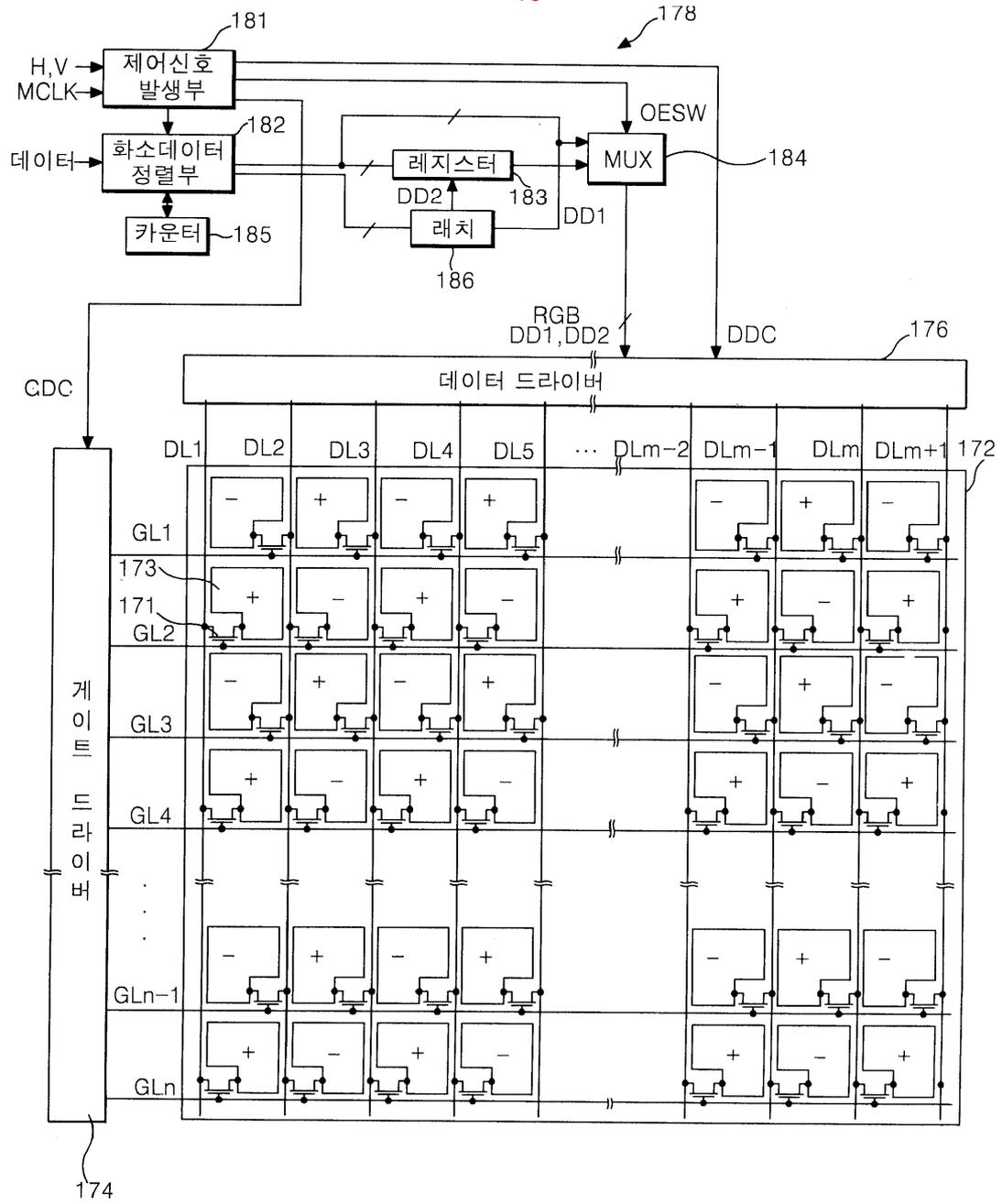


17b

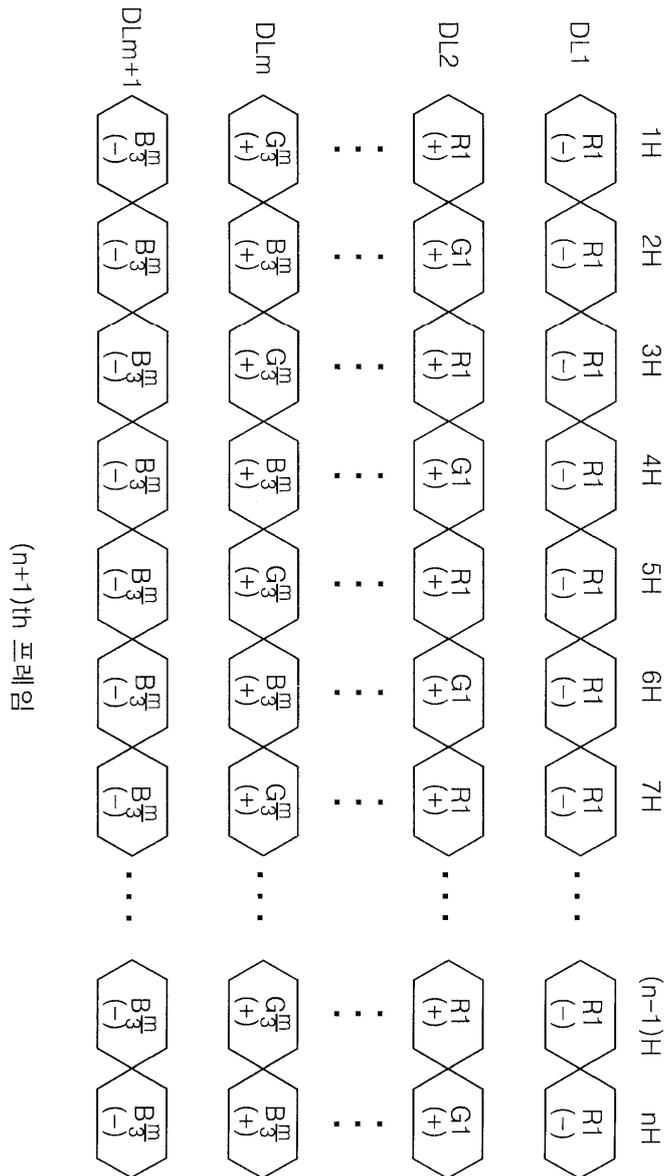


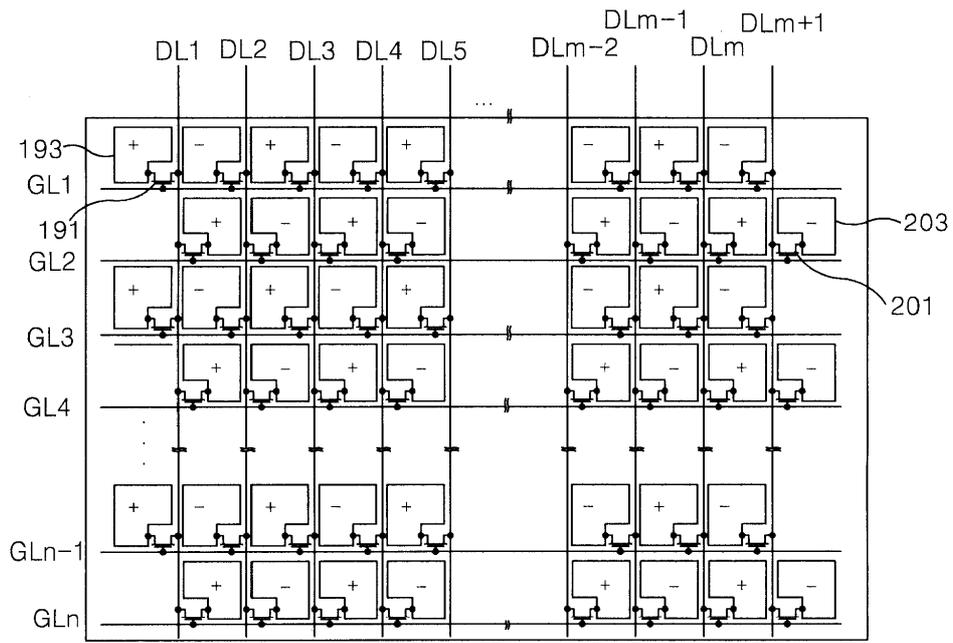


19

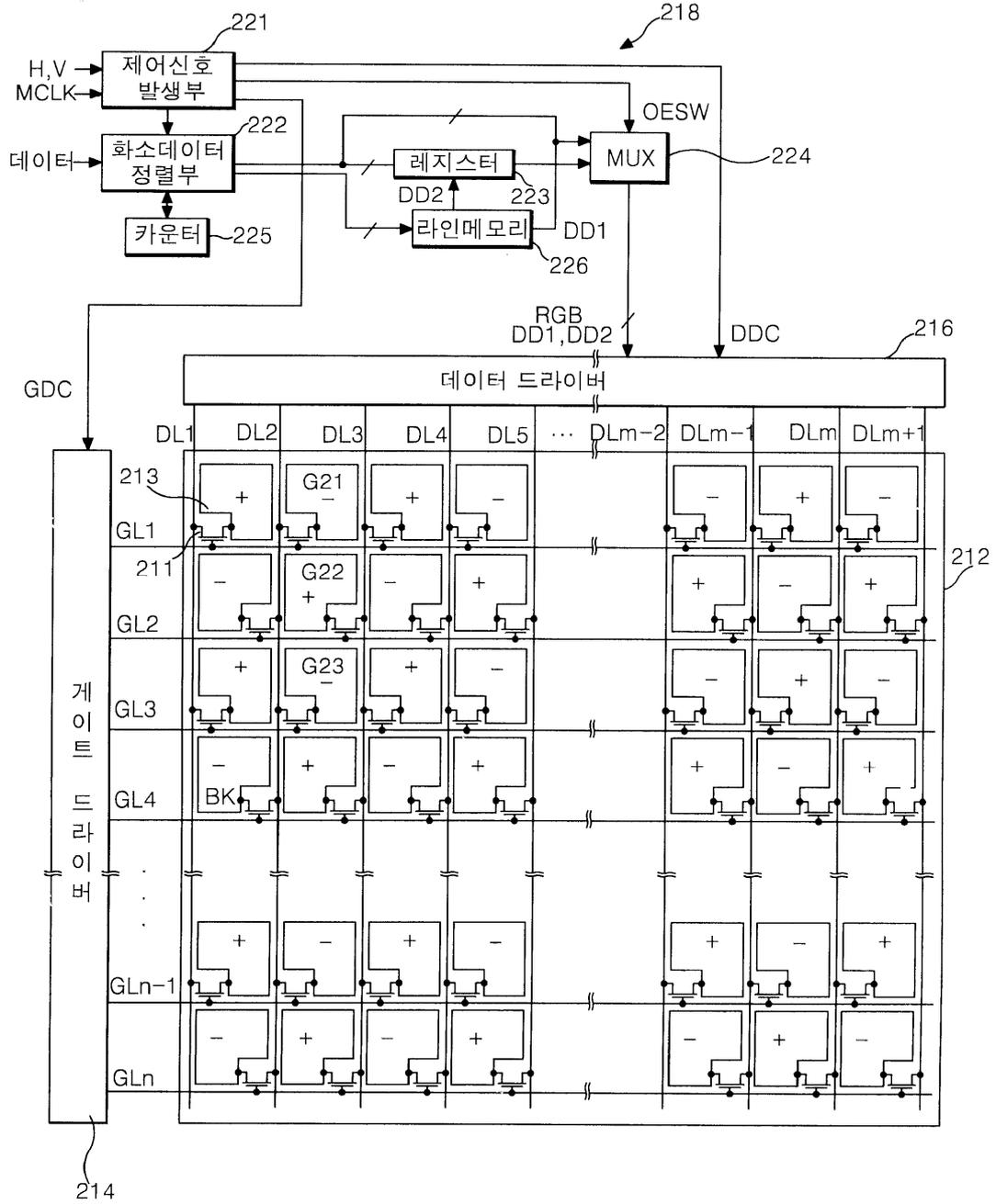


20b

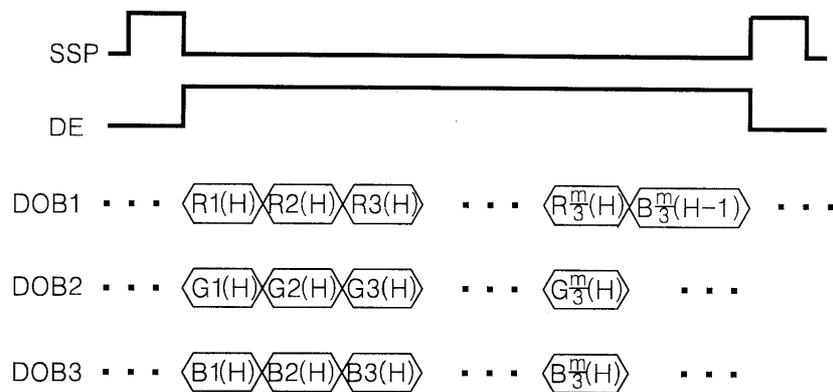




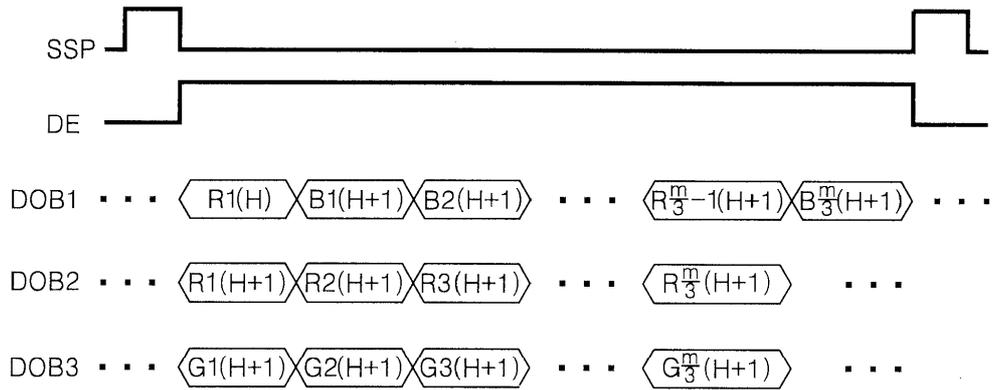
22



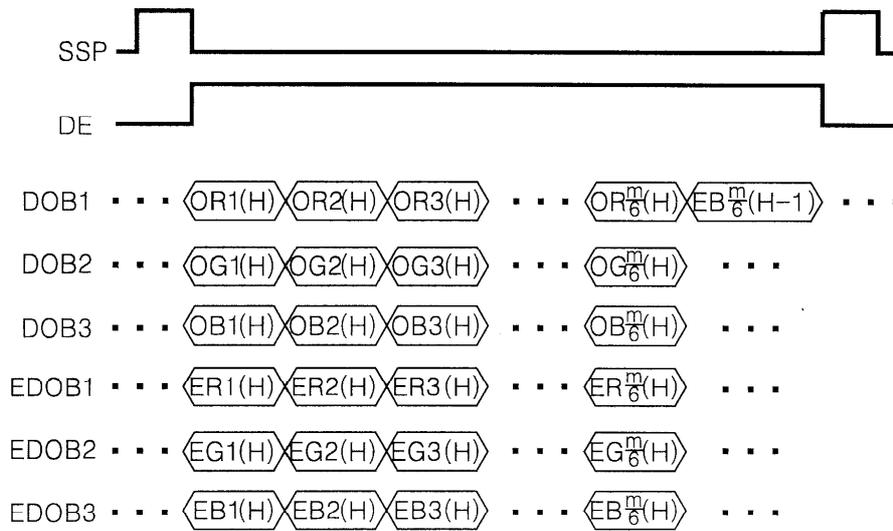
23a



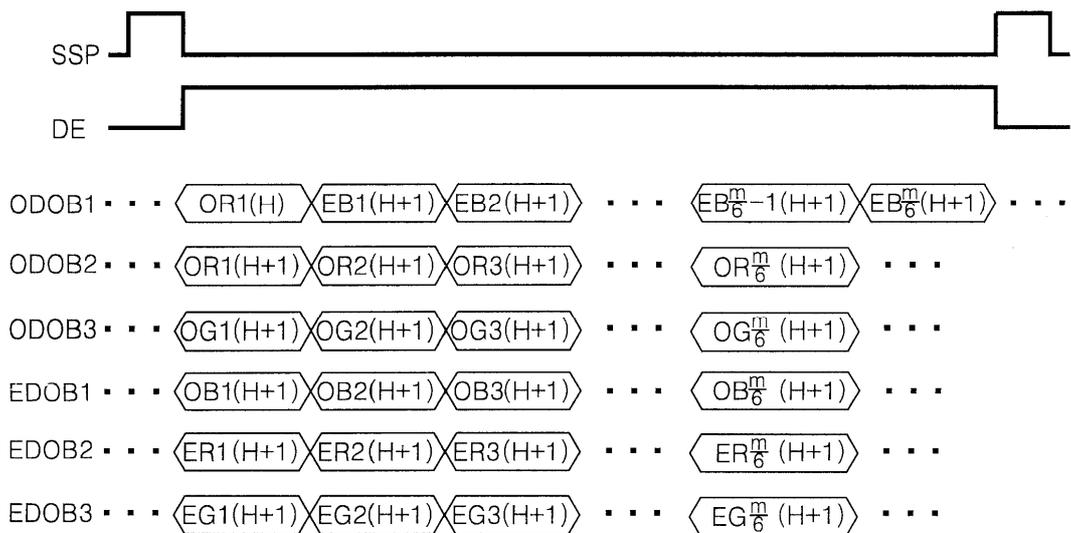
23b



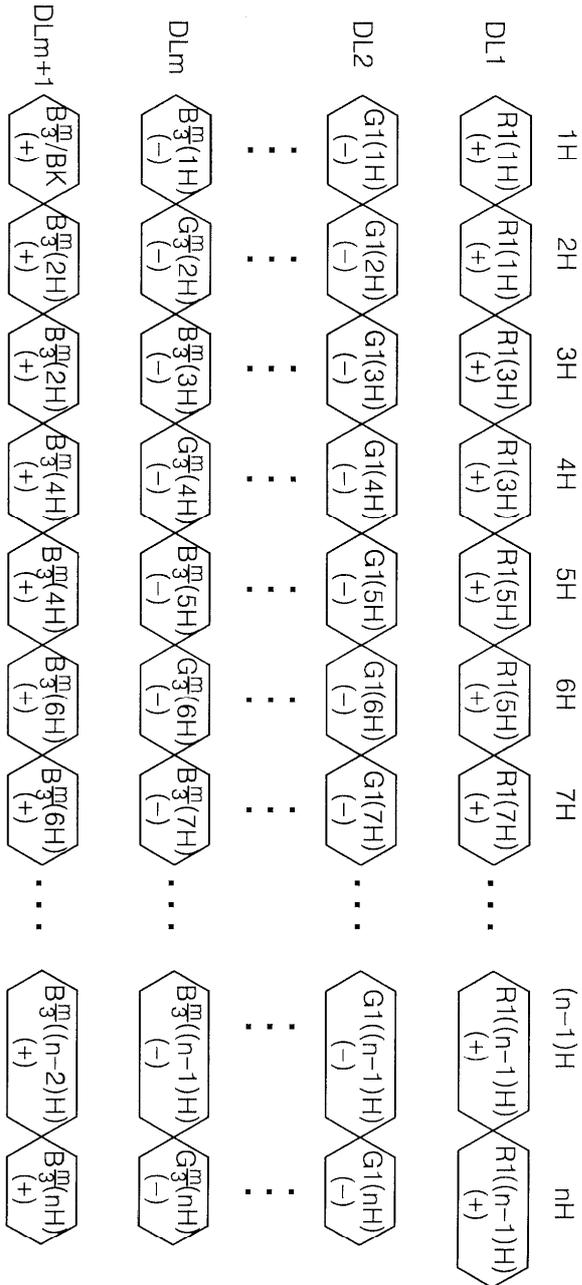
24a



24b

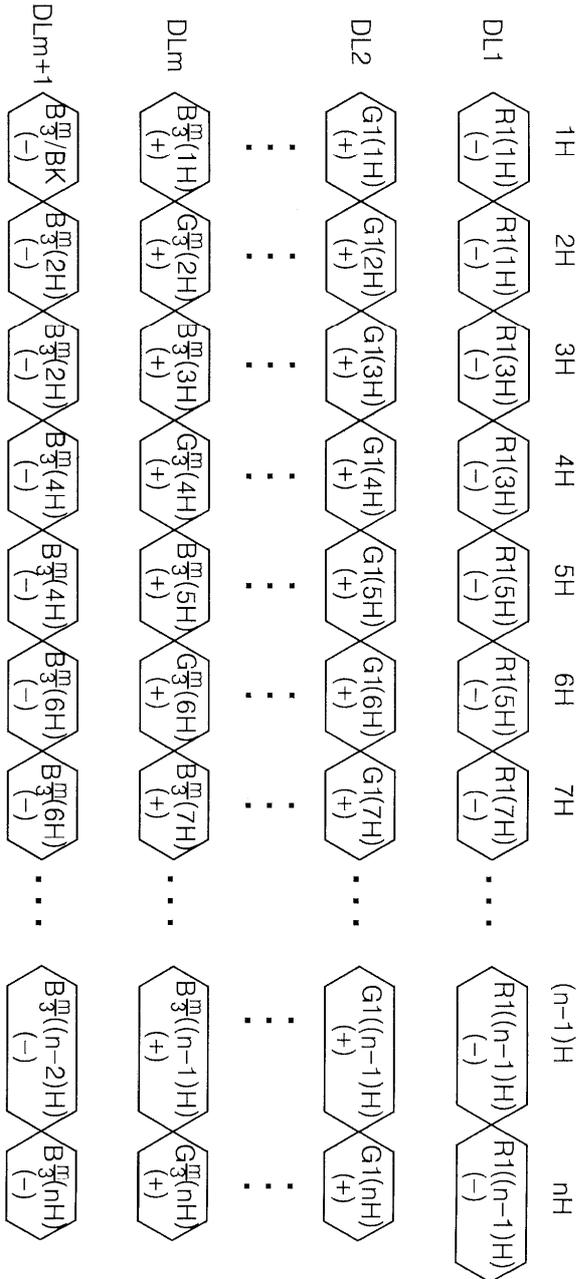


25a



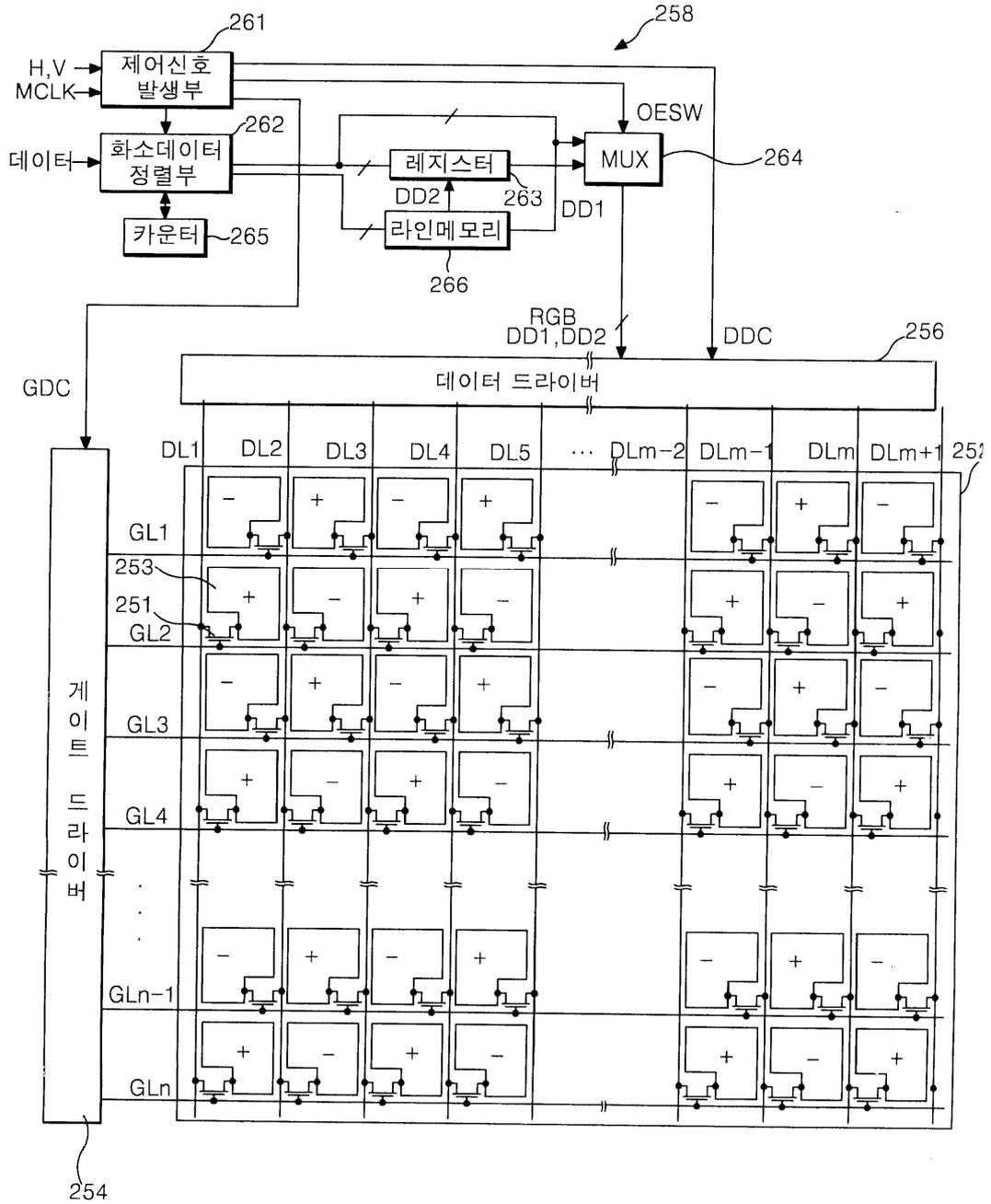
nth 프레임

25b

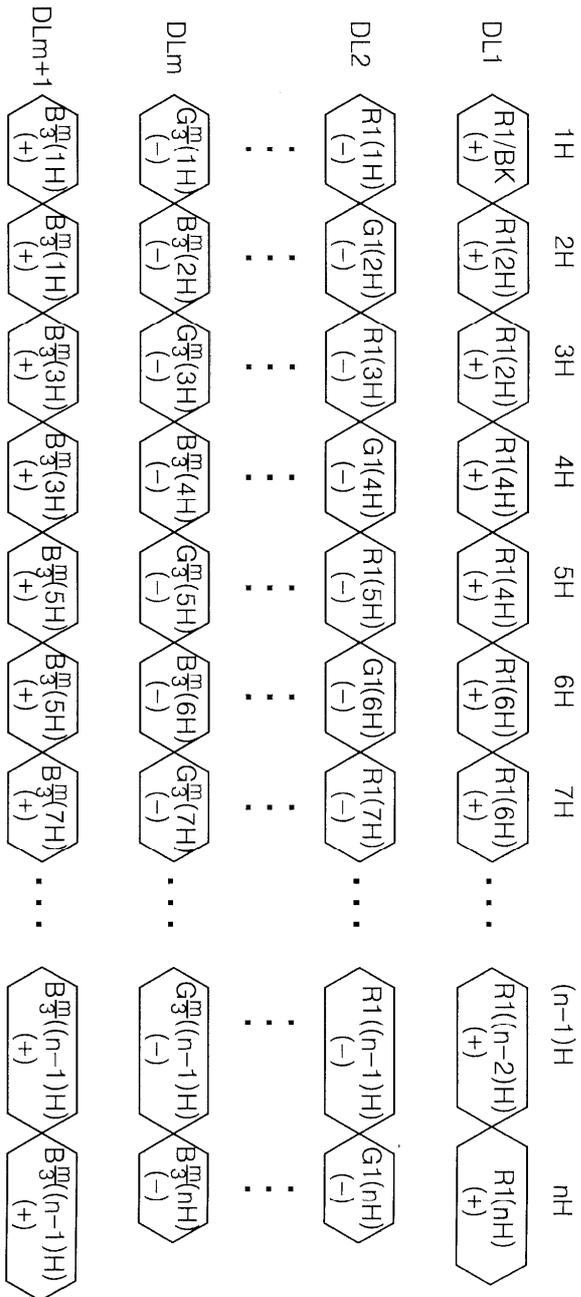


(n+1)th 프레임

26

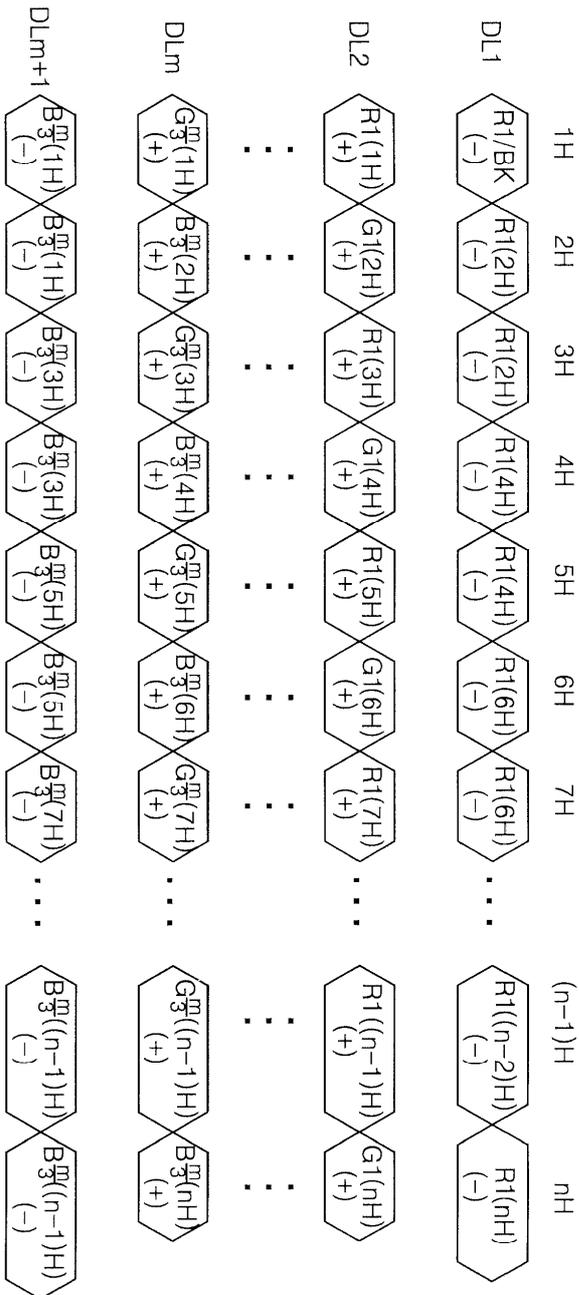


27a



nth 프레임

27b



(n+1)th 프레임

专利名称(译)	用于驱动液晶显示器的方法和设备		
公开(公告)号	KR1020030083313A	公开(公告)日	2003-10-30
申请号	KR1020020021795	申请日	2002-04-20
[标]申请(专利权)人(译)	乐金显示有限公司		
申请(专利权)人(译)	LG显示器有限公司		
当前申请(专利权)人(译)	LG显示器有限公司		
[标]发明人	LEE JAEWOO 이재우 YUN SANGCHANG 윤상창 PARK JUNHO 박준호		
发明人	이재우 윤상창 박준호		
IPC分类号	G09G3/36 G02F1/133		
CPC分类号	G09G2330/021 G09G3/3614 G09G3/3607 G09G3/3688		
代理人(译)	金勇 年轻的小公园		
其他公开文献	KR100853772B1		
外部链接	Espacenet		

摘要(译)

用于驱动液晶显示装置的方法和装置技术领域本发明涉及一种用于驱动液晶显示装置的方法和装置，其改善显示质量并降低功耗。根据本发明的用于驱动液晶显示器的方法和装置通过复制输入数据中的任何一个来产生伪数据，并且薄膜晶体管串联连接在相邻的两条数据线之间，扫描脉冲被提供给布置的液晶面板的栅极线，并且输入数据和伪数据被提供给液晶面板的数据线。6 指数方面 液晶显示装置，反转

