

Title (en)
L.E.D. ARRAY PRINTER

Title (de)
DRUCKER MIT LEUCHTDIODENANORDNUNG

Title (fr)
IMPRIMANTE A RESEAU DE DEL

Publication
EP 0487715 B1 19961016 (EN)

Application
EP 91912735 A 19910625

Priority

- US 54350790 A 19900626
- US 54389290 A 19900626
- US 54392990 A 19900626
- US 54393090 A 19900626
- US 9104488 W 19910625

Abstract (en)
[origin: WO9200196A1] A non-impact printer apparatus is described that includes a recording head having a plurality of recording elements (30) such as LED's for recording on a recording medium (12). A plurality of driver chips (40) are provided on the head and each includes a plurality of current driving channels for selectively driving a plurality of recording elements in accordance with respective image data signals. The driver chips (40) each further include an extra current driving channel not associated with a recording element (30) for generating a current related to that sent to said recording elements. Monitoring of the current in the extra channel is provided to permit for changes of current to the recording elements (30) and/or corrected image data to provide fine tuned control over uniformity of the recording elements. A digitally adjustable current mirror controls the level of current to each LED during recording. Digital current data signals for controlling this level of current are also communicated over one of the lines of the data bus. Token bit signals are used to control the latching of both current data signals and image data signals in respective registers storing the digital data used for current control and the image data used for controlling energization times. Each driver chip (40) includes two sets of digitally addressable transistors. This allows for individual chip control of current to the respective LED's to correct for nonuniformity of light output from chip to chip due to temperature gradients as well as controlling for light output due to aging of the printhead. The current mirror has a master circuit for generating a reference current and a plurality of slave circuits for providing respective driver currents to the recording elements (30) selected for energization. A transistor switch is in series with a respective recording element (30) and switchable from one state to another in response to a signal at its control electrode. Each of the slave circuits includes an additional slave circuit which provides a current path for facilitating changing of the signal at the control electrode from one voltage level to another such as by allowing a capacitive charge at the control electrode to dissipate.

IPC 1-7
B41J 2/45

IPC 8 full level
B41J 2/44 (2006.01); **B41J 2/365** (2006.01); **B41J 2/45** (2006.01); **B41J 2/455** (2006.01); **H04N 1/036** (2006.01)

CPC (source: EP)
B41J 2/45 (2013.01); **B41J 2202/17** (2013.01)

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
WO 9200196 A1 19920109; DE 69122718 D1 19961121; DE 69122718 T2 19970403; EP 0487715 A1 19920603; EP 0487715 B1 19961016; JP 3256225 B2 20020212; JP H05501684 A 19930402

DOCDB simple family (application)
US 9104488 W 19910625; DE 69122718 T 19910625; EP 91912735 A 19910625; JP 51210391 A 19910625