

Title (en)  
LASER DEVICE TRIGGERED BY A PHOTONIC FIBRE

Title (de)  
DURCH PHOTONISCHE FASER GETRIGGERTE LASEREINRICHTUNG

Title (fr)  
DISPOSITIF LASER DECLENCHE A FIBRE PHOTONIQUE

Publication  
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Application  
**EP 06743856 A 20060427**

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Abstract (en)  
[origin: WO2006114557A1] The invention relates to a device generating laser pulses with a duration of less than 30 ns, and comprising, along the internal optical axis thereof, a laser resonator having an optical length of less than 2m and comprising two reflective ends (6', 8) and a laser medium (6) which is continuously pumped by at least one laser diode pump wave (13), the laser medium being a medium wherein the laser wave has a gain with a very weak signal higher than 10 per passage. Said resonator also comprises an optical modulator (7). According to the invention, the optical modulator can deflect the internal laser axis by means of an electrical control in two stable directions, the first direction corresponding to an axis along which the laser radiation suffers sufficient loss to prevent the laser effect, and the second direction corresponding to an axis on which the laser beam is reflected at least partially by an optical redirection means (8); the other end of the resonator is closed by an at least partially reflective means (6''); and the modulator has a switching time which is longer than the time taken by the light to pass through the cavity, and has a much higher loss factor than the gain with a very weak signal of the resonator, the amplifying medium preserving the state of polarisation.

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