

SPECTRUM SCANNING ASSEMBLY AND OPTICAL SEMICONDUCTOR ELEMENT

ABSTRACT

A spectrum scanning assembly (100) and an optical semiconductor element. The spectrum scanning assembly (100) comprises a band-pass waveguide assembly (10) and a plurality of micro-ring resonators (20), the band-pass waveguide assembly (10) respectively being connected
5 to the plurality of micro-ring resonators (20), wherein the band-pass waveguide assembly (10) is used for dividing an optical signal to be tested into a plurality of band-pass optical signals having different central wavelengths, and then respectively inputting the band-pass optical signals into the plurality of micro-ring resonators (20); the micro-ring resonators (20) are used for performing scanning for resonant wavelengths in the band-pass optical signals, so as to form
10 first spectral information; and after beam combination is performed on a plurality of pieces of first spectral information, which are formed by the plurality of micro-ring resonators (20), second spectral information can be formed. The spectrum scanning assembly (100) is integrated on the optical semiconductor element. The spectrum scanning assembly (100) and the optical semiconductor element have high spectral scanning precision.

FIG. 1