

Fiber-Optic Fabry-Perot Interferometer and its Sensor Applications

T. Yoshino, K. Kurosawa, K. Itoh and T. Ose. "Fiber-Optic Fabry-Perot Interferometer and its Sensor Applications." 1982 Transactions on Microwave Theory and Techniques 30.10 (Oct. 1982 [T-MTT] (Special Issue on Optical Guided Wave Technology)): 1612-1621.

Fiber-optic Fabry-Perot interferometers using monomode fibers are fabricated and their basic properties of finesse, polarization, and thermal response are studied. Fiber-optic Fabry-Perot interferometers are applied to the sensors of temperature, mechanical vibration, acoustic wave including human voice, ac voltage, and ac and dc magnetic fields. It has been demonstrated that a fiber-optic Fabry-Perot interferometer can simplify the interferometric fiber sensor system and that high measurement sensitivity can be obtained by using a high-finesse and/or long-distance fiber Fabry-Perot interferometer.

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