

Title (en)

MEASURING METHOD FOR DETECTING NON-LINEARITIES OF AN OPTICAL FIBER

Title (de)

MESSVERFAHREN ZUR BESTIMMUNG DER NICHTLINEARITÄTEN EINER OPTISCHEN FASER

Title (fr)

PROCEDE DE MESURE POUR LA DETERMINATION DES NON-LINEARITES D'UNE FIBRE OPTIQUE

Publication

EP 1297316 A1 20030402 (DE)

Application

EP 01944955 A 20010522

Priority

- DE 0101975 W 20010522
- DE 10028144 A 20000607

Abstract (en)

[origin: DE10028144C1] The method involves coupling at least one test signal into the fiber, altering its power and determining a first stimulated Brillouin scattering entry threshold from the change in reflected signal power. A modulated pump signal is fed into the fiber in addition to the test signal and a second threshold signal determined. The test and pump signal parameters and the fiber parameters are evaluated to determine the fiber's non-linearity coefficient. The method involves coupling at least one test signal (ots) into the fiber (OF) whose test signal power is altered and determining a first entry threshold of the stimulated Brillouin scattering from the change in the power of the reflected signal. A modulated pump signal (ops) is then fed into the fiber in addition to the test signal and a second threshold signal determined. The parameters of the test and pump signals and the fiber parameters are evaluated to determine the fiber's non-linearity coefficient.

IPC 1-7

G01M 11/00

IPC 8 full level

G01M 11/00 (2006.01)

CPC (source: EP US)

G01M 11/319 (2013.01 - EP US)

Citation (search report)

See references of WO 0194905A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

DE 10028144 C1 20011129; EP 1297316 A1 20030402; US 2003128946 A1 20030710; US 6819412 B2 20041116; WO 0194905 A1 20011213

DOCDB simple family (application)

DE 10028144 A 20000607; DE 0101975 W 20010522; EP 01944955 A 20010522; US 31116602 A 20021204