

SEMICONDUCTOR DEVICE AND PACKAGE AND
METHOD THEREOF

ABSTRACT OF THE DISCLOSURE

A conductive mounting board provided in a package has a recessed portion and a projecting portion, and an insulating mounting board is disposed on the recessed portion. The insulating mounting board is disposed on the recessed portion. The insulating mounting board has an insulating board on the surface of which a wiring portion is disposed. A semiconductor laser, constituted by stacked semiconductor layers each being made from a compound semiconductor composed of a group III based nitride, is disposed on the insulating mounting board and the conductive mounting board. An n-side electrode of the semiconductor laser is in contact with the insulating mounting board and a p-side electrode thereof is in contact with the conductive mounting board. Heat generated in the semiconductor laser is radiated via the conductive mounting board, and short-circuit between the n-side electrode and the p-side electrode is prevented by the insulating mounting board. In an alternative semiconductor device, the p-side electrode of the semiconductor element is fixed to the conductive mounting board and the n-side electrode thereof projects from the conductive mounting board.

Figure 18