

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 0 744 648 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

27.11.1996 Bulletin 1996/48

(51) Int. Cl.⁶: **G02F 1/35**

(21) Application number: **95303550.8**

(22) Date of filing: **25.05.1995**

(84) Designated Contracting States:

DE FR GB IE IT NL SE

(71) Applicant: **HITACHI EUROPE LIMITED**

Maidenhead, Berkshire, SL6 8YA (GB)

(72) Inventors:

• **Heberle, Albert P.**
Cambridge, CB4 1YE (GB)

• **Baumberg, Jeremy J.**

Cambridge, CB3 9JU (GB)

(74) Representative: **Read, Matthew Charles et al**

Venner Shipley & Co.

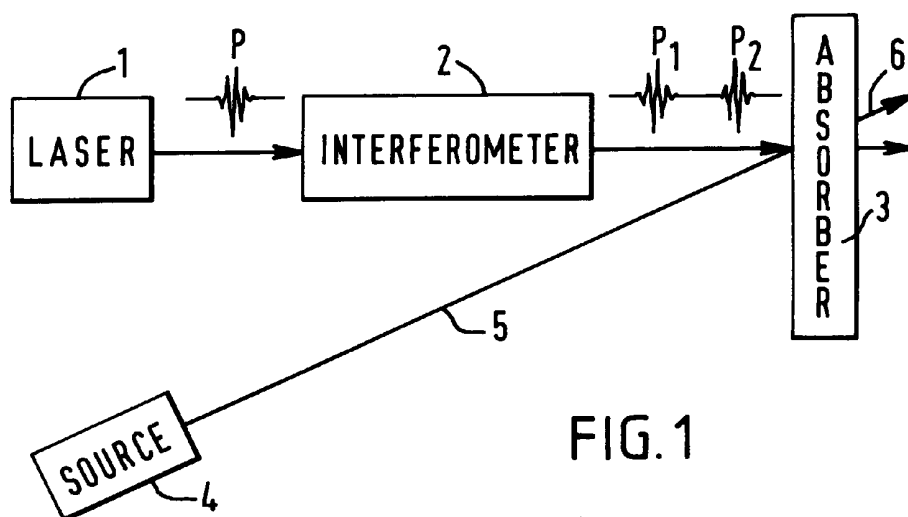
20 Little Britain

London EC1A 7DH (GB)

(54) Apparatus and method for coherently controlling an optical transition

(57) Optically generated charge carriers in an optically responsive medium, such as an optical switch, which are produced in response to a first pulse of optical radiation (P_1), are de-excited by directing a second pulse (P_2) of optical radiation into the medium. The second pulse occurs whilst the excitation produced by the

first pulse remains coherent, and the relative phase of the first and second pulses is selected so that the second pulse destructively interferes with the excitation produced by the first pulse. The apparatus may be used as an optical switch or as a photodetector.



EP 0 744 648 A1