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2003 12 31

(21) 10-2003-0028535
(22) 2003 05 06

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10/065,665 2002 11 07 (US)

(71) , -
1 3

(72) - - 8th 121
- - 8th 121
- - 8th 121
- - 8th 121

(74)
:

(54)

(LCD)

가

1
 2 1 1
 3 1
 4 2
 5 3
 6 5 3
 7
 8

vel) 가 (gray le
 (LCD: Liquid Crystal Display) 가 , LC
 D LCD PDA CRT LCD
 (TFT: Thin Film Transistor) (LCD)(10) 1
 LCD(10) LCD (12), (14), 1 (16), 2 (18), 1 (20) 2 (22
) LCD (12) LCD (24), (24) (26) ((29)
 1 (20) (Vcom) (18) 1
 , (24) (26) LCD (12) (26)
 (24) 가 TFT LCD(10) (28) , (28) (30)
 TFT LCD(10) LCD (12) 가 (28) (30)
 TFT LCD(10) (14) TFT LCD(10)
 (14) (14)가 (32) (34) ,
 1 (16) 2 (18) 1 (16) 2 (18) 가 (30)
 (24) , DL3 (26)

GL3 (26) 2 (18) (28) (24)

(30) 1 (16) (28) (24) 가

(V' 0, ..., V' m) (V' 0, ..., V' n) (V' 0, ..., V' 9) (16) (17) (17)

256 (V 0, ..., V 256) 10 (V' 0, ..., V' 9) (V 0, ..., V 256) (36) (17)

(36) (28) LCD (12)

1 2 (17) 2 1 (V 0 V n) (16) 1 (16) (28)

(56) (37) (37)

(44, 45, 46, 47, 48 49) (44, 45, 46, 47, 48 49) (44, 45, 46, 47, 48 49)

(56) (37) MUX3 MUX8

6 (14) (D3 D8) (16) MUX3

MUX8 (V 0 V n) (36) (DAC) MUX3

1 (16) (V 0, ..., V n) (V 0, ..., V n) (36)

(34) (14)가 (16) 2 (18) (32) (66)

2 (18)가 가 1 (16) 2 (18)

(24) DL3, DL4, DL5, DL6, DL7 DL8 (38, 39, 40, 41, 42 43) 1 (16)

(37) (V 1) (36) (44, 45, 46, 47, 48 49)

(MUX3, MUX4, MUX5, MUX6, MUX7 MUX8) V 1 (38, 39, 40, 41, 42

43) (44, 45, 46, 47, 48 49) V 1 (44,

45, 46, 47, 48 49) (50, 51, 52, 53, 54 55) (36) (25) DL3, DL4, D

L5, DL6, DL7 DL8 (44, 45, 46, 47, 48 49)

가

가

가

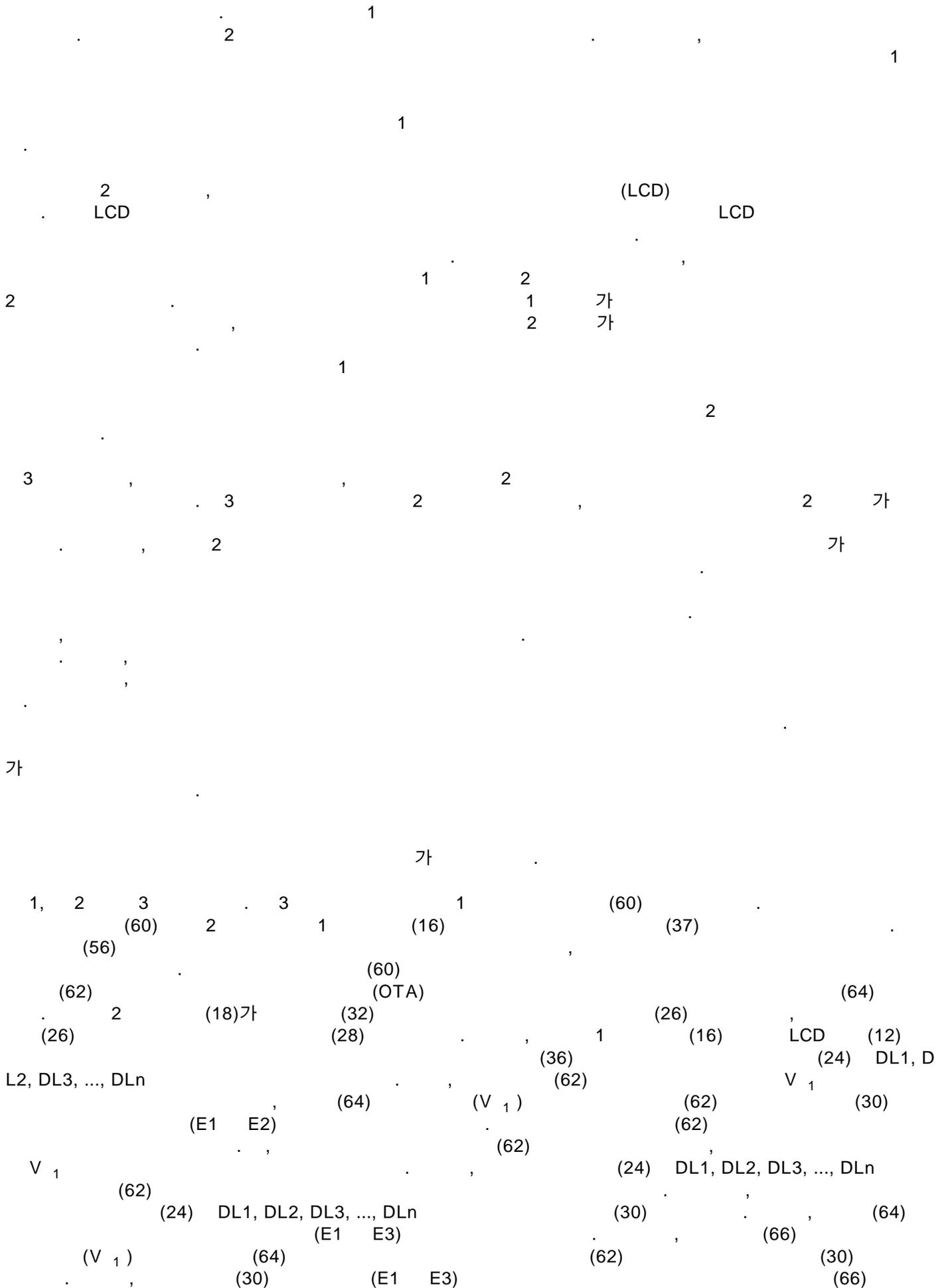
가

LCD

1

(LCD)

LCD



(30)

가

(66)

(64) (E1 E2) (V₁) 5V
 (24) DL1, DL2, DL3 D4 (62)
 5V (24) DL1, DL2, DL3 D4 (62)
 4.8V, 5.1V, 4.7V 4.9V (64) DL1, DL2, DL3 D4 (62)
 (24) DL1, DL2, DL3 D4 (E1 E3) (66)
 4.8V, 5.1V, 4.7V 4.9V (24) DL1, DL2, DL3 D4
 (66) (24) (24)

(17)

가

가

2 (70) 4 2 (70)
 (S1, S2) (72, 73, 74 75) (72, 73, 74 75)
 , 74 75) (S1, S2) (DL1, DL2, DL3 DL4) (72, 73
 (72, 73, 74 75) (70) (S1)
 (DL1, DL2, DL3 DL4)
 (72, 73, 74 75)
 (72, 73, 74 75)
 V1 (DL1 DL2)
 (72 73) (S1) (72 73)
 (72, 73, 74 75) (DL1 DL2) (DL1 DL2)
 (72 73) (DL1 DL2) (DL1
 DL2) (73 74)
 (DL2 DL3) (73 74)
 (S2) (S)
 2) 가 (72, 73, 74 75) (72, 73, 74 75) (S1)가
 (DL1, DL2, DL3 DL4) (S2) (72, 73, 74 75)
 가 (S1) (S2)
 (S2) 가 (S2)
 , 2 (70) LCD 가 (DL1
 DL2) 가 (S2) (DL1
 3 (56) (S2)
 (70)
 1 (16)
 3 (80) 5 3 (80) 2
 (72 74) (S1 S2) 5 (73 75)
 , DL1 DL2 (S2) (S2)
 , 2 가
 (DL1, DL2, DL3 DL4) '+' , '-' , '
 +', '-' '-' , '+' , '-' , '+'
 (S2) (DL1 DL3)
 가 (72 74) (S1) (DL1 DL3)
 (72 74) (DL1 DL3) (S2)가 (DL1 DL3)
 (DL1 DL3) (72 74) (DL1 DL3) (7
 2 74) (DL1 DL3)

(DL1 DL3) (DL1 DL3) 가

(S2) (S2)

3 (80)

3 (56) LCD (S2)

1 (70) (16)

(82) 5 3 (80) 6

가 (82) 3

6 'RGBRGRGRGRGB' (82)

(82) 2 (82) (82)

가 (82a 82c) '+' 가 (82b 82d) '-'

(82a 82c) (82a, 82b, 82c 82d) (S2)가 '+'

(80)가 (S2) (82b 82d) (S2) 3

3 (56) (60)

(56) (66) 가 (24)

(56) (66) (56)

가 (66)

(S2) 4 5 (S2) (70 80)

(S2)가 (70 80) (70 80) (

S2) 56) (66) (

3 (80) (70) LCD LCD

2 LCD LCD

3 (80) (70) LCD LCD

LCD XOR TFT LCD (S2)가

가 XOR 가 XOR TFT L

CD (S2) XOR XOR

3 (64) 4 LCD (12) (S1, S2) 1 (14)

(94), (96) (90) (98) (90) (90) (92),

(92) (92) (CLK1) (N1) '00', '01', '10'
 (N1) (Pd) (Pd) (N1) '1', '2', '3' '4' (f2) (N1) (N1)
 '11' (N1) (102) f1/N1 (f2) (N1) (N1)
 (CLK1) 가 f1 , (102) '11' 가 (92) (N1) (N1)
 f1)가 108KHz (102) 가 27(108/4) KHz가 (102) (102)
 (102) 가 (f2) (CLK1) (102) (102)
 (94) 가 (94) (N2) (102) (102)
 6) (C0, C1, C2 C3) (94) (N2) C0, C1, C2 C3 (9)
 (94)가 216 (102)
 '1', '0', '1' '0' C0, C1, C2 C3 (96) 1 27K
 (102) (f2) 27KHz (94) 8ms C0, C1, C2 C3 '1', '0', '1' '0'
 (94) (96) C0, C1, C2 C3 (Pc) (96)
 (N3) '10' 가 (Pc)가 (96)
 (N3) '1010' C0, C1, C2 C3 (94)가 '1', '0', '1' '0' C0, C
 (96) (96) '1' (102)가 (N2)
 1, C2 C3 가 (94) (94) '1', '0', '1' '0' C0, C1, C2 C3
 (96)가 C0, C1, C2 C3 (1010)가 (N3)(1010)
 (96) '1' '0' (EN)
 (98) (96) (104) (CLK2)
 92), (94) (96) (104) (90) (104)
 (CLK2) (104)
 (98) (104) (CLK2)가 (EN)
 (EN)가 '1' 가 (104)가 (EN)
 (EN)가 '0' 가 (CLK2)가 (EN)
 (EN)가 '1' 가 '0' 가 (CLK2)
 (104)가 (EN)가 '1' 가 (CLK2)
 LCD (104) (96) (104)
 (CLK2) 3 (64) 4 6 (S1, S2)
 (98) (104) (CLK2)
 (90) 8 1 (26) (26)
 1 (32) (26) (26)
 (32) 1 (16) (26) 2 (18)
 (32) (26) (26)
 (32) 8 T2 T1
 , 3 7 (26) (32) T2 T1
 가 (CLK1) (92) (102) (CLK1) (102)
 (92) (C0, C1, C2 C3) (92) (Pd) (N1) 2
 (Pc) (N1) (C0, C1, C2 C3) (N3) (94)
 (36) 8 (N2) (104) '1' , 8 (1)
 04) (94)가 8 (104) T3 T2 '0' (104) T3 '1' '0'
 가 (N1) (94) T3 T2 (94) (96) (96) (32)가
 T2 (94) (102) (96) (96) '1'
 (104) 5 T1 , 1

(16) 가 3 (64) (98) (64)

(V₁) (V₂₅₄) (E1 E2) (64) (98) (64)

(104) (104)가 '0' '1' (V₂₅₄) (98) (62)

(E1 E2) (V₂₅₄) (98) (64)

(104) T3 '1' '0' 가 (V₂₅₄) (98) (64)

(98) T3 (E1 E3) (V₂₅₄) (64)

(V₂₅₄) (V₂₅₄) (V₂₅₄) 가

T5 V₂₅₄ (V₂) T2

(92), (94) (96) (104) (104) T1 T3 '1' (98)

(104) (104) 3 (64) (N1), (N2) (N3) 가

(62) LCD 가 LCD

LCD T3 T2 LCD T1 T3

(62) LCD T1 T3

T3 LCD (90) T1 T3

T3 가 (62) T1 T3

T2 T3 (90) LCD T2 (62)

T1 T3 LCD T2 (104)

(90) LCD 4 6 (S1)

(S1 S2) (72, 73, 74 75) (62) T1 T3 T3 (S1)

(S1) T3 (S2) T3

T2 (72, 73, 74 75) (72, 73, 74 75) (17) 가 LC

D LCD 가 (90) T1 T3 (N1), (N2) (N3)

LCD 가

LCD 가

LCD LCD LCD

(57)

1.

(LCD) ;

;

(a)

가 (row)

(b)

(c)

가

2.

1

(b)

3.

1

4.

1

(DACs)

5.

4

1

2

6.

5

(a)

가

1

7.

5

(b)

가

1

8.

5

(c)

9.

1

1

;

2

10.

9

(a)

가 1 ;

가 2 .

9 11. , (b) 가 1

9 12. , (c) 가 2

1 13. , (a), (b) (c)

13 14. , ,
(divisor) ;

;

14 15. , ,
(b) (c)가

14 16. ,

14 17. ,

14 18. , , 1 (b) (c)

18 19. , 2 ,
(b) (c)

19 20. , 3 ,

21. ;

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가

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27.

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28.

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1

2

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1

1

29.

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1 ;

2

1 가

2 가

1
2

30.

1 1 1 1 ; 1 1 , 1
1 1 1 ;
2 2 2 2 , 2 2
2 2 ; 2 2 2
1 2 3 ;
1 2 3

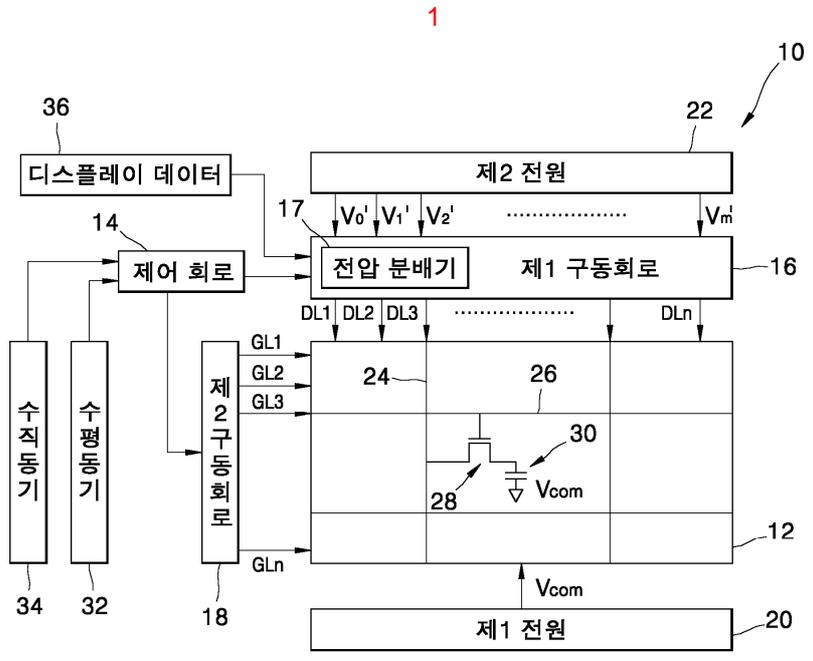
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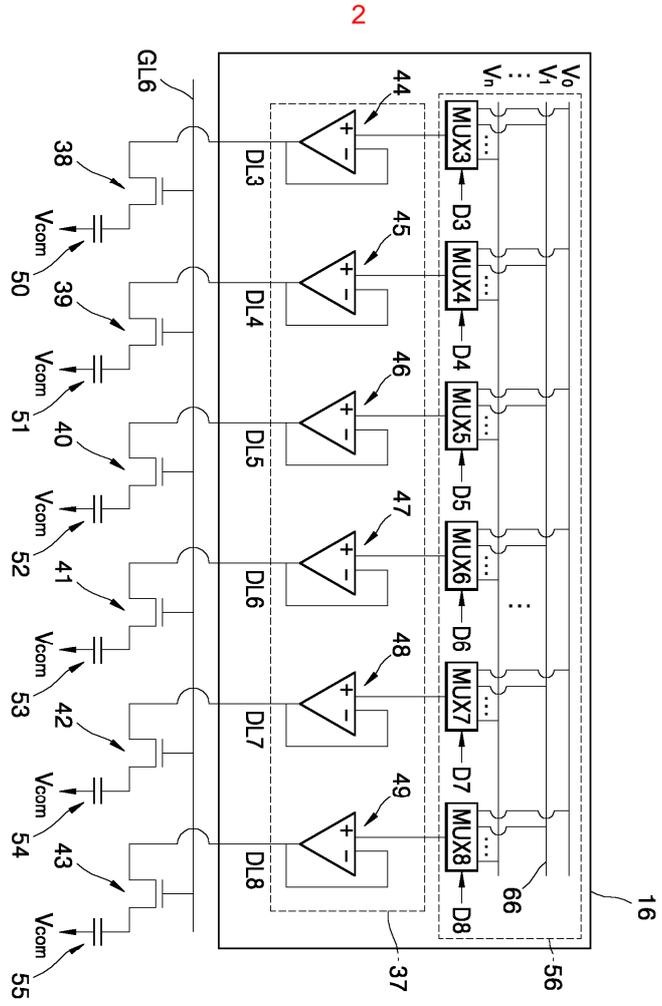
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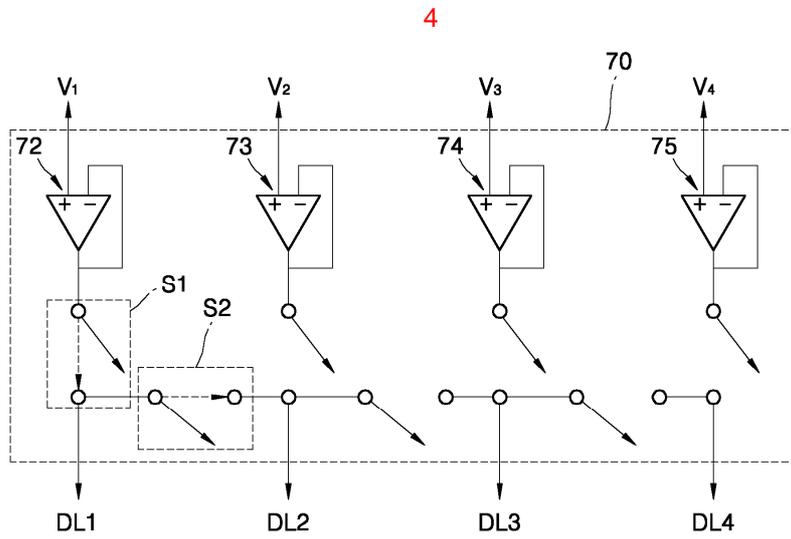
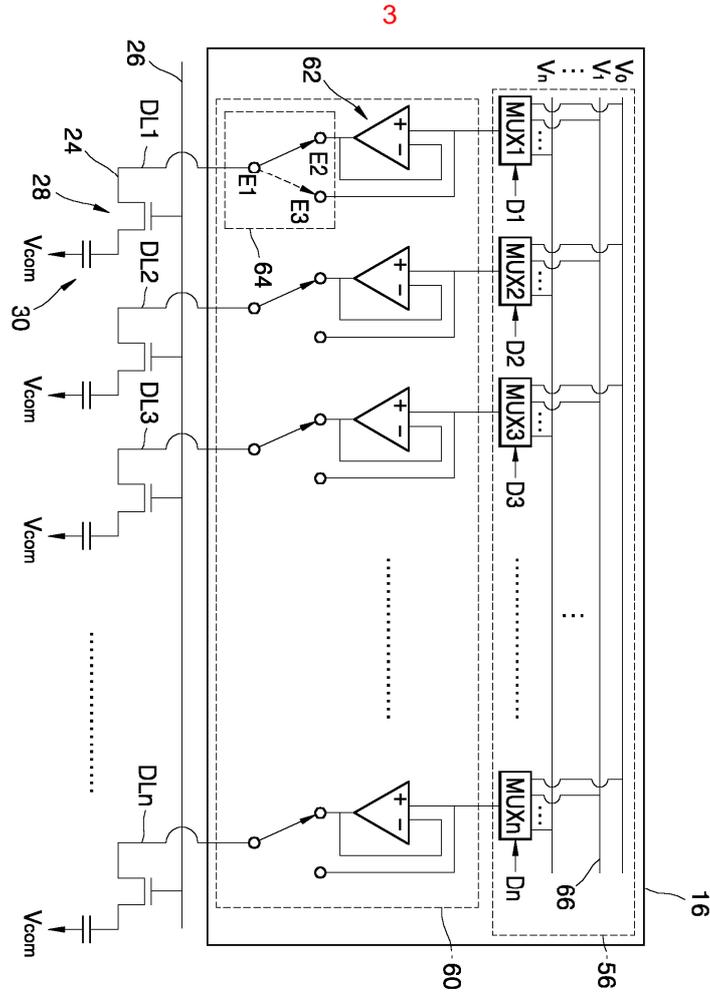
32.

1 1

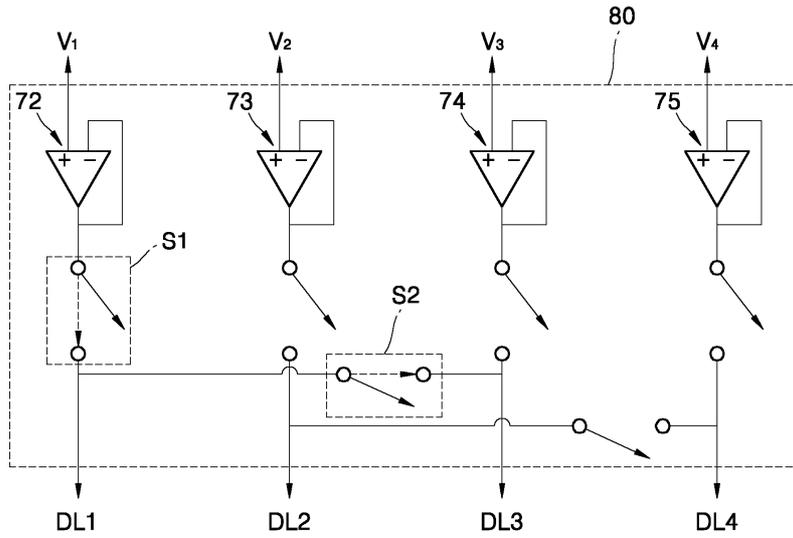
1 1 , 1 1 1 1 ;
 2 2 , 2 2 2 2 ;
 2 2 , 2 2 2 2 ;
 1 2 3 ;
 1 2 3 .
33.
 32 , 3 1 2 가



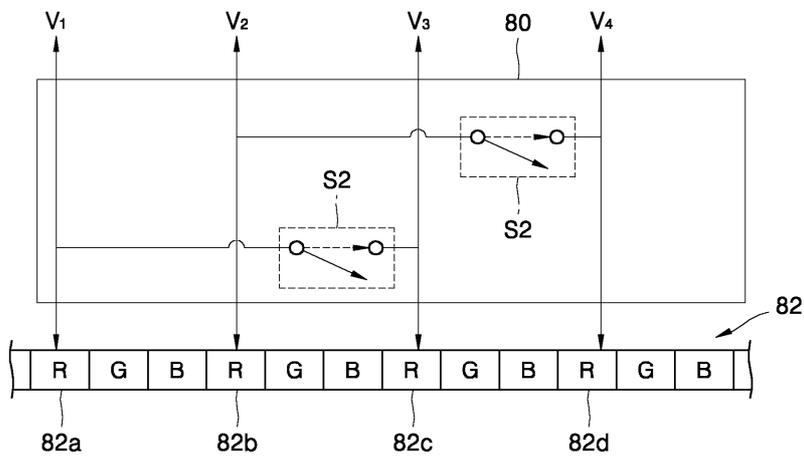




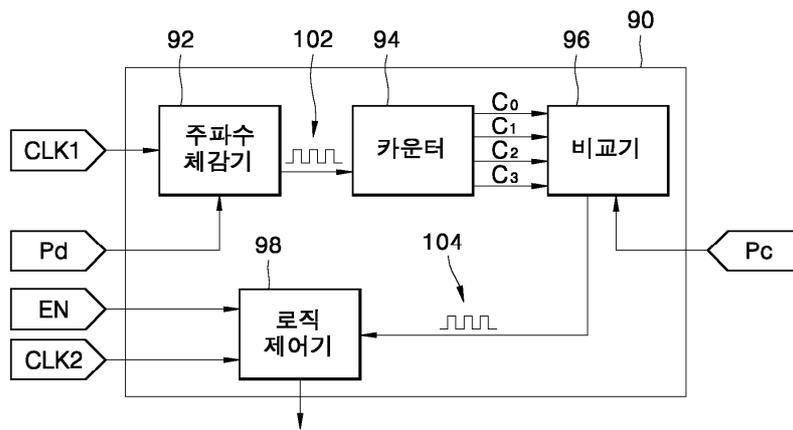
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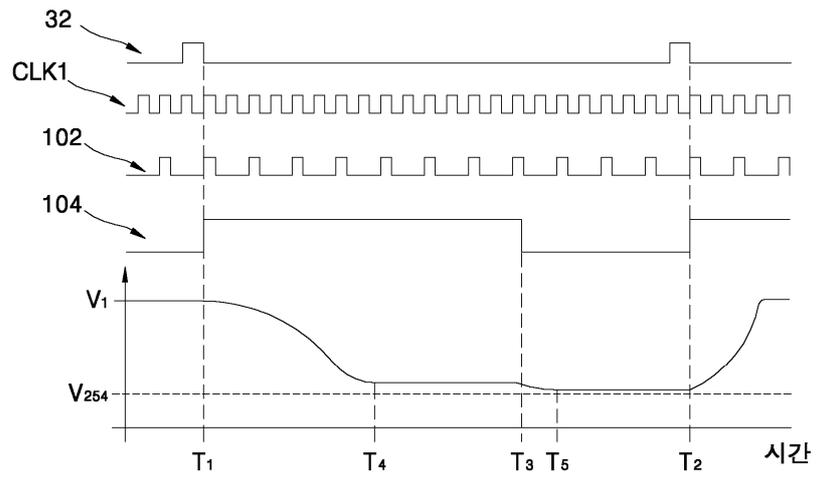
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专利名称(译)	用于驱动液晶显示监视器的方法和相关设备		
公开(公告)号	KR1020030097650A	公开(公告)日	2003-12-31
申请号	KR1020030028535	申请日	2003-05-06
[标]申请(专利权)人(译)	奇景光电股份有限公司		
申请(专利权)人(译)	嗨最大科技有限公司		
当前申请(专利权)人(译)	嗨最大科技有限公司		
[标]发明人	BU LIN KAI 부린카이 CHENG CHIN FENG 첩친펑 WU TSUNG YU 우충유 HSIAO CHUAN CHENG 시아오추안첩		
发明人	부린카이 첩친펑 우충유 시아오추안첩		
IPC分类号	G09G3/20 G02F1/133 G09G3/36		
CPC分类号	G09G2310/027 G09G2330/021 G09G2310/0291 G09G2320/0233 G09G3/3685 G09G3/3614 G09G3/3696 G09G2310/0297 G09G3/3688 G09G2320/0276 G09G3/3648		
优先权	10/065665 2002-11-07 US 10/064207 2002-06-21 US		
其他公开文献	KR100539619B1		
外部链接	Espacenet		

摘要(译)

公开了一种用于驱动液晶显示器 (LCD) 监视器的方法。LCD监视器包括：电压选择单元，用于根据显示数据输出多个驱动电压；相应的电压选择电路；以及多个输出缓冲器，电连接在相应的像素中。首先，每个输出缓冲器的输出端口接近输入端口的电压。接下来，它电连接，使得接近相同输入电压的驱动单元的输出端口具有平均电压。此外，LCD监视器还可以包括用于控制输出缓冲器的操作的定时控制器。当输出端口接近与输出缓冲器如上所述相同的输入电压时，电力被关闭，从而输出缓冲器减少电力。液晶，显示器，面板，显示器，驱动器，像素，电力。

