

ABSTRACT

COHERENT OPTICAL MIXER CIRCUIT

A coherent optical mixer circuit is provided that can measure a phase error without requiring a step of cutting away a delay circuit. Odd-numbered or even-numbered two of four inputs of an 4-input-and-4-output multimode interference circuit are connected to an input mechanism. The four outputs of the multimode interference circuit are all connected to an output mechanism to the exterior. Other two inputs of the multimode interference circuit are connected to two monitor waveguides. One of the monitor waveguide is longer than the other to configure a light delay circuit. The monitor waveguides constituting the light delay circuit are connected to the respective outputs of a 2-branched light splitter. The 2-branched light splitter has an input connected to a monitor light input mechanism from the exterior via a monitor input waveguide. (Figure 6)