

Fabrication of a GaAs monolithically integrated optical circuit

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A GaAs/(AlGa)As monolithically integrated optical circuit containing an injection laser, a passive waveguide and a detector has been fabricated by wet chemical etching. The threshold, the near-field pattern of the laser and the transfer efficiency are determined.

The integrated devices reported in this paper have a cladding layer with an Al content far lower than those reported in reference, and therefore it is easier to obtain a higher carrier concentration that leads to more reliable contacts. Moreover, a symmetrical contact pattern is adopted, so that it should be easy to select out good integrated devices.

砷化镓单片集成光路的制造

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近年来,用湿法化学腐蚀制作腐蚀面 GaAs 激光器和集成光路,受到了相当重视。我们用化学腐蚀法成功地实现了 GaAs 基片上激光器和探测器的集成。激光器与探测器相距 250 微米。

本文报导的集成器件,复盖层材料含铝量远低于文献所报导的,外延时易获得较高的表面浓度,有利于制得良好的欧姆接触。此外,采用了对称结构的电极图形,较易挑选出合适的集成器件。