

Title (en)

METHOD AND APPARATUS FOR DETERMINING DIFFERENTIAL GROUP DELAY AND POLARIZATION MODE DISPERSION

Title (de)

VERFAHREN UND VORRICHTUNG ZUR BESTIMMUNG DER DIFFERENZ-GRUPPENVERZÖGERUNG UND
POLARISATIONSMODENDISPERSION

Title (fr)

PROCÉDÉ ET APPAREIL DE DÉTERMINATION DE TEMPS DE PROPAGATION DE GROUPE DIFFÉRENTIEL ET DISPERSION EN MODE
POLARISATION

Publication

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Application

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Abstract (en)

[origin: WO2008116314A1] A method and apparatus for measuring at least one polarization-related characteristic of an optical path (FUT) uses a light input unit connected to the FUT at or adjacent a proximal end of the FUT and a light output unit connected to the FUT at or adjacent its proximal or distal end. The light input unit injects into the FUT at least partially polarized light having a controlled state of polarization (I-SOP). The output light unit extracts corresponding light from the FUT, analyzes and detects the extracted light corresponding to at least one transmission axis (A-SOP), and processes the corresponding electrical signal to obtain transmitted coherent optical power at each wavelength of light in each of at least two groups of wavelengths, wherein the lowermost (λ_{min}) and uppermost (λ_{max}) said wavelengths in each said group of wavelengths are closely-spaced. A processing unit then computes at least one difference in a measured power parameter corresponding to each wavelength in a wavelength pair for each of the at least two groups, the measured power parameter being proportional to the power of the said analyzed and subsequently detected light, thereby defining a set of at least two measured power parameter differences; computes the mean-square value of said set of differences; and calculating the at least one polarization-related FUT characteristic as at least one predetermined function of said mean-square value, the predetermined function being dependent upon the small optical frequency difference between the wavelengths corresponding to the said each at least said two pairs of closely-spaced wavelengths.

IPC 8 full level

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