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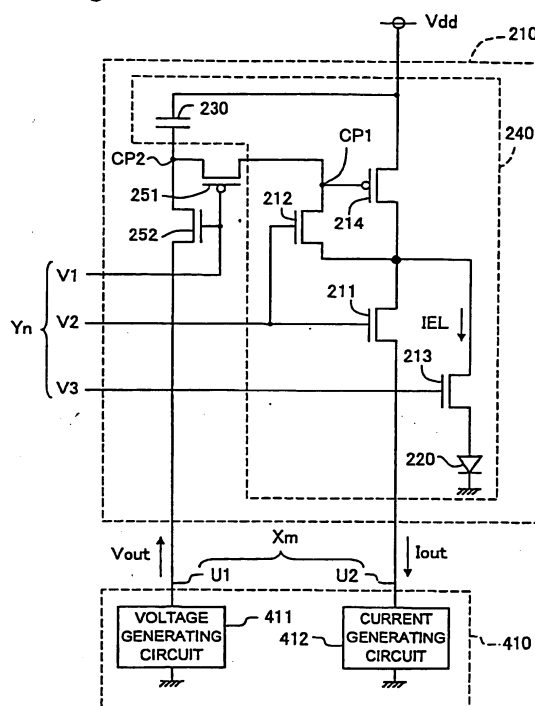
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(54) **Pixel circuit for light emitting element**

(57) An electronic device includes a scanning line (Y_1 - Y_N), a data line (X_1 - X_N , U1, U2), a current generating circuit (412) for generating a current signal (I_{out}) that is output to the data line, and an electronic circuit. The electronic circuit includes a diode (220), a driving transistor (214) for controlling a current level of a driving current that is supplied to the diode, a holding capacitor (230) that is connected to a gate of the driving transistor and maintains a charge in accordance with a signal level of the current signal, a first transistor (252) that is connected between the holding capacitor and the data line and controls an electrical connection between the holding capacitor and the data line, and a second transistor (213). The device is configured so that a voltage signal (V_{out}) is output to the data line; the voltage signal is supplied to the holding capacitor (230) through the first transistor (252) during a first period that starts when the voltage signal (V_{out}) begins to be output to the data line; the current signal (I_{out}) is supplied to the electronic circuit through a third transistor (211) during a second period; the driving current is supplied to the diode (220) through the driving transistor (214) and the second transistor (213) during a third period, and the first period starts when the second transistor (213) is in an off-state.

Fig.3





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EUROPEAN SEARCH REPORT

Application Number
EP 07 07 5927

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	WO 99/38148 A (FED CORP ; MALAVIYA SHASHI (US); HOWARD WEBSTER E (US); PRACHE OLIVIER) 29 July 1999 (1999-07-29) * abstract * * page 10, line 17 - page 13, line 26 * -----	1-15	INV. G09G3/32
P,X	WO 02/071379 A (EMAGIN CORP) 12 September 2002 (2002-09-12) * page 6, line 18 - page 7, line 11 * * page 14, line 5 - page 15, line 14 * * figure 5 * -----	1-15	
			TECHNICAL FIELDS SEARCHED (IPC)
			G09G
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		9 July 2008	van Wesenbeeck, R
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p> <p>& : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 07 07 5927

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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09-07-2008

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9938148	A	29-07-1999	EP 1055218 A1	29-11-2000

WO 02071379	A	12-09-2002	NONE	

专利名称(译)	用于发光元件的像素电路		
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优先权	2001379714 2001-12-13 JP		
其他公开文献	EP1921596A2		
外部链接	Espacenet		

摘要(译)

一种电子装置，包括扫描线（Y1-YN），数据线（X1-XN，U1，U2），用于产生输出到数据线的电流信号（Iout）的电流产生电路（412），以及电子电路。电子电路包括二极管（220），用于控制提供给二极管的驱动电流的电流电平的驱动晶体管（214），保持电容器（230），其连接到驱动晶体管的栅极并保持根据电流信号的信号电平的电荷，连接在保持电容器和数据线之间并控制保持电容器和数据线之间的电连接的第一晶体管（252），以及第二晶体管（213）。该装置被配置为使得电压信号（Vout）输出到数据线；在电压信号（Vout）开始输出到数据线时开始的第一时段期间，电压信号通过第一晶体管（252）提供给保持电容器（230）；在第二周期期间，电流信号（Iout）通过第三晶体管（211）提供给电子电路；在第三时段期间，驱动电流通过驱动晶体管（214）和第二晶体管（213）提供给二极管（220），并且第二时段在第二晶体管（213）处于截止状态时开始。

Fig.3

