

Title (en)  
DEVICE FOR CHARACTERISING OPTICAL GRATINGS AND METHOD FOR MAKING OPTICAL GRATINGS WITH PREDEFINED SPATIAL FREQUENCY

Title (de)  
EINRICHTUNG ZUR CHARAKTERISIERUNG OPTISCHER GITTER UND VERFAHREN ZUM HERSTELLEN OPTISCHER GITTER MIT VORDEFINIERTER RÄUMLICHER FREQUENZ

Title (fr)  
DISPOSITIF DE CARACTERISATION DE RESEAUX OPTIQUES ET PROCEDE DE FABRICATION DE RESEAUX OPTIQUES AVEC UNE FREQUENCE SPATIALE PREDEFINE

Publication  
**EP 1395794 A1 20040310 (FR)**

Application  
**EP 02750974 A 20020522**

Priority  
• EP 0205712 W 20020522  
• FR 0106917 A 20010528

Abstract (en)  
[origin: WO02097375A1] The invention concerns an optical device (2) for characterising a diffraction grating (14) consisting of first and second integral interferometric diffraction sensors (4, 6) spaced apart from each other by a first specific distance, and comprising each a reading system (10a, 10b) and at least a light intensity detector, said first and second sensors delivering respectively first and second electric signals which, during the relative displacement ( DELTA x) between the device and the diffraction grating, vary in accordance with the spatial frequency of said grating in first and second regions thereof located respectively opposite the two reading systems and receiving each light supplied by at least one light source. In particular, the first and second electric signals define first and second phases of the first and second sensors. Additionally, the device comprises means for measuring a difference between the phases of the first and second signals and means (24) for measuring the accumulation of said difference when the device moves along the grating. The invention also concerns optical devices for determining the spatial frequency of a grating of a type similar to said device. The invention further concerns methods for making diffraction gratings using said device.

IPC 1-7  
**G01D 5/38**; G01M 11/02; G02B 5/18

IPC 8 full level  
**G01D 5/38** (2006.01); **G02B 5/18** (2006.01)

CPC (source: EP US)  
**G01D 5/38** (2013.01 - EP US); **G02B 5/1847** (2013.01 - EP US)

Citation (search report)  
See references of WO 02097375A1

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**WO 02097375 A1 20021205**; CA 2448823 A1 20021205; EP 1395794 A1 20040310; FR 2825150 A1 20021129; FR 2825150 B1 20030926; US 2004174536 A1 20040909

DOCDB simple family (application)  
**EP 0205712 W 20020522**; CA 2448823 A 20020522; EP 02750974 A 20020522; FR 0106917 A 20010528; US 47904504 A 20040422