

Title (en)  
PRECISION LASER SYSTEM USEFUL FOR OPHTHALMIC SURGERY.

Title (de)  
PRÄZISIONSLASERSYSTEM, VERWENDBAR BEI OPHTHALMISCHER CHIRURGIE.

Title (fr)  
SYSTEME A LASER DE PRECISION POUR CHIRURGIE OPHTALMIQUE.

Publication  
**EP 0305405 A4 19900220 (EN)**

Application  
**EP 87903930 A 19870504**

Priority  
US 86471986 A 19860519

Abstract (en)  
[origin: WO8707165A1] A laser system is capable of producing a plasma in a target irrespective of whether the target (18) is absorbing or non-absorbing for the laser pulses. This system is particularly useful for making precise cuts in animal tissue for laser surgery such as for opthamological procedures. The system including a generation zone (24) for generating a principal lasing radiation pulse (44), an shortening zone (56) for shortening the duration of the principal pulse, a pulse multiplier (102) that multiplies the shortened pulse to a plurality of temporally, and preferably spatially, spaced apart pulses, and a beam delivery system (28) that focuses the spaced apart pulses into a sufficiently small spot size to achieve an irradiance of at least about 10<13> watts/cm<2> in the target. A pulse shortener achieves substantial pulse shortening using amplified spontaneous emission.

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**A61N 5/06**

IPC 8 full level  
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Citation (search report)

- EP 0007256 A1 19800123 - DANIELE SYLVIE ARON ROSA [FR], et al
- EP 0143185 A1 19850605 - ZEISS CARL FA [DE], et al
- See references of WO 8707165A1

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