

SEMICONDUCTOR LASER UNIT AND OPTICAL PICKUP DEVICE INCLUDING THE SEMICONDUCTOR LASER UNIT

ABSTRACT OF THE DISCLOSURE

The present invention provides a semiconductor laser unit which realizes efficient heat dissipation, reduction in size, high-density integration of optical elements, prevention of a light-receiving element from being polluted with dust, and simple structure for easy assembly. The semiconductor laser unit includes: (a) a metal plate having a first recessed portion in a central part of an upper surface of the metal plate; (b) a flexible printed circuit which has wiring patterns, and a first aperture positioned on the first recessed portion, and is bent at both ends and in contact with the first recessed portion and a pair of side surfaces of the metal plate; (c) a light-emitting/receiving unit which includes a light-emitting element and a light-receiving element, and is placed on the first recessed portion through the first aperture; (d) a frame having: side portions for fixing firmly, on the side surfaces of the metal plate, the flexible printed circuit which is in contact with the side surfaces; and a top portion which has a second aperture and is placed on a protruding portion of the metal plate so that the first recessed portion is covered with the top portion and the second aperture faces toward the first recessed portion; and (e) an optical element which covers the second aperture.

Fig. 5A.