

Antiresonant waveguide add/drop filter using Fabry-Perot interference

The antiresonant waveguide apparatus is for periodically selecting a first series of at least one optical wavelength from a first incoming light signal. It comprises a first waveguide having an input for receiving the incoming light signal, the first waveguide having guiding mirrors for guiding the incoming light signal, one of the guiding mirrors being a first partial reflectivity mirror; a second waveguide having guiding mirrors for guiding an outputting light signal containing the first series of at least one wavelength; and a first Fabry-Perot resonator adjacent to the first partial reflectivity mirror, and forming one of the guiding mirrors of the second waveguide.

The Fabry-Perot resonator is a second partial reflectivity mirror for the second waveguide. The Fabry-Perot resonator has a predetermined thickness determining the first series of at least one optical wavelength transmitted through the Fabry-Perot resonator from the first waveguide to the second waveguide.
