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(54) Display device

(57) The image quality of a display device using a bottom gate TFT is improved. In particular, fluctuation in luminance is controlled and the frequency characteristic of a driver circuit is compensated by suppressing a change in amount of current flowing through an EL element which is caused by a change in surrounding temperature while the device is in use. A monitoring EL element is provided in addition to a pixel portion EL element. The monitoring EL element constitutes a temperature compensation circuit together with a buffer amplifier and the like. A current is supplied to the pixel portion EL element through the temperature compensation circuit. This makes it possible to keep the amount of current flowing through the pixel portion EL element constant against a change in temperature, and to control the fluctuation in luminance. An input signal is subjected to time base expansion to perform sampling with accuracy.

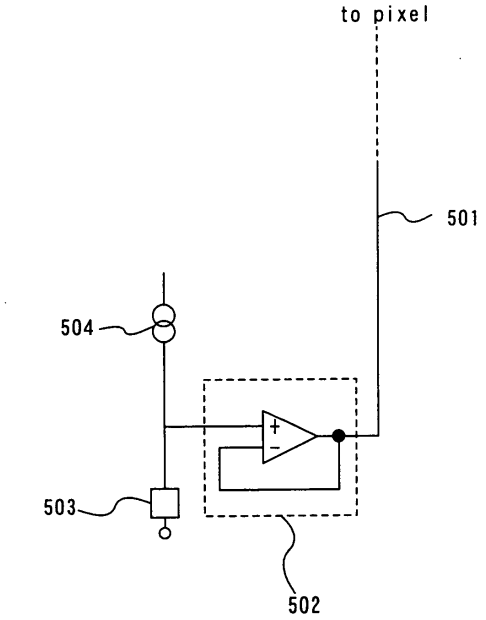

Fig. 1

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EUROPEAN SEARCH REPORT

Application Number
EP 01 11 4361

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X Y	US 5 594 463 A (SAKAMOTO MITSUNAO [JP]) 14 January 1997 (1997-01-14) * column 6, line 22 - column 8, line 14 * * column 8, line 60 - column 9, line 48 * * figures 6-8 * * figures 10-12 * -----	1-6,8, 10-20 7,9	INV. G09G3/32
Y	US 5 170 158 A (SHINYA MASAKO [JP]) 8 December 1992 (1992-12-08) * figures 2,3 * * column 2, line 15 - column 3, line 10 * -----	7,9	
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X Y	EP 0 923 067 A1 (SEIKO EPSON CORP [JP]) 16 June 1999 (1999-06-16) * figure 8 * * sentence 39, paragraph 35 * -----	1-6,8, 10-20 7,9	
X Y	WO 98/52182 A1 (UNISPLAY SA [CH]; SALAM HASSAN PADDY ABDEL [GB]) 19 November 1998 (1998-11-19) * page 12, line 33 - page 16, line 17 * * figures 2,4 * -----	1-6,8, 10-20 7,9	TECHNICAL FIELDS SEARCHED (IPC) G09G
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	20 August 2010	Husselin, Stephane

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 01 11 4361

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

专利名称(译)	显示设备		
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申请号	EP2001114361	申请日	2001-06-13
[标]申请(专利权)人(译)	株式会社半导体能源研究所		
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IPC分类号	G09G3/32 G09F9/30 G09G3/10 G09G3/20 G09G3/30 G09G3/38 H01J1/62 H01L27/15 H01L31/12 H05B33/00		
CPC分类号	G09G3/2022 G09G3/3233 G09G2300/0842 G09G2310/027 G09G2320/029 G09G2320/041 G09G2320/043 G09G2320/045		
优先权	2000176246 2000-06-13 JP		
其他公开文献	EP1168291B1 EP1168291A2		
外部链接	Espacenet		

摘要(译)

使用底栅TFT的显示装置的图像质量得到改善。具体地，通过抑制在装置使用时由周围温度的变化引起的流过EL元件的电流量的变化来控制亮度的波动并且补偿驱动电路的频率特性。除了像素部分EL元件之外，还提供监视EL元件。监视EL元件与缓冲放大器等一起构成温度补偿电路。通过温度补偿电路向像素部分EL元件提供电流。这使得可以保持流过像素部分EL元件的电流量相对于温度的变化恒定，并且可以控制亮度的波动。对输入信号进行时基扩展以精确地进行采样。

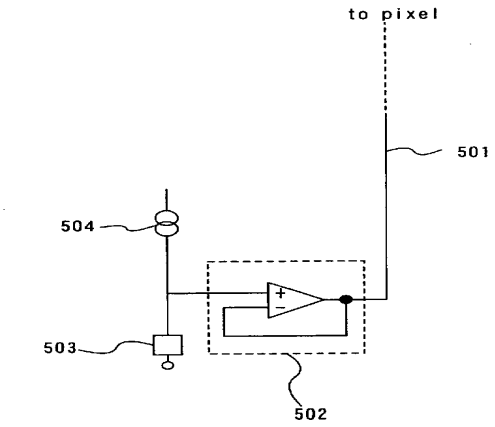

Fig. 1