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(12) (B1)

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(11) 10-0952837
(24) 2010 04 06

(51) Int. Cl.
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G09G 3/20 (2006.01) *H01L 51/50* (2006.01)

(21) 10-2008-0073542
(22) 2008 07 28
2008 07 28
(65) 10-2010-0012247
(43) 2010 02 08
(56)
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KR1020080002226 A
KR1020080028222 A
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(73)

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(72)

428-5 SDI

428-5 SDI

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(54)

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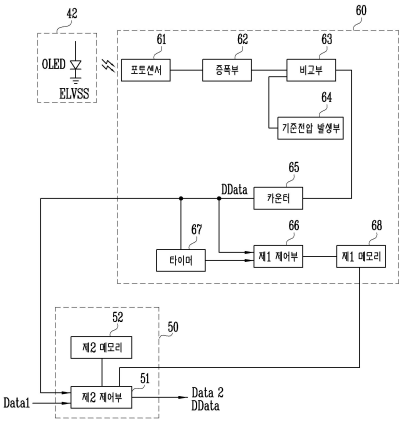

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[0001] ,

.

[0002] , (Cathode Ray Tube)

. (Liquid Crystal Display), (Field Emission Display), (Plasma Display Panel) (Organic Light Emitting Display) .

[0003] (Organic Light Emitting Diode : OLED) . , .

[0004] 1 .

[0005] 1 , (4) (OLED) , (Dm) (Sn) (OLED) (2) .

[0006] (OLED) (2) , 2 (ELVSS) . (OLED) (2) .

[0007] (2) (Sn) (Dm) (OLED) . , (2) 1 (ELVDD) (OLED) 2 (M2) , 2 (M2), (Dm) (Sn) 1 (M1) , 2 (M2) 1 (C) .

[0008] 1 (M1) (Sn) , 1 (Dm) . , 1 (M1) 2 (C) . , 1 , 2 1 . , 1 2 . (Sn) (Dm) 1 (M1) (Sn) - (Dm) (C) . , (C) .

[0009] 2 (M2) (C) , 1 (C) 1 (ELVDD) . , 2 (M2) 2 (OLED) . 2 (M2) (C) 1 (ELVDD) (OLED) 2 (ELVSS) . , (OLED) 2 (M2) .

[0010] , (4) . , 2 (M2) 1 (ELVDD) 2 (ELVSS) (OLED) , (OLED) . 2 (M2) .

[0011] , (OLED) (OLED) , .

[0012] , .

[0013]

[0014]

[0015] ; 2
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1 ,
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[0016] .

[0017] ,
2 6 .

[0018] 2 . 2 X , Y
. , Y "1" .

[0019] 2 , ,
. , 5 37%
.
.

[0020] 3 .

[0021] 3 , . ,
. , "B" "B" (
1023) 0.5 . , "B" "A"
0.7 . "A", "B"
.

[0022] . ,
. ,
.

[0023] 4a 4b .

[0024] 4a , T (
) 0.7T . ,

(T) 70% .

[0025] , 4b
. ,
. , "A" 0.8T , "B"
0.9T .

[0026] (T) . ,
"01111111" . ,
4b
.

[0027] 5 .

[0028] 5 , (S1 Sn+1) (D1
Dm) (30) (40) , (Sn+1) (D1)
(42) , (S1 Sn+1) (10) ,
(D1 Dm) (20) , (10) (20)
(50) , (40)
(60) .

[0029] (40) 1 (ELVDD) 2 (ELVSS) . 1 (ELVDD) 2
(ELVSS) (40) ,
. (40) (30) .
, (40) , , 1
.

[0030] (42) 1 (ELVDD) 2 (ELVDD) . 1 (ELVDD) 2
(ELVSS) (42) ,
. (42) . ,
(42) .

[0031] (10) (S1 Sn+1)
. (S1 Sn+1) (40)
(42) , (40) (42) .

[0032] (20) (D1 Dm)
. , (20) (40) 1
(40) 2 . , 1
(40) ( ) .
, (20) (42) 1 2 (42)
.

[0033] (50) ( ) (DCS)
(SCS) . (50) (DCS) (2
0) , (SCS) (10) .

[0034] , (50) (40) 1 (Data1) ( )
, ( ) . ,
(40) . , (50) (60)
(40) 1 (Data1)
2 (Data2) , 2 (Data2) (20) . ,
(50) (60) (DData) (20) .

[0035] (60) (42) , (42)
(DData) . , (60) (DData)

( ) , (DData) (50) .

[0036] 6 5 .

[0037] 6 , (60) (61), (62), (63), (64), (65), 1 (66), (67) 1 (68) .

[0038] (61) (42) (OLED) , . , (61) (42) .

[0039] (62) (63) .

[0040] (63) (64) , (65) .

[0041] (64) (63) . , (42) (62) .

[0042] , (42) (DData) . (DData) . , (DData) .(, 4a 0.7T) , (64) ( ) (42) (63) .

[0043] (65) (63) (DData) . (OLED) , . , (65) (DData) (42) .

[0044] , (65) (DData) , (42) . (65) (DData) (62) (OLED) .

[0045] (67) (42) . , (67) (DData) (42) .

[0046] 1 (66) (DData) (42) 1 (68) . , 1 (66) (42) , (DData) 1 (68) . , 1 (66) 1000 (DData) (, 1) 1 (68) .

[0047] (50) 2 (51) 2 (52) . , (50) , 2 (51) 2 (52) .

[0048] 2 (51) (60) (DData) (20) . , 2 (51) 1 (Data1) 2 (52) .

[0049] , 2 (51) 2 (52) 1 (68) (DData) 2 (Data2) , 2 (Data2) (20) .

[0050] , (40) 1 (Data1) 2 (51) (40) (40) . (40)

2 (51) 1 (68) (40) (DData)
. , (51) 1 (Data1)
2 (Data2) , 2 (Data2) (20) .

[0051] 2 (52) (40) . (40)
.

[0052] , (DData)
(42) . (42) (61) , (62)
(63) .

[0053] (63) , (65) .
(65) (DData) ,
(DData) 2 (51) . , 2 (51)
(DData) (20) .

[0054] (60) (50)
(42) . , 1 (66) (67) (42)
, (DData) 1 (68) . 1 (68)
(DData) .

[0055] 2 (51) (40) 1 (Data1) ,
2 (52) . , 2 (51) 1 (Data1)
2 (52) , 1
(68) . 2 (51) 1 (Data1) 2
(Data2) , 2 (Data2) (20) .

[0056] (20) 2 (Data2) ,
.

[0057] , 2 (Data2) ,

.

[0058] 1 .

1

[0059] Data2 = Data1 × F(t) / DData( )

[0060] 1 DData( ) . , F(t) (42)
(DData) .

[0061] 1 (40) , t 2
(Data2) . , 2 (Data2) 1 (Data1)
2 factor .

2

[0062] Data2 = Data1 × F(t) / DData( ) × factor

[0063] 2 factor . ,
factor 0.7 4a 70%
.

[0064] ,
. ,
.

[0065] 1 .

[0066] 2 .

[0067] 3 .

[0068] 4a 4b .

[0069] 5 .

[0070] 6 5 .

[0071] < >

[0072] 2 : 4 :

[0073] 10 : 20 :

[0074] 30 : 40 :

[0075] 42 : 50 :

[0076] 51,66 : 52,68 :

[0077] 60 : 61 :

[0078] 62 : 63 :

[0079] 64 : 65 :

[0080] 67 :

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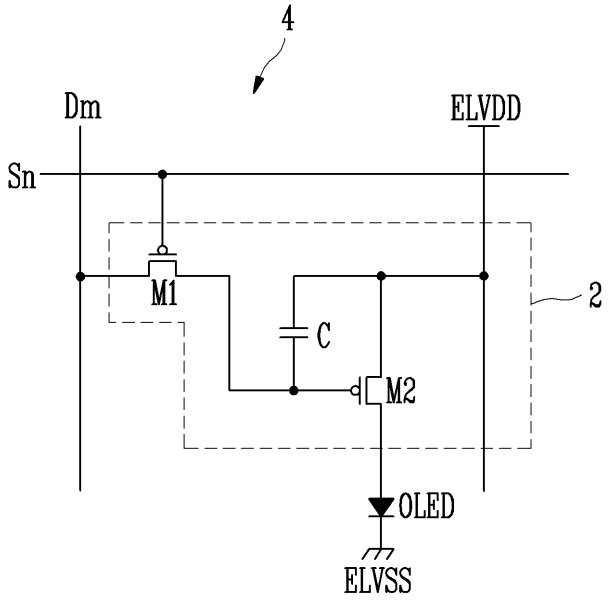

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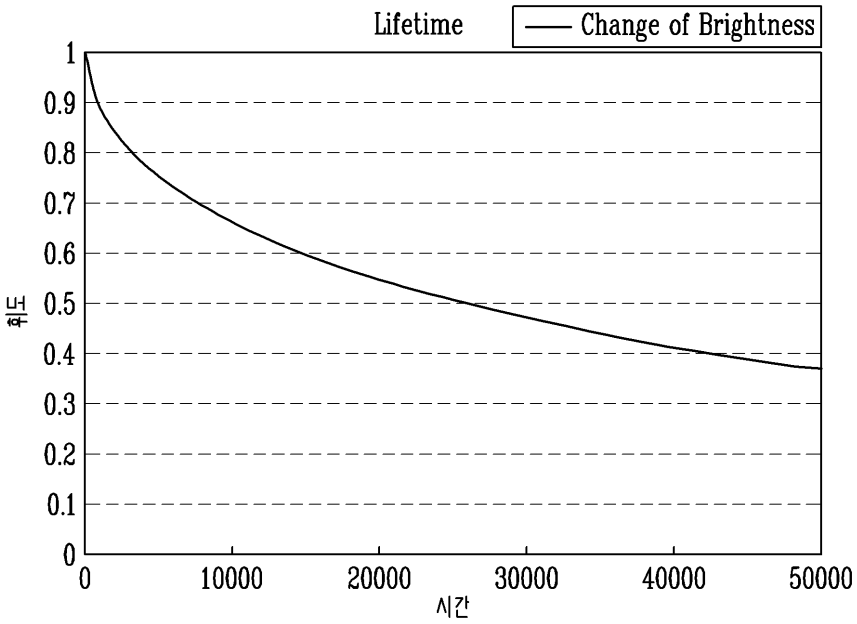
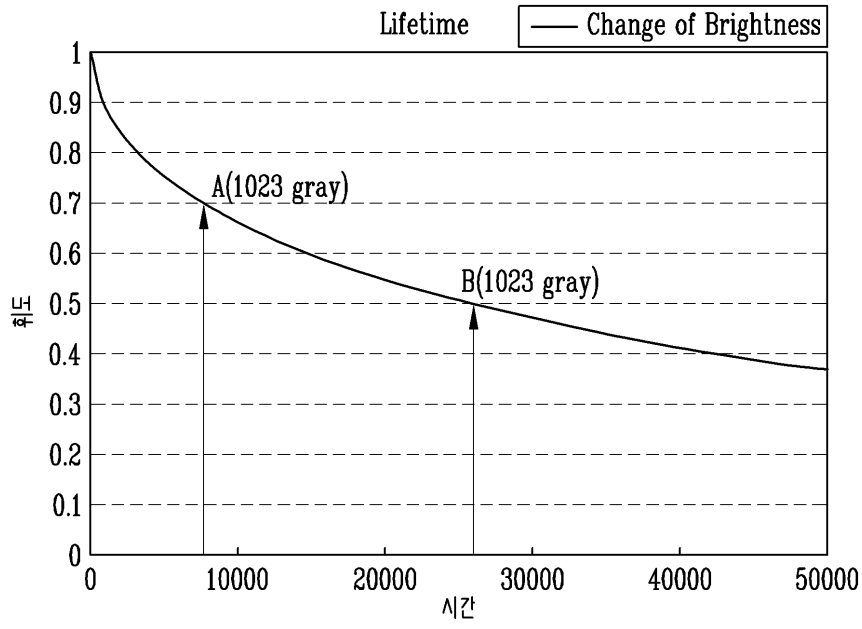
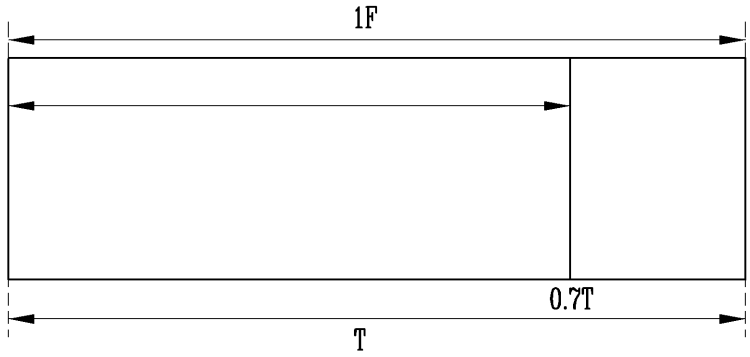

Lifetime
Change of Brightness
휘도
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
10000
20000
30000
40000
50000
시간

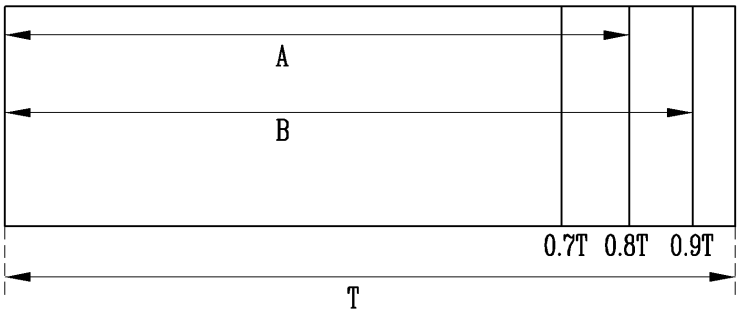
3


Lifetime
Change of Brightness
A(1023 gray)
B(1023 gray)
휘도
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
10000
20000
30000
40000
50000
시간

4a



4b



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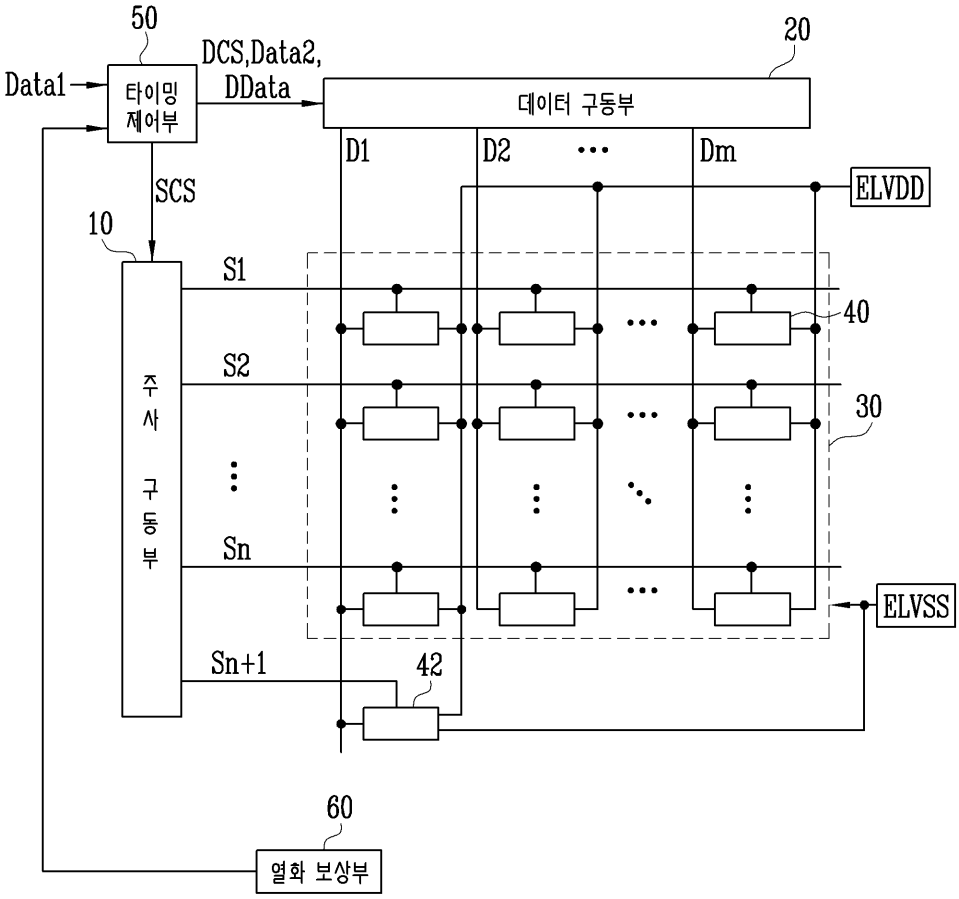
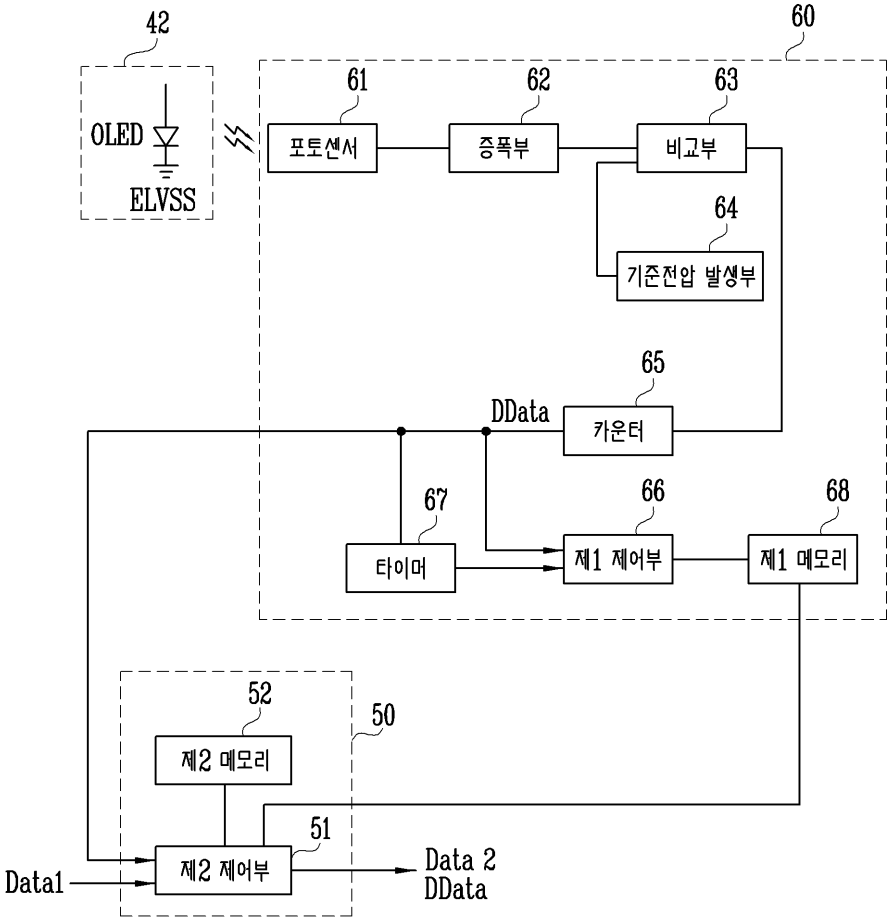

50
Data1
타이밍
제어부
DCS,Data2,
DData
20
데이터 구동부
D1
D2
Dm
ELVDD
SCS
10
S1
S2
Sn
Sn+1
주사 구동부
40
30
42
ELVSS
60
열화 보상부

6


42
OLED
ELVSS
60
61
포토센서
62
증폭부
63
비교부
64
기준전압 발생부
65
DData
카운터
67
타이머
66
제1 제어부
68
제1 메모리
52
제2 메모리
50
51
제2 제어부
Data1
Data 2
DData

专利名称(译)	有机电致发光显示装置		
公开(公告)号	KR1020100012247A	公开(公告)日	2010-02-08
申请号	KR1020080073542	申请日	2008-07-28
[标]申请(专利权)人(译)	三星显示有限公司		
申请(专利权)人(译)	三圣母工作显示有限公司		
当前申请(专利权)人(译)	三圣母工作显示有限公司		
[标]发明人	DOIK KIM 김도익 JAEWOO RYU 류재우		
发明人	김도익 류재우		
IPC分类号	H01L51/50 G09G3/30 G09G3/20 G09G3/32		
CPC分类号	G09G2320/048 G09G2320/043 G09G3/3233 G09G2320/045 G09G2360/145 H01L29/66545 H01L31/03767		
代理人(译)	SHIN，YOUNG MOO		
其他公开文献	KR100952837B1		
外部链接	Espacenet		

摘要(译)

本发明涉及指示均匀亮度图像的有机电致发光显示装置。本发明的有机电致发光显示装置配备有定时控制单元，用于利用扫描驱动器产生的数据信号产生第二数据，用于将扫描信号提供给扫描线用于扫描周期的伪数据，数据驱动器用于产生数据信号使用第二数据和第二数据，它位于包含在一帧中的多个子场的有效区域中，其中数据信号由像素辐射产生，而虚拟数据位于虚拟区域中，使用对应于累积的伪数据的位变化值数据和发光时间劣化补偿：用于存储比特变化值和从外部提供的第一数据，并且累加到与虚拟像素的发光时间对应的伪数据的像素元素，虚拟像素的亮度和虚拟像素辐射是固定的。