World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:14, No:12, 2020

Spectral Properties of Fiber Bragg Gratings

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Abstract : In this paper, the reflection spectra, group delay and dispersion of a uniform fiber Bragg grating (FBG) are obtained. FBGs with two types of apodized variations of the refractive index were modeled to show how the side-lobes can be suppressed. Apodization techniques are used to get optimized reflection spectra. The simulation is based on solving coupled mode equations together with the transfer matrix method.

Keywords : fiber bragg gratings, coupled-mode theory, reflectivity, apodization
Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development
Conference Location : Chicago, United States
Conference Dates : December 12-13, 2020