

Title (en)

METHOD AND CIRCUIT FOR DRIVING LIQUID CRYSTAL DEVICE, AND DISPLAY DEVICE

Title (de)

STEUERUNGSVERFAHREN UND -SCHALTUNG FÜR FLÜSSIGKRISTALLELEMENTE UND BILDANZEIGEVORRICHTUNG

Title (fr)

PROCEDE ET CIRCUIT D'ATTAQUE POUR UN DISPOSITIF A CRISTAUX LIQUIDES, ET DISPOSITIF D'AFFICHAGE

Publication

**EP 0598913 B1 19991013 (EN)**

Application

**EP 93911979 A 19930510**

Priority

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- JP 12362392 A 19920515
- JP 14348292 A 19920508
- JP 19907792 A 19920702

Abstract (en)

[origin: EP0836173A2] In a multiplex driving method of a matrix type liquid crystal electro-optical device comprising a liquid crystal layer provided between a first substrate carrying row electrodes (X1, X2,...) and a second substrate carrying column electrodes (Y1, Y2,...) wherein said row and column electrodes define a matrix of pixels, said row electrodes are divided into groups and, during a selection period, the row electrodes of one group are simultaneously selected by applying a respective row voltage waveform to each of them while applying a non-selection voltage to the row electrodes of all other groups. The groups are sequentially selected. The row voltage waveforms are composed of a plurality of successive row select pulses defining a corresponding plurality of successive row select patterns. To each column electrode is applied a respective column voltage determined in response to each row select pattern and display data. The selection period is divided into plural subperiods (t1, t2, t3) and and, when a frame is defined as the time period equal to said selection period times the number of row electrode groups and a picture period comprises a certain number of frames, said column voltages are modulated during said picture period in accordance with gradation information of grey scale display data,. <IMAGE>

IPC 1-7

**G09G 3/36**

IPC 8 full level

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Cited by

CN1107301C; EP1471496A1; EP1365384A1; CN100446073C; US5739803A; CN102568370A; EP0720141A3; US5815128A; EP0683479A1; US5696524A; EP1079364A4; EP1396838A4; FR2738378A1; US5774103A; WO9606423A1; WO2004111987A1; US7209129B2; US7403195B2; US6657610B1

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