

ABSTRACT

An on-chip integrated wavelength division multiplexer, including a bus waveguide (10) and at least two cascaded wavelength division multiplexing units (20) disposed on the bus waveguide (10). Each of the wavelength division multiplexing units (20) comprises two input ports and one output port, and is used for combining two optical signals received by the two input ports and outputting the combined optical signal from the output port, so as to implement multiplexing of incident optical signals of different wavelengths. By means of the structure in which the at least two wavelength division multiplexing units (20) are cascaded, a relatively wide and flat-top passband can be provided for the on-chip integrated wavelength division multiplexer; moreover, the present invention has the characteristics of low loss and pure passivity, and can solve the problem of crosstalk between adjacent channels that may be caused by center wavelength shifting of wavelength division multiplexing devices. Also provided is a chip comprising the on-chip integrated wavelength division multiplexer.