

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2002/0033718 A1**
 Tam (43) **Pub. Date: Mar. 21, 2002**

(54) **CIRCUIT, DRIVER CIRCUIT, ORGANIC ELECTROLUMINESCENT DISPLAY DEVICE ELECTRO-OPTICAL DEVICE, ELECTRONIC APPARATUS, METHOD OF CONTROLLING THE CURRENT SUPPLY TO AN ORGANIC ELECTROLUMINESCENT PIXEL, AND METHOD FOR DRIVING A CIRCUIT**

Publication Classification

(51) **Int. Cl.⁷** **H03K 5/00**
 (52) **U.S. Cl.** **327/94**

(57) **ABSTRACT**

(75) **Inventor:** Simon Tam, Cambridge (GB)

Correspondence Address:
OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320 (US)

(73) **Assignee:** SEIKO EPSON CORPORATION, 4-1, Nishishinjuku 2-chome, Tokyo 163-0811 (JP)

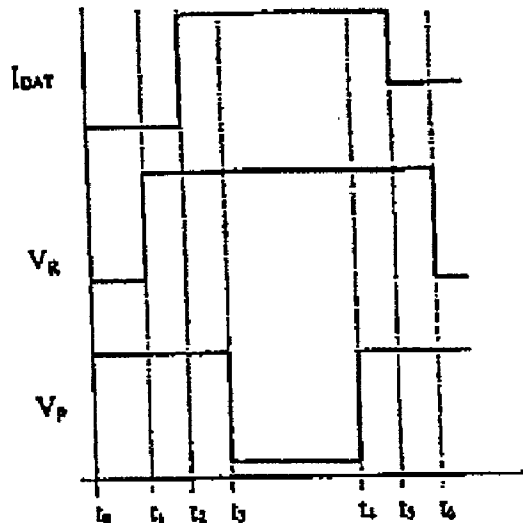
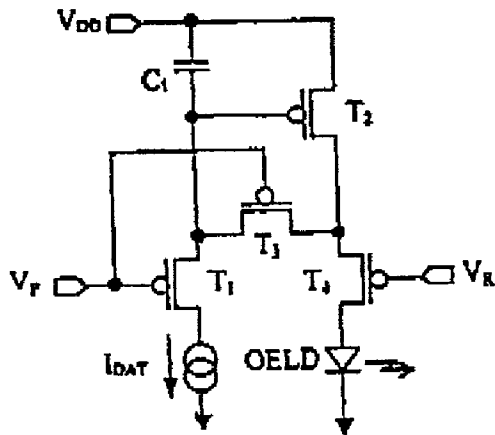
(21) **Appl. No.:** 09/899,915

(22) **Filed:** Jul. 9, 2001

(30) **Foreign Application Priority Data**

Jul. 7, 2000 (GB) 0016816.1

A driver circuit operating in stages that comprise a programming stage and a reproduction stage, the circuit comprising: a plurality current paths each of which passes through the circuit a current driven element, a transistor connected so as operatively to control the current supplied to the said element, a capacitor connected for storing an operating voltage of the transistor during the programming stage, and switching means which control the current paths, the arrangement being such that one of the current paths does not include the said element. No current is applied to the current driven element by the current controlling transistor during the programming stage and thus the overall power consumption is reduced. Furthermore, the circuit can be operated from a normal supply voltage rather than requiring a high bias voltage. During the programming stage, the circuit uses a current sink rather than a current source. Preferably, the current driven element is an electroluminescent element.



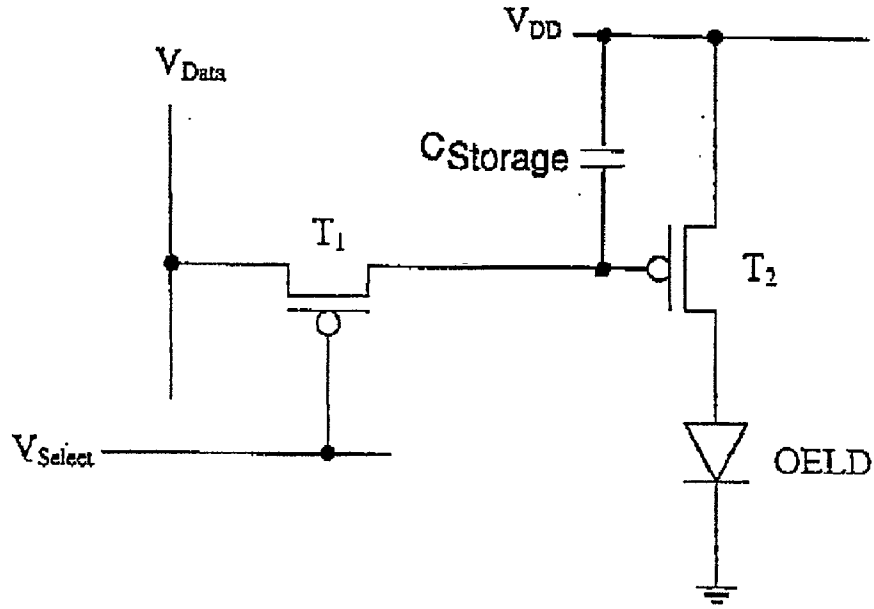


Figure 1

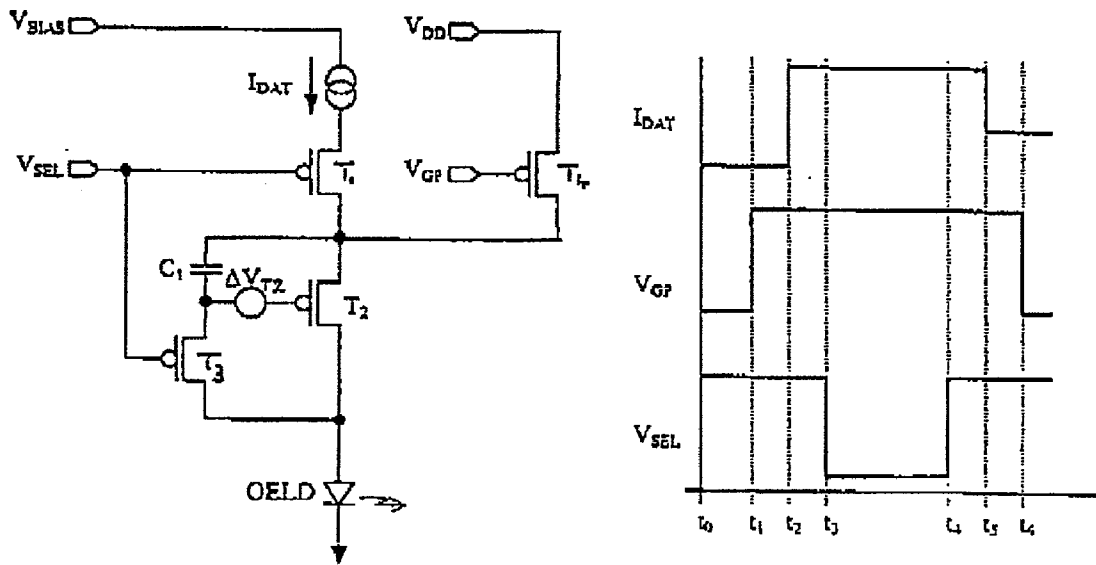


Figure 2

Figure 3

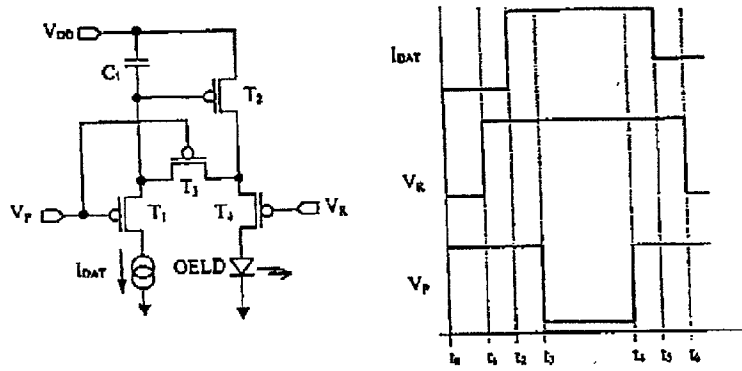


Figure 4

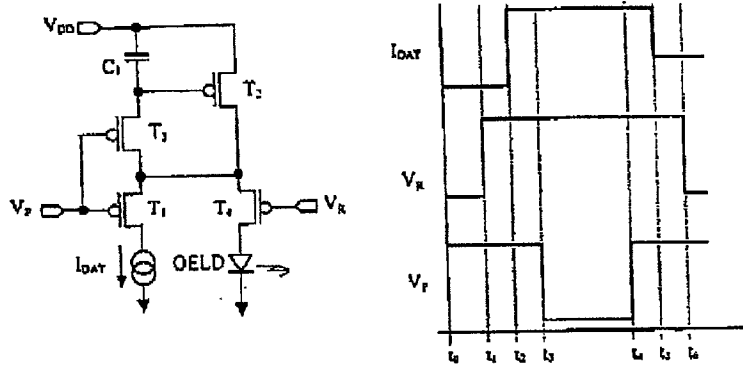


Figure 5

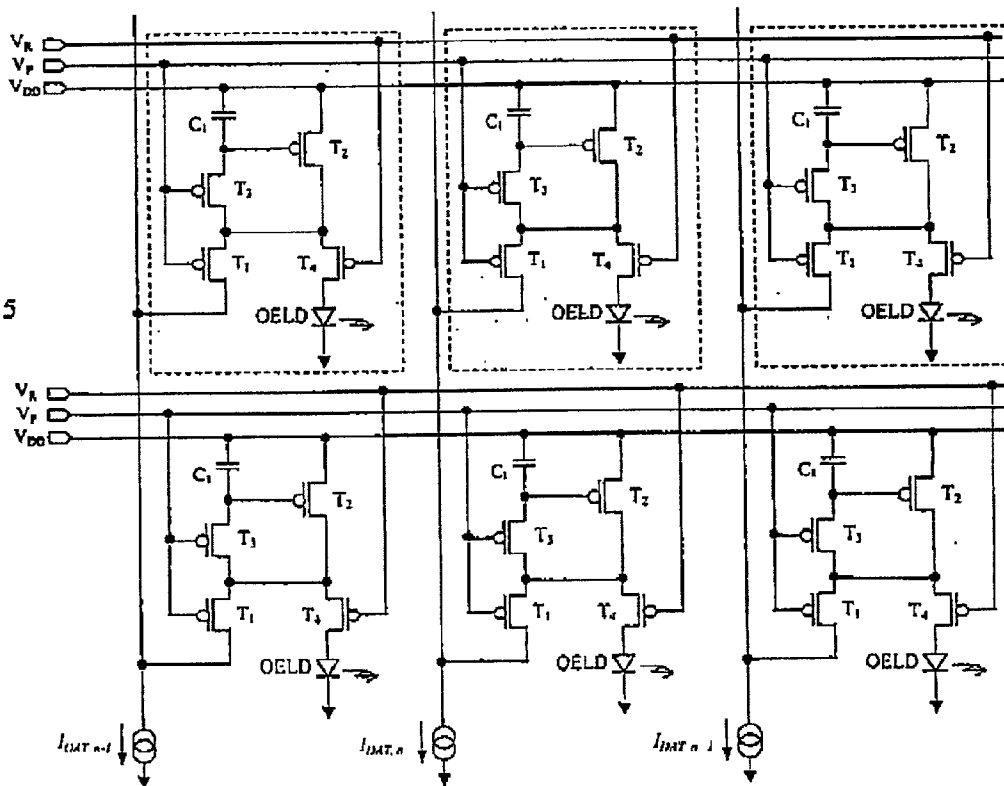


Figure 6

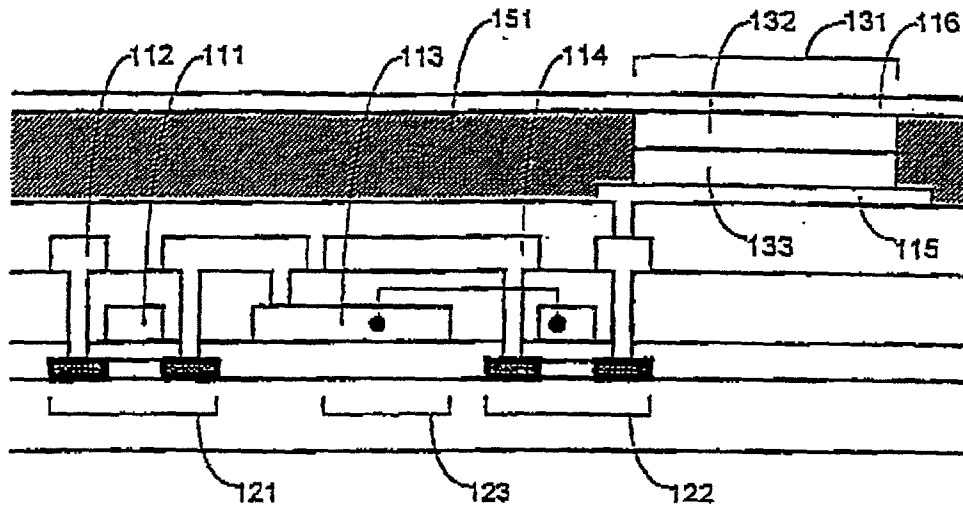


Figure 7

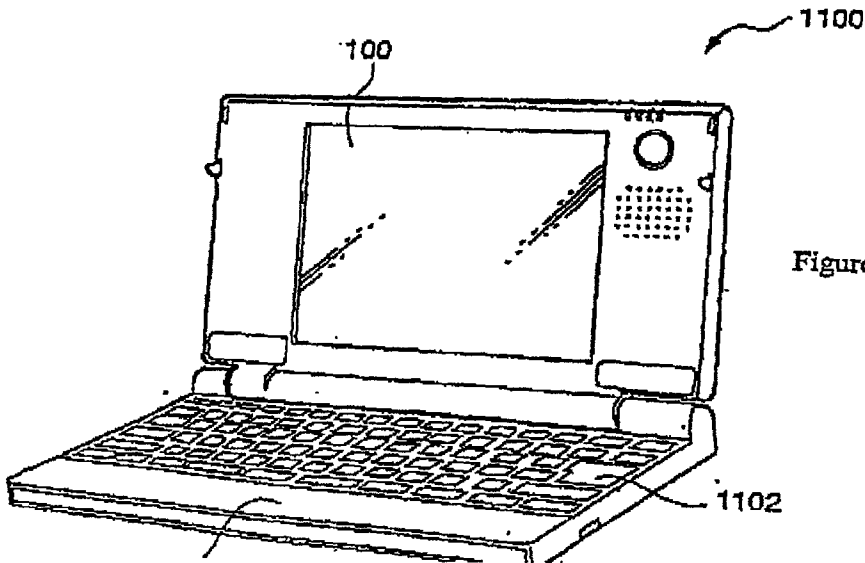
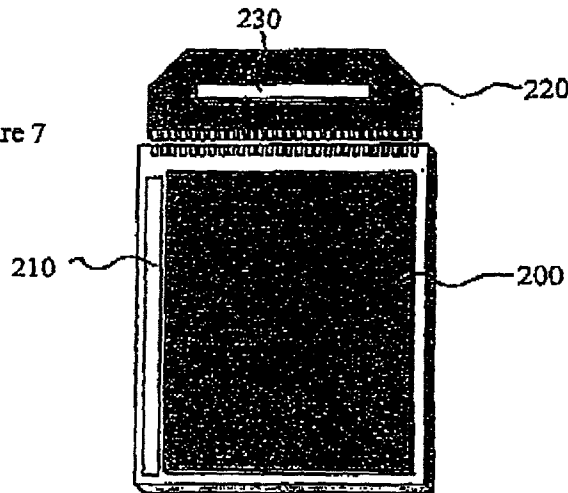


Figure 10

Figure 8

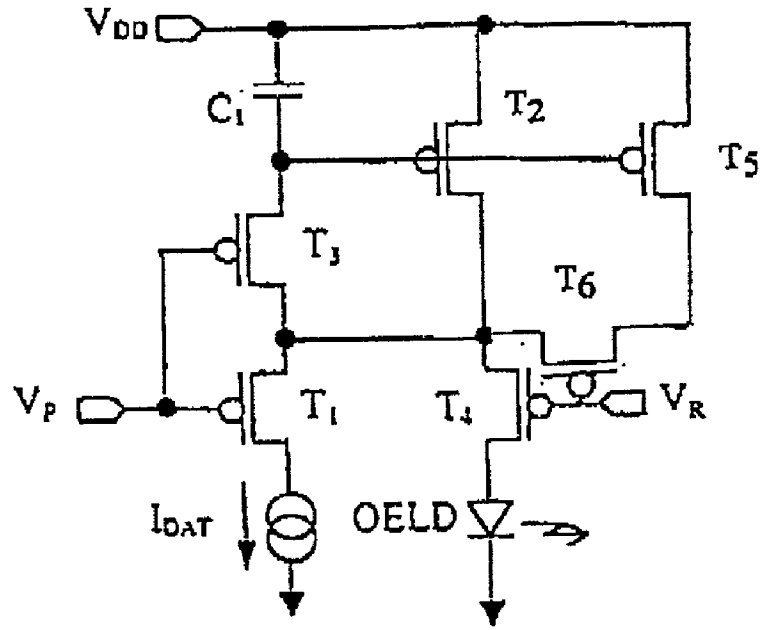
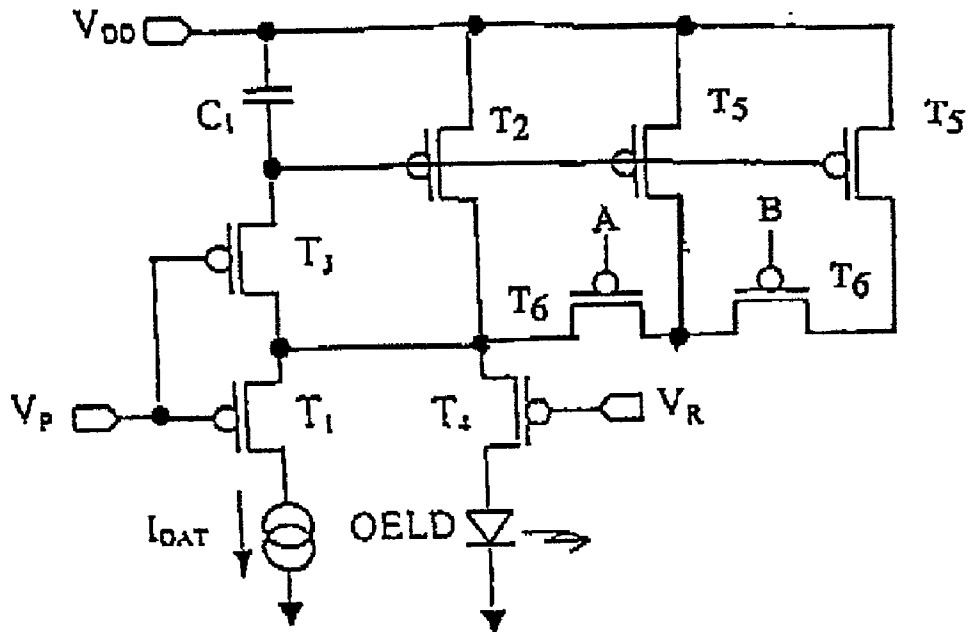


Figure 9



Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.