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2001 09 04

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1 957 - 5 2 201

(74)

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(54)

8

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2

3 8

4 .

5 1 .

6 5 1 .

7 5 2 .

8 , 1 .

9 2 .

10 , 2 .

< >

41 : 42 :

43 : 44 :

51,91 : 52,92 :

53,93 : 54,94 :

55,95 : 56,96 :

57,97 : 58,98 :

59 : 60,99 :

,

(Liquid Crystal Display)

가

(Active Matrix)

(Thin Fi

Im Transistor; " TFT")가 .

1 2 ,

가

1

$$\tau_r \propto \frac{\gamma d^2}{\Delta \epsilon |V_a^2 - V_F^2|}$$

, τ_r 가 (rising time) , V_a 가 (Freederick Transition Voltage) , d (rotational viscosity) , V_F 가 (cell gap) , γ (gamma)

2

$$\tau_f \propto \frac{\gamma d^2}{K}$$

, τ_f 가 (falling time)
 , K .
 TN 20 - 30ms . (NTSC : 16.67ms) 20 - 80ms
 1 (Motion Burring) .
 1 , (VD)
 가 (BL)가 , (Contrast ratio)
 . 가 .
 967 , 5,495,265 PCT WO 99/09
 (, ' ,)
 . 2 .
 2 , (VD) (MVD) 가
 (MBL) .
 1 $|V_a^2 - V_F^2|$
 가 , (Motion Burring)
 .

(MSB) , 가 (Fn - 1) (Fn) (MSB)
 (Mdata) 3 .
 4 .

4 , (42) (43) (44) (43) ,
 (42) (43) (44) .
 (43) (MSB) 1 (44)
 , (MSB) 8 (RGB) 4 .
 (44) (42) (Fn) (MSB)
 (43) (Fn - 1) (MSB) 1 2
 (Mdata) (Mdata) (41) (LSB) 가

[1]

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	00	1	3	4	6	7	9	10	11	12	14	15	15	15	15	15
1	0	11	2	4	5	7	9	10	11	12	13	14	15	15	15	15
2	0	1	22	3	5	7	8	9	10	12	13	14	15	15	15	15
3	0	1	2	33	5	6	8	9	10	11	12	14	14	15	15	15
4	0	0	1	2	44	6	7	9	10	11	12	13	14	15	15	15
5	0	0	0	2	3	55	7	8	9	11	12	13	14	15	15	15
6	0	0	0	1	3	4	66	8	9	10	11	13	14	15	15	15
7	0	0	0	1	2	4	5	77	8	10	11	12	14	14	15	15
8	0	0	0	1	2	3	5	6	88	9	11	12	13	14	15	15
9	0	0	0	1	2	3	4	6	7	99	10	12	13	14	15	15
10	0	0	0	0	1	2	4	5	7	8	1010	11	13	14	15	15
11	0	0	0	0	0	2	3	5	6	7	9	1111	12	14	15	15
12	0	0	0	0	0	1	3	4	5	7	8	10	1212	13	15	15
13	0	0	0	0	0	1	2	3	4	6	8	10	11	1313	14	15
14	0	0	0	0	0	0	1	2	3	5	7	9	11	13	1414	15
15	0	0	0	0	0	0	0	1	2	4	6	9	11	13	14	1515

1 , (Fn - 1) (VDn - 1) , (Fn)
 (VDn) .

(Dynamic Contrast Ratio)가 (Normal Drive)
 가 1
 가
 가
 가

가

, 5 10

5 , 1
 (Clc) TFT가 (57) , (55) (56)
 (53) , (57) (57) (55)
 (54) , (H,V)가 (51) ,
 (51) (53) (RGB) (52) (53) (52) ,
 (BL) (60) , (BL) (59)
 (AMdata) (58) (58) (59)
 (58) , (51)

(56) (57) (55) (56) (55) TFT
 (56) (55) (Clc) TFT (Clc)
 (56) (55) TFT (Clc)
 (51) (51) (RGB) (52) (59)
 (GSP), (51) / (H,V) (Dclk),
 (GSC), /
 (53) (54) (Dclk)
 (53) (GSP) (GSC)
 (54) (51) (58)
 가 (51) (V) 1/3
 (SW) (SW) (58)
 (AMdata), (RGB) (BL) 3 가
 2
 (54) (51) (GSP) (GSC)
 (Clc) TFT (Clc)
 FT가 - (55) (Clc) TFT - T
 GSP) 3 가 (

(53) (58) (AMdata), (RGB)
 (BL)가 (Dclk) (51) (AMdata), (RGB)
 (53) (53) 1
 (55) (53)
 (AMdata) (55) (RGB) (BL)가 3
 가

(52) 6 7 (RGB) 가
 (52) 6 8 () 4 (RGB) 8 (AMdata)
 7 4 (MSB) 4

(60) (57)
 (BL) (BL) (58)

4 (MSB) , 2

[2]

()	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	0	2	3	5	6	8	9	10	11	12	13	14	15	15	15	15

2 ,

6 7 (52)
가
(RGB) 2

가

(58) (51) (SW) (AM
data) (RGB) (BL) (53)
(59) (AMdata) (BL)가 (57) (RGB)

1 (57)
8

8 1 3 (SF1 SF3) 1 3 (S
F1 SF3) 1/3 (SF1
SF3)

8 , 'VD' , 'BL' , 'MVD'
'MBL' , 'AMVD' 1
BL' , 'AM

1 (SF1) (52) (AMdata)가 (57)
1 (SF1) 2 (SF2) (RGB)가 (57)
3 (SF3) (Pause Interval) 3 (S
F3) (60) (BL)가 (57) 3 (SF3)
(Cathode Ray Tube : CRT)

1 (SF1) 가
2 (SF2) 3 (SF3) 3 (SF3)

8 , (2) (RGB) .
 , (AMdata) 2 (RGB) .

9 2 .

9 , 2 (Clc) TFT가 (97) , (95) (96) (95)
 (93) , (97) (96)
 (94) , (H,V)가 (91) ,
 (91) (93) (RGB) (92) ,
 (BL) (99) , (92) (93)
 (AMdata) (BL) (98) .

(97) 5 가 .

(91)
 (91) (RGB) (92) .

, (91) / (H,V) (Dclk),
 (GSP), (GSC), /
 (93) (94) (Dclk)
 (93) , (GSP) (GSC)
 (94) , (91) (98)
 가 (91) (V) 1/2
 (SW) (SW) .

(94) (91) (GSP) (GSC)
 , (Clc) T T
 FT가 - (95) (Clc) TFT - T
 GSP) (GSC) . (

2 가 .

(93) (98) (AMdata) (BL)가
 , (91) (Dclk) (93)
 (Dclk) (AMdata) (BL) , 1
 (93)
 (95) (93)
 , (Dclk) (95)
 (BL)가 2 가 (AMdata) (RGB)

(92) 6 7 (RGB) (AMdata) 가
 (RGB) .
 4 (MSB) , 2 .
 (99) (97)
 (BL) . (BL) (98) .
 (98) (91) (SW) (AM
 data) (BL) (93) .
 2 (97)
 10 .
 10 , 1 2 (SF1,SF2) . 1 2 (SF1,SF2)
 . , 1 2 (SF1,SF2)
 1/2 .
 1 (SF1) (92) (AMdata)가 (97) .
 1 (SF1) 2 (SF2) (Pause Interval) . , 2
 (SF2) (99) (BL)가 (97) . 2 (SF3)

가

가

(PDP),

(FED),

(EL)

(57)

1.

2.

1 ,

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3.

1 ,

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4.

1 ,

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5.

1 ,

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6.

2 ,

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2 ,

가

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8 ,

10.

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11.

8 ,

12.

8 ,

13.

9 ,

14.

9 ,

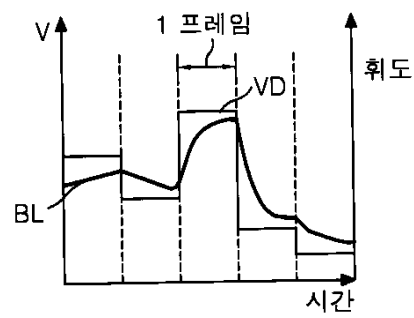
가

15.

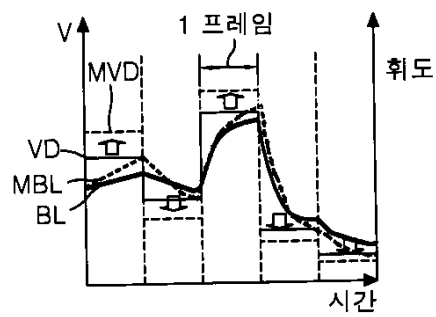
12 ,

16.

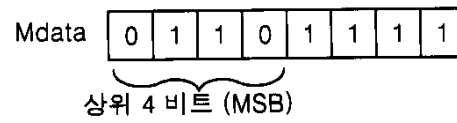
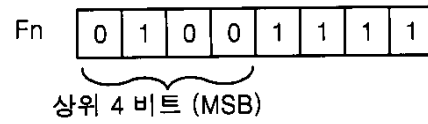
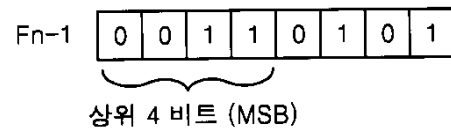
1



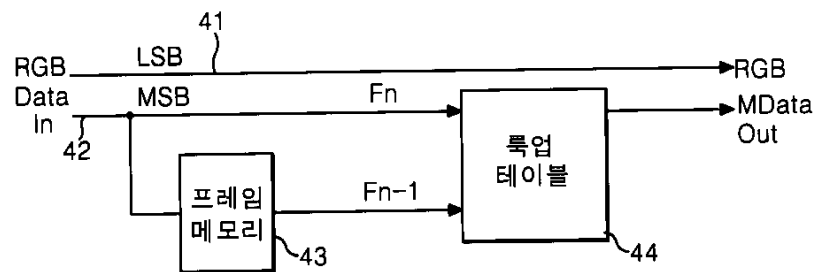
2



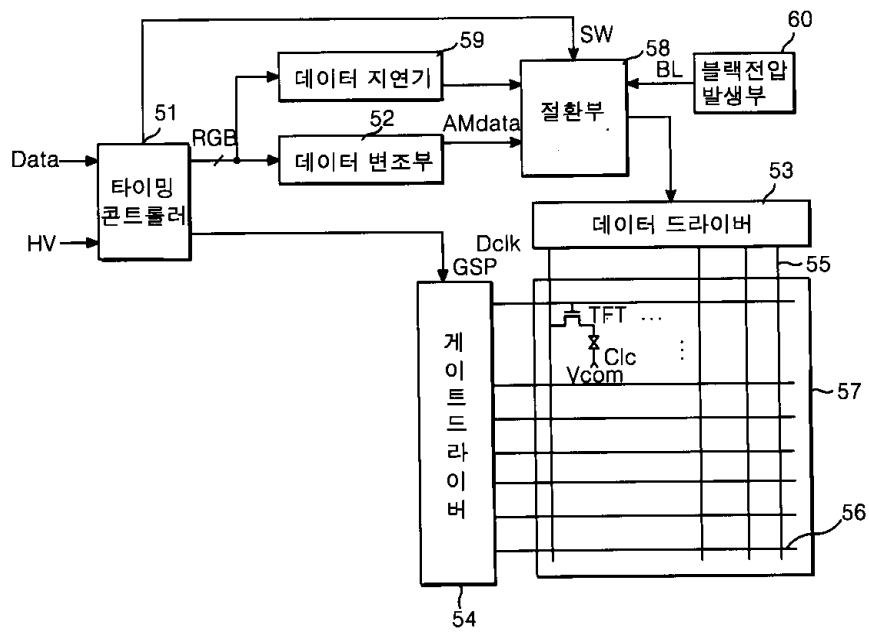
3



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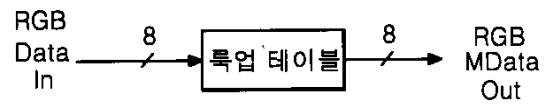


5



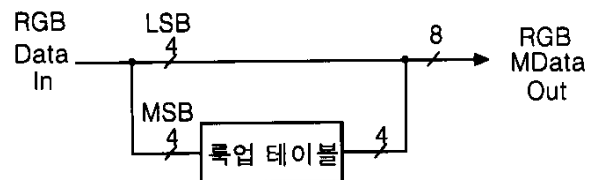
6

52, 92

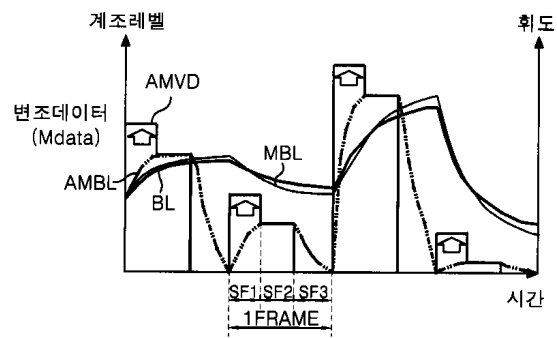
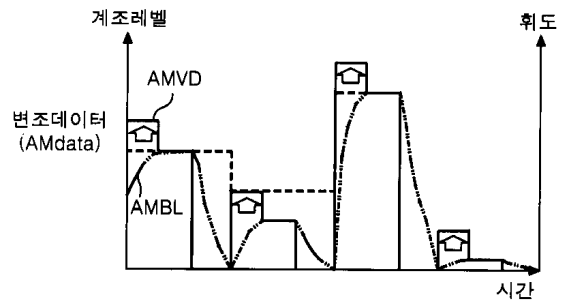
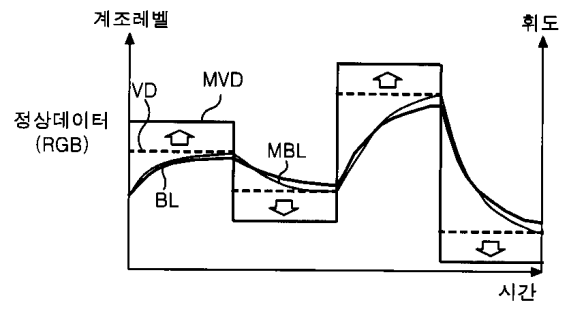


7

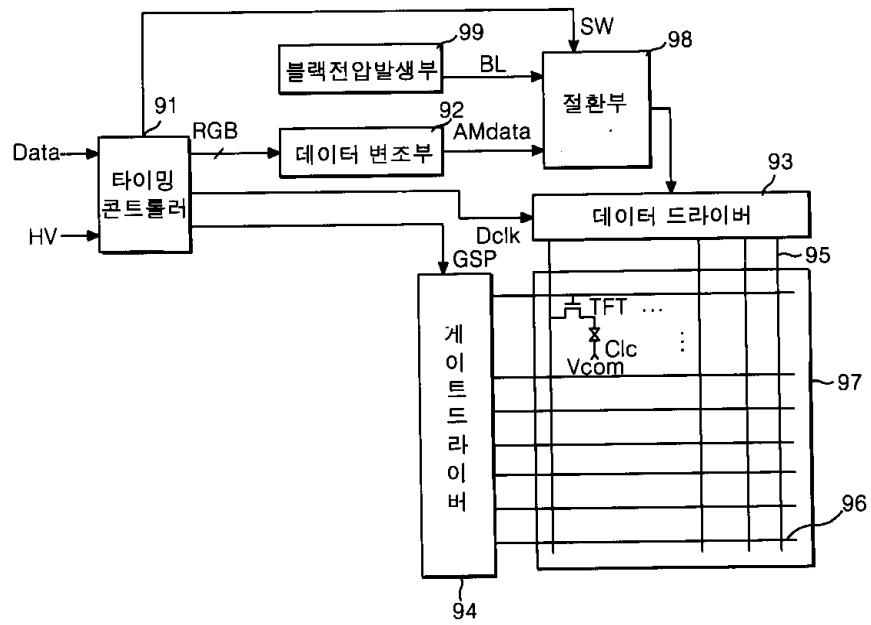
52, 92



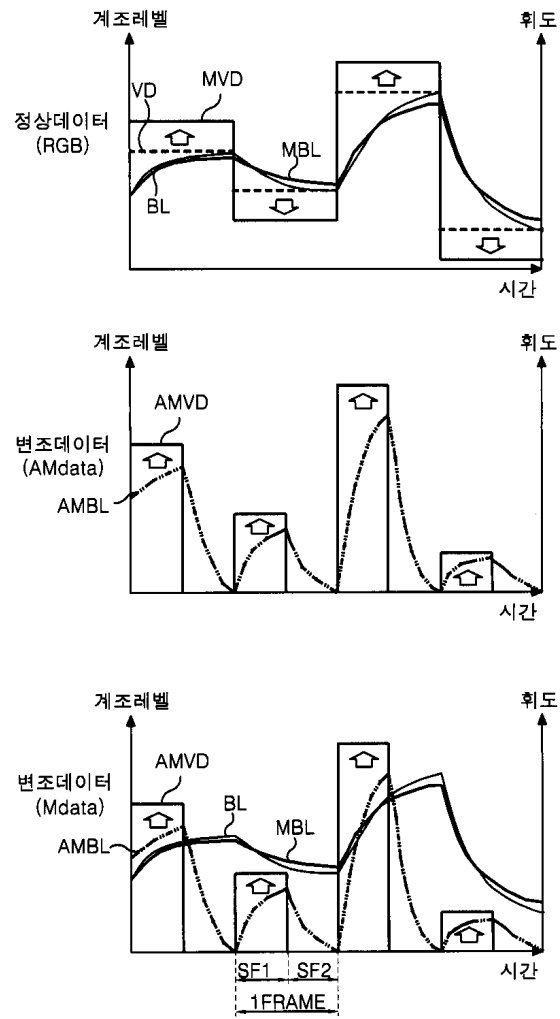
8



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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	KR1020030020694A	公开(公告)日	2003-03-10
申请号	KR1020010054128	申请日	2001-09-04
[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	HAM YOUNGSUNG 함용성		
发明人	함용성		
IPC分类号	G09G3/36 G09G3/20 G02F1/133		
CPC分类号	G09G3/3648 G09G2320/0285 G09G2320/0261		
代理人(译)	金勇 年轻的小公园		
其他公开文献	KR100769169B1		
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以改善图像质量的方法和装置。液晶显示装置的驱动方法和装置使用预设的调制数据在帧的开始处调制源数据，并将调制的数据提供给显示面板，使得电压电平并将设定的黑色数据提供给显示面板。此外，根据本发明的用于驱动液晶显示器的方法和设备将调制数据和黑色数据之间的源数据提供给显示面板。 8

