

(19) (KR)
(12) (A)

(51) 。 Int. Cl.⁷ (11) 2003-0089419
G09G 3/30 (43) 2003 11 21

(21) 10-2003-0019550
(22) 2003 03 28

(30) JP-P-2002-00142366 2002 05 17 (JP)

(71) 가 가
가 4 6

(72) 2-32 B101
1-842-1-508

(74) :
:

(54)

가 , 가 , 가 가 .
, ,
.
, ,
.

1

EL , , TFT, ,

1 1 ,

[illegible]

29

31~37 TFT

38~39

40

41

42 TFT()

51~56 TFT

57~58

59~60

71~77 TFT

78~80

81

82

91~102 TFT

103~106

108

111

112

113 TFT()

121~127 TFT

128~129

130~131

150

151~154 TFT

155

156 EL

157

161

162

가 , , 가 .

가 , (, EL) EL

가 , EL , EL , (TFT) ,

가 EL , , 가 EL , (1) EL 가 ,

. (2) , . (3) EL , IEEE, IDEM98, 875-878 7, 8

EL 14 . (150) EL (156) ,

TFT(151~154), (155) (IDADA) ,

TFT(151, 153) (ON) , TFT(151, 152) EL (156) (IDADA)가

, (155) TFT(152)가 (IDADA) (V) .

EL (156) , TFT(154) , TFT(152) , EL (156) (I

(155) (V) , TFT(154) , (IDADA) EL 가

DATA) . EL (156) , EL EL 가

EL 2 , (IDADA)

14 , , (161)

EL (161) (162) 가 , EL (157) ,

EL (162) (162) .

가 (162) $C() \times V() = I() \times t()$, EL , 가 ,

10 μ s, 1/100 1 μ s , 1/10

100 μ s 가 .

가 EL

1 , QVGA(320 × 240) 1 60 μ s, VGA(640 × 480) 30 μ s, XGA

(1024 × 768) 20 μ s 가 .

(多階調) , 1 가 EL

가 ,

(1) 1 (11) 2
(12)가 (12) TFT(13~18), (19, 20), EL
(21) EL (21) (29) TFT(13~18) n
(11) (D1, D2),
EL (21) (E1, E2), (12) (W1, W2, P1,
P2, L1, L2, R1, R2)

(22) (22) TFT(23, 24), (25)가
(S_pow), EL (21) (26)
(27), (27) (E1, E2) (27) (28)
(28) (29)

2 (1) (11), (12)가

2 (1) (L1~Ln,
W1~Wn, P1~Pn, R1~Rn), (D1~Dm), (E1~Em), (L1~Ln, W1~Wn, P1~Pn, R1~Rn)
(2), (D1~Dm) (3), (E1, E2)
(22) (2), (3), (22) TFT (1)
LSI (2) (11), (L
1~Ln, W1~Wn, P1~Pn, R1~Rn)

(3) (22)
(2) (L1~Ln, W1~Wn, P1~Pn, R1~Rn) 2 (2 値)(2)
(3) D1~Dm
(11) (29), (12) EL (21)
(12) EL (21) (1) , 2
(29) , 2 EL
EL , EL (21) , , ,

1 (11) (12) 2×2 4
VGA(640 ×RGB 3 ×480) m=1920
n=480 가 (D1~Dm), (E1~Em) 1920 , (L1~Ln, W1~Wn, P1~
Pn, R1~Rn) 480 가

3(A) 1 , 3(B)
1 3(A)

3(A) , A1, A2, B1, B2, C 가

$$S_{\text{pow}}, L1, R1, P1, W1, D1 \cdot a, b$$

$$+ () \cdot S_{\text{pow}}, L1, R1, P1, W1 \cdot H \cdot L \cdot 2 \cdot ($$
2 値) , D1 (12) TFT (OFF) 3(A)
'1' 1 , 1 (12) , 3(A) L1, R1, P1, W1, D1
3(B) (11) , 1
, (12)
1 , C A, B, EL 가
A , A1 B1
A2 , B
B2 A A1 1 2
, 3 가 , B A B1 1 2 , 3
B A2 n B1 B2
A1 , TFT(13~15) (19)가 (D1)
(Vdata) , (19) P1 H , TF
T(15) b W1 H , TFT(13)가 b H
, P1 L , TFT(14) 가 a b TFT(14)
/ 가 (Vth) , (19) Vdata-
19) Vth
A2 , L1, R1, P1, W1 (D1)
, TFT(13)가 (19)가 Vdata-Vth
B , S_pow L , (22) TFT(23) , (E1) (25)
(27) 가 (E1) (iref) (27)
, iref Vx/Rx(Vx: (27) , Rx: (25)) (25) 가
(27) E1, E2
TFT(24)
B1 , TFT(16~18) (20)가 B1 L1 R1 H , TF
T(16, 17) , TFT(18) (22) (iref)가 TFT(18)
, TFT(18) - TFT(18)가 - (iref)
(Vref) (20) 가 , L1 R1 L TFT(16, 17)가
가 TFT(18) 0 , (20) (Vref)
B2 , (iref) , (L1, R1)가 L , TFT(16, 17)
가 (20)
C , S_pow H TFT(23)가 , (22)
(22) (26) (E1, E2) , L1 H , TFT(16)
TFT(18) (26) 가 , TFT(18) (20)가
(Vref) (iref) , EL (21) iref가 , EL (21)
(EL :).
, (D1)
C , (D1) , (12)
a , a TFT(14) (Vth) (12) A1 (Vdata) , (20)
, TFT(14)

가 TFT(14)
, TFT(18) 가 0 b L Iref TFT(18) 가
(EL :).

EL (21) (12) (19) (Vdata)
0% 100% Iref (12)

ata)- (gamma) (Vd

가

(Vdata)

1 가

(12) EL (21) (iref) (E1) 가
(Vdata)

EL

1 EL 가 EL

(2) 4 (12)가 2 2 (12) TFT(31~37), (11) 2 (38, 39)
1~37) p , EL (21) . EL (21) (29) . TFT(3

(11)
(E1, E2) , (12)
, EL (21) (D1, D2),
(W1, W2, P1, P2, R1, R2)
(12) (26) (S_pow)

(40) (40) (41) (E1,
E2) TFT(42)가
(27) (28) (27) (28) (29) (E1, E2) (

2 (1) (11) (12)가

2 n, P1~Pn, R1~Rn), (D1~Dm), (E1~Em) 2 (P1~Pn, W1~Wn, R1~Rn) (W1~W
(2), (D1~Dm) (3), (E1, E2) (40)
LSI (2), (3), (2) (40) TFT (1) (P1~Pn, W1~Wn,
R1~Rn) (11) (3) (40) (P1~Pn, W1~Wn, R1~Rn) 2

2 (3) D1~Dm (11) (29) (12) EL (21) 2
(12) EL (21) (1)

EL EL (29) 2 EL (21) 2 (L1~Lm)

4 (11) (12) 2x2 4 m=1920
, VGA(640 xRGB 3 x480) (D1~Dm), (E1~Em) 1920 (P1~Pn, W1~Wn, R1
~Rn) 480 가 가

E1, E2) 2 가 1 , 가 p , (EL (21) (40) (E1, E2) (40) .

3 2 , 1 , n , 1 2 가) , H L p , (E1, E2) EL (21) - (, 3 L1, L2 .

(40) , (27) , iref Vx/Rx(Vx: (27) , Rx: (41)) (25) 가 가 .

A , TFT(31~33) (38)가 , (38) .

B , TFT(34~37) (39)가 , (39) TFT(34)가 - (Iref) (Vref) .

C , (D1) , (12) (38)가 (Vdata) (12) 0% 100% / iref , (12) (Vdata) , 2 가 .

EL (12) EL (21) (iref) , (E1) 가 (Vdata) EL .

2 , EL , 가 EL .

(3) 5 3 (12)가 3 (12) TFT(51~56), (57, 58) (11) 2 , EL (21) . EL (21) . TFT(51~56) n , (59, 60) . TFT(56) (57) (59, 60) (29) , (59, 60) (29) .

(11) (D1, D2), EL (21) (E1, E2) , (12) (W1, W2, L1, L2, R1, R2) .

(22) , (22) TFT(23, 24), (25)가 (S_pow), EL (21) (26), (27) , (27) (E1, E2) . (27) (28) (28) (29) .

2 . (1) (11) , (12)가 .

2 W1~Wn, R1~Rn), (D1~Dm), (E1~Em) , 3 (1) (L1~Ln, (2), (D1~Dm) (3), (E1, E2) (22) SI . (2), (3), (22) TFT (1) , (L1~Ln, W1~Wn, R (2) (11) ,

1~Rn) (3) (22) (2) (L1~Ln, W1~Wn, R1~Rn) 2 (3) D1~Dm (11) (29) (12) EL (21) (1) (29) 2 EL EL (4) EL (21) 2 (P1~Pm) (5) (11) (12) 2x2 4 VGA(640 xRGB 3 x480) (D1~Dm), (E1~Em) 1920 m=1920 (L1~Ln, W1~Wn, R1~Rn) 480 가 (6(A) 3 (6(B) 1 (6(A) B1, B2, A1, A2, C 가 S_pow, L1, R1, W1 ILED EL (21) S_pow, L1, R1, W1, D1 H L 2 H (12) TFT (12) TFT 가 6(A) D1, L1, R1, W1 '1' 1 , 1 (12) 6(B) (11) 1 (12) 1 C B, A, EL 가 B1 B2 A A1 1 2 A1 A2 , 3 가 B B1 1 2 , 3 B2 A C 가 8 3 , 64 6 가 6 가 8 3 (DATA) A 가 (b2~b0) (D1) , 4:2:1 (27) S_pow L (22) TFT(23) (E1) (25) Vx/Rx(Vx: (27) , Rx: (25)) (iref) (27) , iref (25) 가 가 (27) E1, E2 TFT(24) B1 TFT(53~57) (58)가 B1 L1 R1 TFT (54~56) , TFT(53) (22) TFT(53)가 TFT(53) (iref)

가 TFT(53) (Vref) , (58) 가 , L1 R1 L , TFT(54~56)가
 가 B2 , (iref) (L1, R1)가 L , TFT(54~57)
 가 (58) (Vref) .
 A1 , TFT(51, 52) (57)가 (D1) (DATA)
 (57) 2 (bx) , TFT(51) W1 H ,
 (57) (bx)가 가 (bx) H L 2 . W1 L
 (bx) (57) , TFT(52) / (57)
 , bx=H , TFT(52) , bx=L , TFT(52) 가
 , bx 1 A1 , (DATA) (b2, b1,
 b0)가 .
 A2 , , W1 (DATA) . , (D1)
 , TFT(51)가 , (19)가
 C , S_pow H , TFT(23)가 (22)
 가 (22) (26) (E1, E2) . , L1 H , TFT(55)
 (57)가 (bx)가 H , TFT(52)가 , TFT(55, 53, 52)
 (E1) EL (21) 가 TFT(53) (58)가 (iref)
 , EL (21) iref가 , EL (21) (EL :).
 (57)가 (bx)가 L , TFT(52)가 , TFT(52) 가
 EL (21) 0 , EL (EL :).
 , (D1) (bx) , EL (21) / .
 1 A C C 3 , A , (D1) (b2
 ~b0)가 C EL (21) , (b2~b0) / 가 .
 C 가 (DATA) 8 가 , 1 EL (21)
 (DATA) 8 . , (DATA)
 , 3 , 가 .
 , 1 A C , .
 , 3 , 1 2 p
 , (12) EL (21) (iref) , (E1) 가
 EL (Vdata)
 3 , EL , 가 EL .
 (4) 7 4 (11) 2
 (12)가 (12) TFT(71~77), (78~80), (82)
 , EL (21) . EL (21) (29) . TFT(71~77) n
 . TFT(74) (81)
 (28) (82) EL (21) 가
 , 가 가
 , EL (21) EL ,
 EL .

(11)
EL (21) (E1, E2) , (12) (Dp1, Dp2, Dn1, Dn2), (W1, W2, L1, L2, R1, R2) .

(22) , (22) TFT(23, 24), (25)가 (S_pow), EL (21) (26), (27) , (E1, E2) (27) (28) (28) (29) .

2 (1) (11) , (12)가 .

2 W1~Wn, R1~Rn), (Dp1~Dpm, Dn1~Dnm), (E1~Em) , (1) (L1~Ln, W1~Wn, R1~Rn) (2), (Dp1~Dpm, Dn1~Dnm)(D1~Dm) (3), (E1~Em) (22) (2), (3), (2) 2) TFT (1) , LSI (2) (11) , (L1~Ln, W1~Wn, R1~Rn) (3) (22) (L1~Ln, W1~Wn, R1~Rn) 2 (3) (Dp1~Dpm, Dn1~Dnm) 2 (11) (29) , (12) EL (21) 2 (12) EL (21) (29) (1) , 2 EL EL , EL (21) 2 , (P1~Pm) .

7 (11) (12) 2×2 4 , VGA(640 ×RGB 3 ×480) , m=1920 , (L1~Ln, W1~Wn, R1~Rn) 480 가 (D1~Dm), (E1~Em) 1920 , (L1~Ln, W1~Wn, R1~Rn) 480 가 .

8(A) 4 , 8(B) 1 8(A) .

8(A) , A1, A2, B1, B2, C 가 S_pow, L1, R1, W1, Dp1, Dn1 . VC 78, VC79 (78, 79) . IREF TFT(75) , ILED TF T(73) EL (21) , IBYP TFT(74) . Dp1, Dn1 T + S_pow, L1, R1, W1 H L 2 , L (12) TF T H (12) TFT , 8(A) , 8(A) Dp1, Dn1, L1, R1, W1 '1' 1 , 1 (12) .

8(B) (11) , 1 (12) .

1 , A, B, EL 가 A A A1 1 2 A1 3 B B1 1 2 B2 . A1 3 B B1 1 2 B2 . A1 (Vdata1, Vdata2) T(71~74) (78, 79)가 , T(71, 72) (Dp1, Dn2) W1 H

, (78, 79), VC78=Vdata1, VC79=Vdata2가 . W1 L
(78, 79) (Vdata1, Vdata2) .

A2 , (W1)
(Dp1, Dn1) , TFT(71, 72)가 (78, 79)가
(Vdata1, Vdata2) .

B , S_pow L , (22) TFT(23) , (E1) (25)
(27) 가 . (E1) (iref) , (27) , iref
Vx/Rx(Vx: (27) , Rx: (25)) . (25)
(27) E1, E2 , 가 TF
T(24) .

B1 , TFT(75~77) (80)가 . B1 L1 R1 H
TFT(76, 77)가 . , TFT(75) (22) (iref)가 . TFT(75)
, TFT(75) - TFT(75)가 - (iref)
(Vref) , (80) 가 . , L1 R1 L , TFT(
76, 77)가 가 , TFT(75) 0 , (80) TFT(75)가 (Vref)

B2 , (iref) , (L1, R1)가 L , TFT(76,
77)가 , (20) .

C , S_pow가 H , TFT(23)가 (22)
(22) (26) (E1, E2) . , L1 H , TFT(77
)가 , (E1) , TFT(77, 75) , TFT(73, 74) , (ILED) EL (
21) (28) , (IBYP) (82) (81) .

ILED=i1, IBYP=i2 가 , i1 i2 Vdata1 Vdata2 . TFT(73, 74)
(Vdata1, Vdata2) TFT(73, 74)
(Vdata1, Vdata2) 가 가 . , 9 i1
i2 Vdata1 Vdata2 . 9 Vdata1 Vdata2 i1 i2
. Vdata1-Vdata2가 , TFT(73) 가 TFT(74) , i1 가
. Vdata1-Vdata2가 , TFT(74) 가 TFT(73) , i2가
가 . , Vdata1-Vdata2 , i1+i2=iref가 .

EL (21) (i1) , L1 , 1
(12) (i1) .

, 9 (Vdata1, Vdata2) (Dp1, Dn1)
, , 4 가

, (12) EL (21) (iref) , (E1) 가
(Vdata1, Vdata2)
2) iref EL .

4 , EL , 가 EL .

(5) 10 5 (12) TFT(91~102), (103~106) (11) 2
(21) (12)가 . EL (21) (29) . TFT(71~77) n , EL
 .

TFT(94~97, 100) (103~105) (108) , (1
08)

TFT(100) TFT(97~99) , , TFT(97) TFT
 (106) 4/7, TFT(98) 2/7, TFT(99) 1/7 .

(11) 3 (Dbus1, Dbus2),
 (E1, E2) , (12) (W1, W2, L1, L2, R1, R2)
 . (Dbus1, Dbus2) b2, b1, b0 .

(111) , (111) TFT(113), (112)가
 (27) , (E1, E2)
 . EL (21) , (26) (108), (29) .

2 (1) (11) , (12)가
 .

2 5 (1) (L1~Ln,
 W1~Wn, R1~Rn), (Dbus1~Dbusm), (E1~Em) , (L1~Ln, W1~Wn, R1~Rn) (L1~Ln,
 (2), (Dbus1~Dbusm)(D1~Dm) (3), (E1, E2) (111) (2), (3), (111) (3),
 TFT (1) , LSI (2) (11) (11)
 (L1~Ln, W1~Wn, R1~Rn) (3) (2) (3)
 (111) (2)
 (L1~Ln, W1~Wn, R1~Rn) 2 (3) (Dbus1~Dbusm) (3)
 29) , (12) EL (21) . (12) EL (21) (11)
 (1) , 2 (29)
 , EL (21) 2 , EL EL .
 5 2 (P1~Pm) .

10 (11) (12) 2x2 4 ,
 , VGA(640 xRGB 3 x480) m=1920 ,
 n=480 가 (Dbus1~Dbusm), (E1~Em) 1920 , (L1~Ln, W1
 ~Wn, R1~Rn) 480 가 .

11(A) 5 , , 11(B)
 1 11(A) . 11(A) .

bus1 A1, A2 가 . L1, R1, W1, D
 b . VC (103~105)가 , b
 . IREF TFT(100), ILED EL (21)
 . L1, R1, W1, Dbus1 H L 2
 FT . H (12) TFT , L (12) T
 가 . 6(A) Dbus1, L1, R1, W1 '1' 1 , 1
 (12) ,

11(B) (11) , 1 .
 , (12) .

1 A A , A A1 1 A1 2 , 3
 , A2 n . A A A2 .

A , (E1) (111) (112) (27) 가 . (E1)
 (iref) (27) , iref Vx/Rx(Vx: (27) , Rx: (111)
) (111)
 , 가 가 , (27) E1, E2
 , TFT(113) .

A1 (91~93) , (Dbus1) W1 L H b2~b0 3 (DATA) , TFT (DATA)
) 가 . W1 L (103~105) (103~105) (DATA) , L
 . TFT(94~96) / (103~105) , H , L
 가 .

, A1 (111) L1 R1 H (iref)가 , TFT(101, 102) , TFT(100)
 TFT(100)가 - , TFT(100) -
 (106) 가 , L1 R1 L (iref) (Vref) ,
) 0 , (106) (Vref) , TFT(101, 102)가 가 TFT(100)

A2 (91~93)가 , (iref) W1, L1, R1 L , TFT(
 가 , (103~105)가 (DATA) , TFT(101, 102)
 가 , (106) (Vref) .

, TFT(106) TFT(97~99) , , TFT(9
 7) TFT(100) 4/7, TFT(98) 2/7, TFT(99) 1/7 (106)가
 (Vref) TFT(97~99) 가 , TFT(94)가 TFT(97) (4/7)
 xiref가, TFT(95)가 TFT(98) (2/7)xiref가, TFT(95)가 TFT(97) (1/7)xiref가

가 EL (DATA) 8 (ILED)가 , EL (21) (103~105)가
 (0/7,1/7,2/7,3/7,4/7,5/7,6/7,7/7)xiref 가 .

EL (21) (12) (ILED) , 1 , 1
 (Dbus) (12) (ILED) . , (DATA)
 가 , 5

, (D1, D2) , TFT TFT(97~99)
 , .

, (12) EL (21) (iref) , (E1) 가
 iref EL , (DATA)

5 , EL , 가 EL .

(6) 12 6 (11) 2 , E
 L (21) (12)가 . EL (21) (12) TFT(121~127), (128, 129) , E
 n (21) , n TFT(121) p TFT(122) p 가
 . TFT(121) (130) , TFT(124) (131)
 (130, 131) , (29)
 (11) (D1, D2), EL (21)
 (E1~Em) , (12) (W1, W2, L1, L2, R1, R2)

(22) , (22) TFT(23, 24), (25)가
 (26), (27) , (S_pow), EL (21)
 (28) . (28) (29) (E1, E2) . (27)

2 . (1) (11) , (12)가

2 , 6 , (1) (L1~Ln,

$W1 \sim Wn, R1 \sim Rn), (D1 \sim Dm), (E1, E2), (L1 \sim Ln, W1 \sim Wn, R1 \sim Rn)$
 $(2), (D1 \sim Dm) (3), (E1 \sim Em) (22)$
 $(2), (3), (22) TFT (1)$
 $LSI (2) (11) (L1 \sim Ln, W1 \sim Wn, R1 \sim Rn)$
 $(3) (22) (L1 \sim Ln, W1 \sim Wn, R1 \sim Rn) 2$
 $(3) (D1 \sim Dm) (29) (12) EL (21) (12) EL (21) (29) (1) (21) EL (21) (P1 \sim Pm)$
 $2 EL EL EL (21) 2 (P1 \sim Pm)$
 $12 (11) (12) 2 \times 2 4$
 $VGA(640 \times RGB 3 \times 480) (D1 \sim Dm), (E1 \sim Em) 1920, m=1920, (L1 \sim Ln, W1 \sim Wn, R1 \sim Rn) 480$
 $13(A) 6 13(A) 13(B)$
 $1 13(A)$
 $A1, A2, C$
 $W1, R1, D1$
 $VC (129) a, b S_{pow}, L1, (21) ILED EL (21) H L$
 $2 D1 (12) TFT H S_{pow}, L1, W1, R1 (12) TFT 8(A) D1, L1, W1, R1$
 $'1' 1, 1 (12) 8(A)$
 $13(B) (11) 1$
 (12)
 $1 A, EL C$
 $A A A A1 1 A1 2, 3 A2$
 $A S_{pow} L (22) TFT(23) (E1) (25) iref$
 $(27) 가 (E1) (25) (27) (25) 가 가 TFT($
 $Vx/Rx(Vx: (27) Rx: (25)) 가 가 TFT($
 $24) E1, E2$
 $A1 L1 H R1 H TFT(124 \sim 126)가 T$
 $FT(127) (22) (iref)가 TFT(127) TFT(1$
 $27) TFT(127)가 (iref) TFT(124, 125)가$
 $Vref가 (129) (Vref) R1 L$
 $(129) (Vres) (128) a-b 가 TFT(123)가 TFT(121, 1 (Vre$
 $s) (Vres) (128) 가 (128)$
 $(D1) (Vdata) (128)$

2.
1 ,

3.
1 ,

4.
1 ,

5.
1 ,

6.
1 ,

7.
1 ,

8.
1 ,

9.
1 ,

10.
1 ,

가

가 1 가

14. **16.**

，

(掃引)

，

18.

가 , 가 , 가 , 가

가 , 가 , 가 , 가

18 19.

18 20.

18 21.

18 22.

18 23.

18 24.

n p

18 25.

18 26.

27.

18

2

1

2

28.

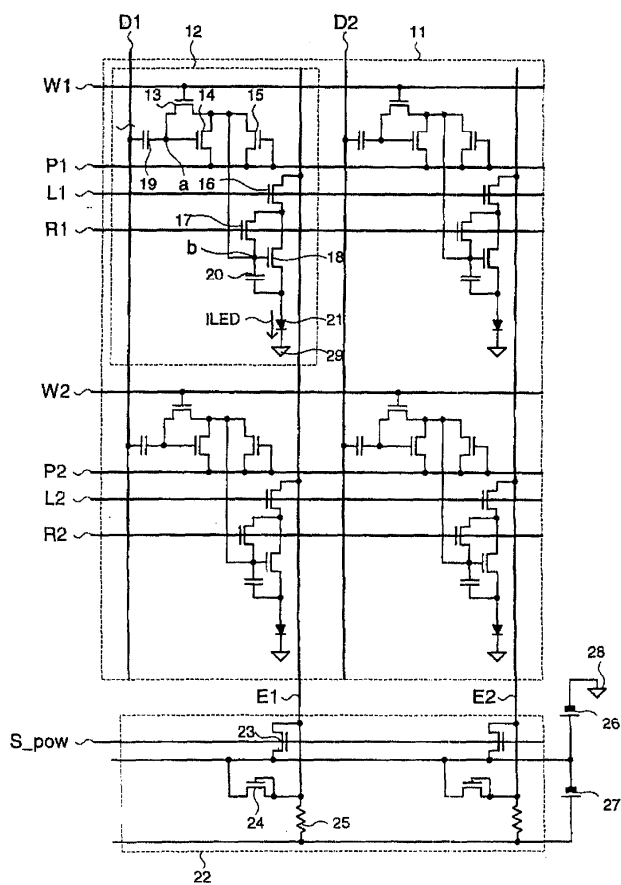
18

29.

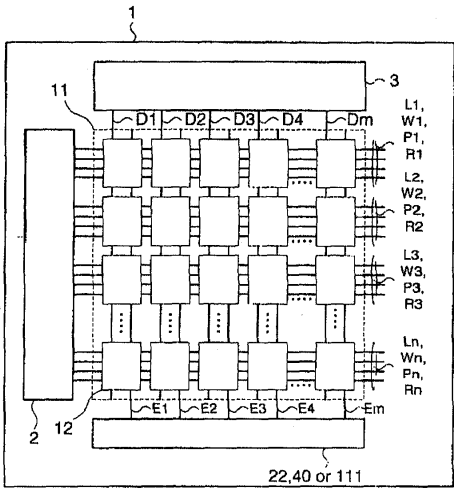
18

2

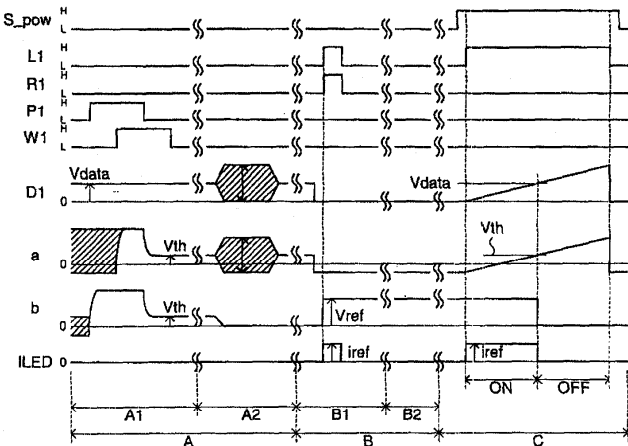
1



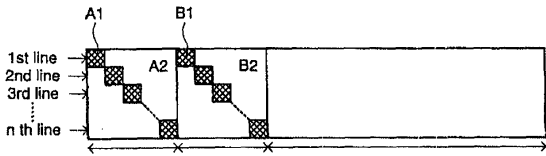
2



3

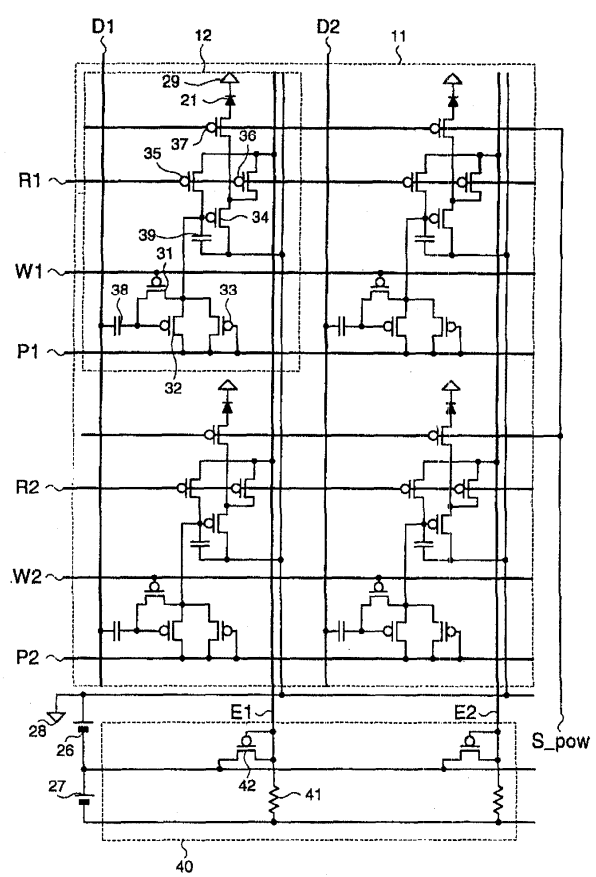


(A)

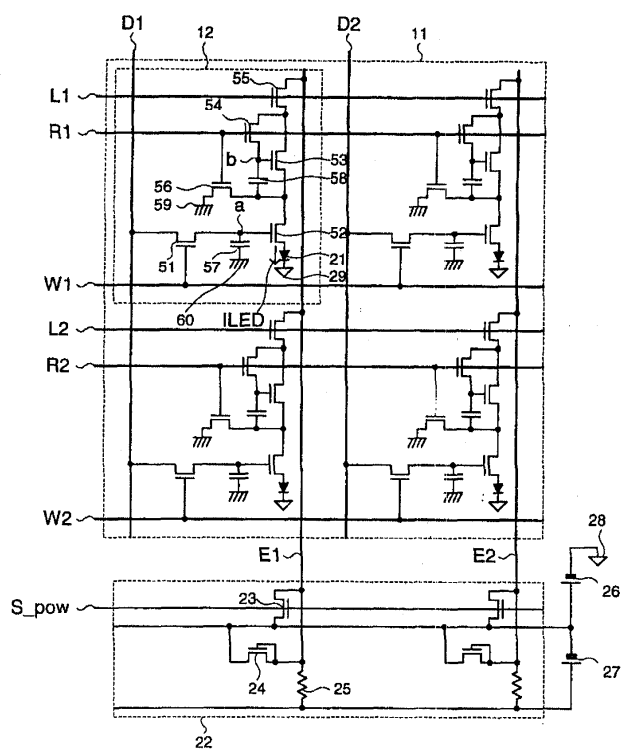


(B)

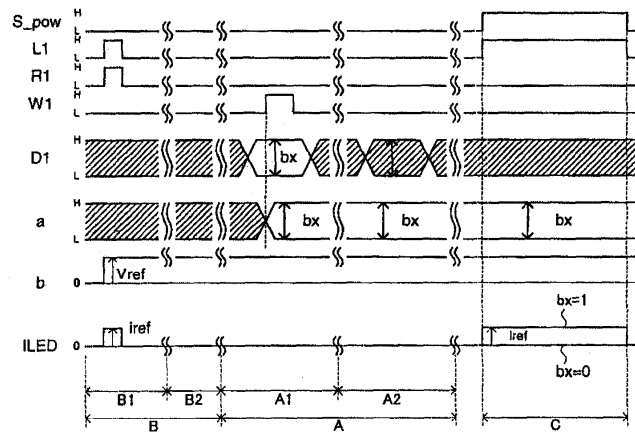
4



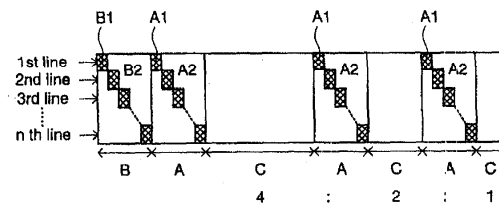
5



6

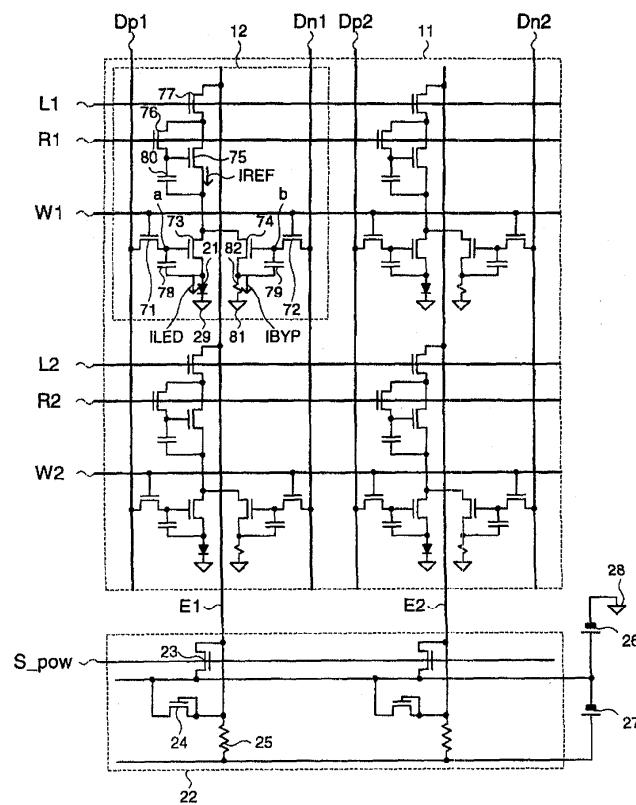


(A)

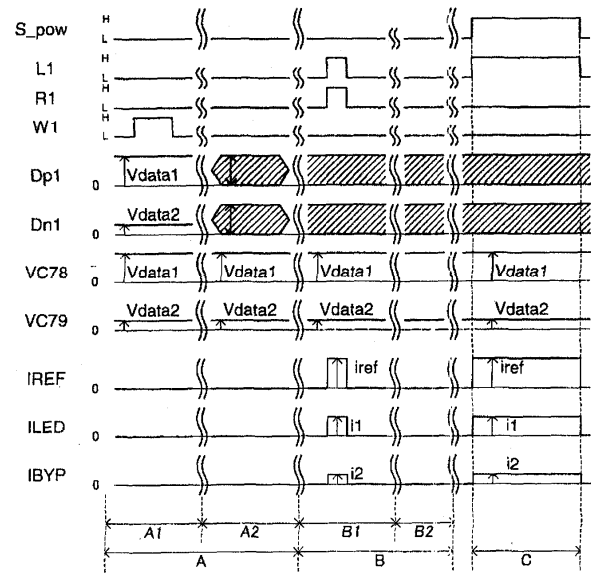


(B)

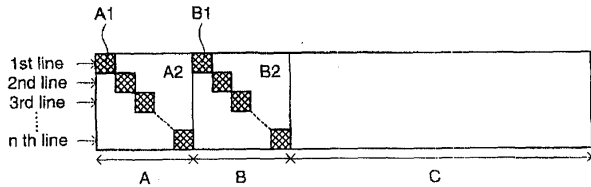
7



8

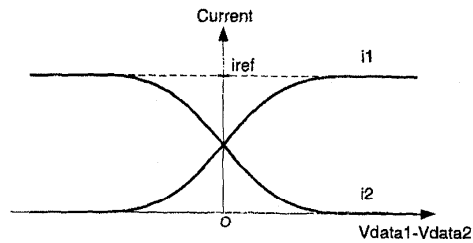


(A)

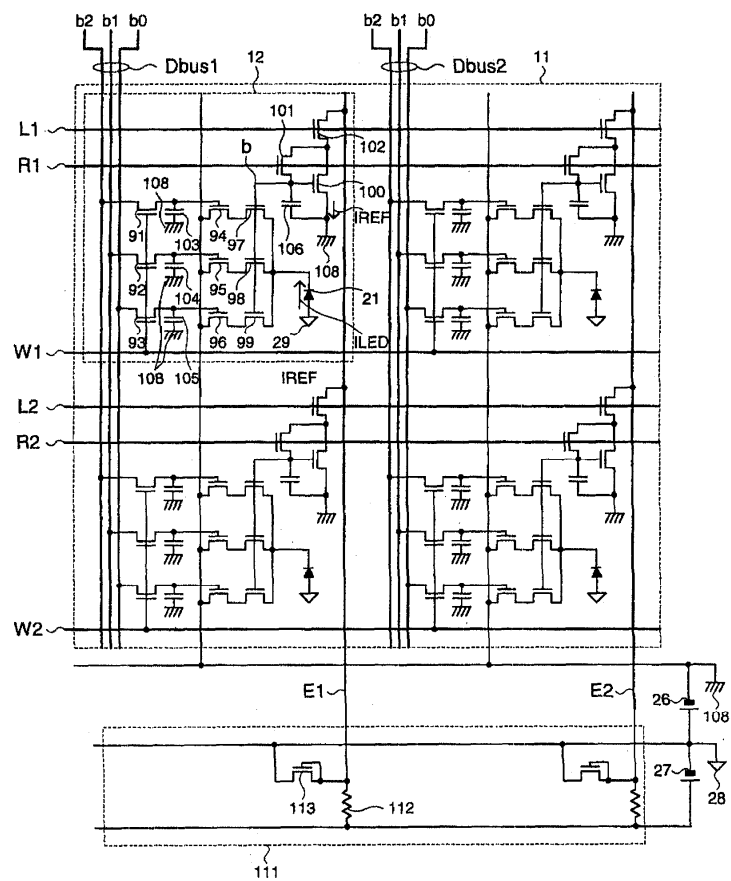


(B)

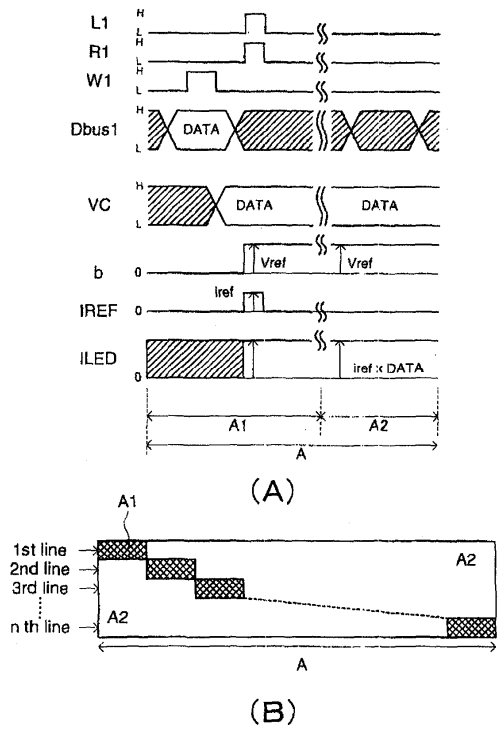
9



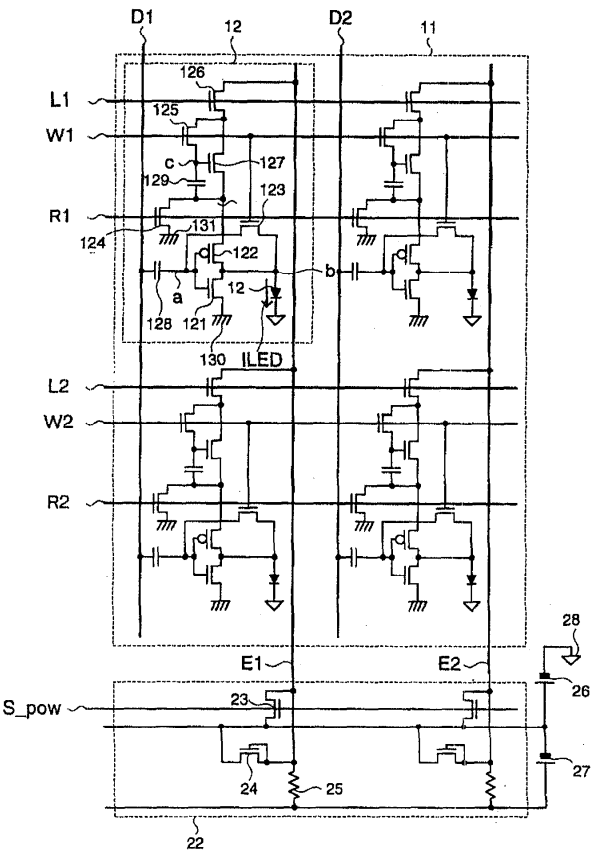
10



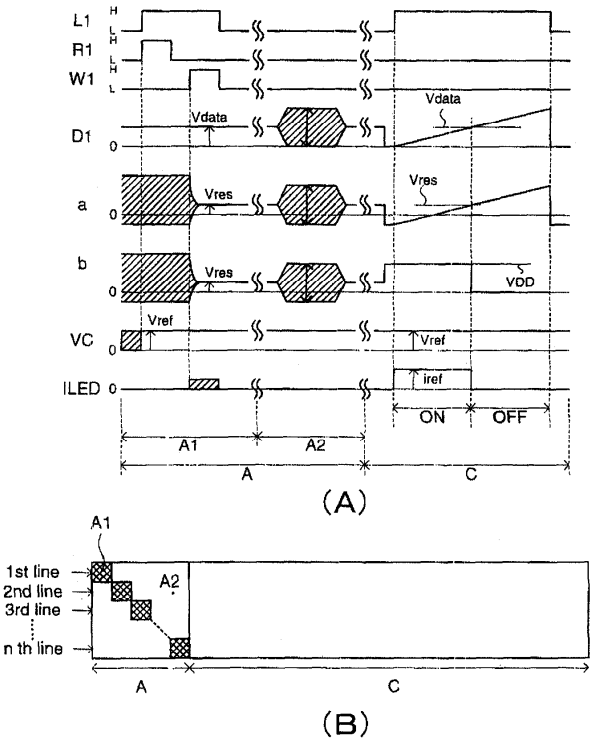
11



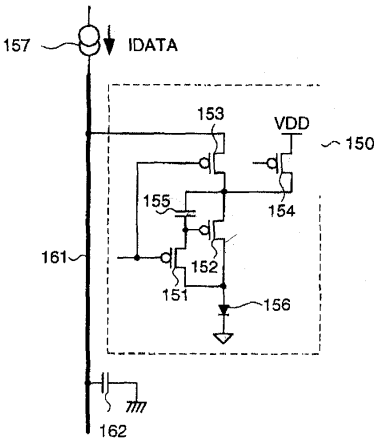
12



13



14



专利名称(译)	图像显示装置		
公开(公告)号	KR1020030089419A	公开(公告)日	2003-11-21
申请号	KR1020030019550	申请日	2003-03-28
[标]申请(专利权)人(译)	株式会社日本显示器		
申请(专利权)人(译)	株式会社日本排气量		
当前申请(专利权)人(译)	株式会社日本排气量		
[标]发明人	KAGEYAMA HIROSHI 카게야마히로시 AKIMOTO HAJIME 아키토하지메		
发明人	카게야마히로시 아키토하지메		
IPC分类号	H01L51/50 G09G3/30 G09G3/32 G09G3/20		
CPC分类号	G09G2300/0828 G09G2300/0852 G09G2300/0861 G09G2310/0262 G09G2320/043 G09G2300/0809 G09G3/2014 G09G2320/0252 G09G3/3233 G09G2310/066 G09G3/2011 G09G2300/0819 G09G3/2022		
优先权	2002142366 2002-05-17 JP		
其他公开文献	KR101005646B1		
外部链接	Espacenet		

摘要(译)

提供了能够在发光装置处于像素中的图像显示装置中分辨率高的多灰度表达的图像显示装置。本发明的图像显示装置配备有时间调制电路，该电流限制装置在像素电路中产生预定的驱动电流，并且调制向发光装置提供预定驱动电流的时间。本发明的图像显示装置配备有在像素电路中产生预定驱动电流的电流限制装置，以及基于预定驱动电流产生多个值的电流的电流产生电路。电致发光单元，保护二极管，电容器，TFT，玻璃基板，时间调制电路，电流限制装置。

