

ABSTRACT

Provided in the present utility model are a photonic integrated circuit chip and a silicon optical integrated platform. The utility model aims to arrange multiple layers of waveguides in an optical waveguide layer of a photonic integrated circuit chip, the multiple layers of waveguides jointly participate in the spot size conversion of light, so as to reduce the light loss in spot size conversion by a conventional edge coupler provided with a single-layer waveguide. Furthermore, in the thickness direction of a substrate layer, at least one protective layer is arranged on the surface of the side of the photonic integrated circuit chip away from the substrate layer, thereby preventing water vapor from entering silicon dioxide on a surface layer during long-term use, thereby affecting device performance. Moreover, the influence of various kinds of dirt infiltration in the packaging process can be prevented.

FIG. 1