

Title (en)
DIFFRACTION MICROSCOPE METHOD AND DEVICE

Title (de)
DIFFRAKTIONSMIKROSKOPVERFAHREN UND -VORRICHTUNG

Title (fr)
METHODE ET DISPOSITIF DE MICROSCOPE DIFFRACTIVE

Publication
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Application
EP 15771517 A 20150908

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Abstract (en)
[origin: WO2016050460A1] According to one aspect, the invention relates to a device (100, 200, 300, 400, 500) for measuring the distance, with respect to a reference plane (PREF), of a point of light (Pi) of an object (O). The device comprises a two-dimensional detector (30) comprising a detection plane (PDET) and an imaging system (10) capable of forming an image of a point of light (Pi) situated on an object plane of interest (11) in an image plane (11') arranged close to the detection plane (PDET) or to a conjugate plane (P'DET) of the detection plane. The device further comprises a separator element (20) able to form, from a beam emitted by a point of light of the object plane of interest (11) and emerging from the imaging system (10), at least two mutually coherent beams, having a region of special superposition in which the beams interfere, and signal processing means (50) able to determine, from the interference pattern formed in the detection plane and resulting from the optical interference between said mutually coherent beams, the distance from the point of light to the conjugate plane of the detection plane in the object space of the imaging system (10), said conjugate plane of the detection plane forming the reference plane (PREF).

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