

Title (en)

PARALLEL CONFOCAL LASER MICROSCOPY SYSTEM BASED ON VCSEL TECHNOLOGY

Title (de)

PARALLELES KONFOKALES LASERMIKROSKOPIESYSTEM AUF DER BASIS VON VCSEL-TECHNOLOGIE

Title (fr)

SYSTEME DE MICROSCOPIE LASER CONFOCALE PARALLELE BASE SUR LA TECHNOLOGIE VCSEL

Publication

EP 1579260 A1 20050928 (FR)

Application

EP 03815394 A 20031212

Priority

- FR 0303687 W 20031212
- FR 0216276 A 20021220

Abstract (en)

[origin: FR2849215A1] Light from a matrix of lasers (23) is focussed by an optical unit (24) on to an object (25). The lasers are vertical cavity surface emitting lasers (VCSEL) and each laser has a photo-detector (22) mounted at the rear and able to receive reflected light from the object. The photo-detector signals are amplified and digitized by a processing unit (21) and sent to a control unit (26) which controls the matrix and optical unit. Independent claims are also included for the following: (1) An application of the system in which the miniature head is deployed at the head of an endoscope; (2) A method for realizing confocal parallel laser microscopy in which a photo-detector is attached to the rear of each laser to receive light returning from the object and the laser cavities are used as filters.

IPC 1-7

G02B 21/00; **G02B 23/24**

IPC 8 full level

G02B 21/00 (2006.01); **G02B 23/24** (2006.01)

CPC (source: EP US)

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Citation (search report)

See references of WO 2004066015A1

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