TECHNOLOGY OFFER

Łukasiewicz Institute of Microelectronics and Photonics

Centering frame

Who are we?

Łukasiewicz – Institute of Microelectronics and Photonics, based in Poland (Warsaw), is a part of Łukasiewicz Research Network - one of the largest European organizations for applied research. Łukasiewicz – IMiF operates under the formula Science is Business and its strategy is to play a central role in the innovation process towards R&D for industry and business. One of the Institute's main areas of activity is infrared photonics. The Research Group carries out R&D work in topics that belong mainly to cascade lasers and infrared detectors. The group has the competence and a complete technological line for the manufacture of optoelectronic semiconductor devices: from the design of the device and the growth of the crystal structure, through the manufacture of the device ending with complex characterization.

Utility model information

Technology readiness level: 6

Title: Centering frame

Patent number: Ru.073236

Priority Date: 10.03.2021

Inventors: Krzysztof Michalak, Joanna Branas, Lech Rządca

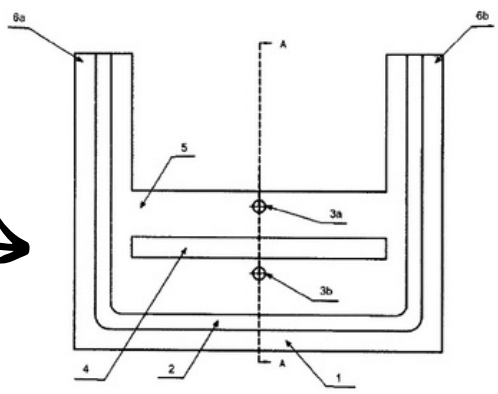
Owners: Łukasiewicz - IMiF

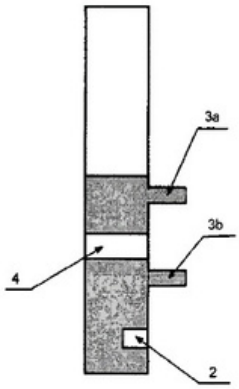
Jurisdictions: Poland

The subject of the utility model is a centering frame that facilitates the proper positioning of the laser structure placed on the radiator inside the optoelectronic enclosure.

Presented frame design is simple, and its use does not require strictly defined mounting pads. What is more, it allows for accurate and quick centering of the radiator using two contact points between the frame and the radiator, at a large distance from the soldering material and the internal walls of the enclosure. The simple design also allows for relatively quick modifications to adapt to an enclosure with dimensions other than standard.

top view of the frame





cross-section of the frame along A-A section line

Sourse: https://api-ewyszukiwarka.pue.uprp.gov.pl/api/collection/a4c8613baba30f15759bf501440edcbb

Technology Summary

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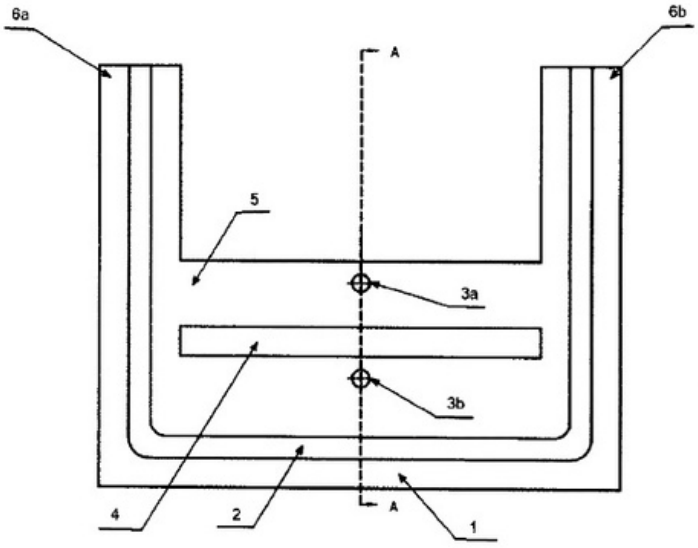
The potential behind the technology

One of the main purposes of presented tool is to enable precise and repeatable positioning of the radiator with a laser structure in the enclosure. This solution will both significantly shorten the required time and allow offering a product with repeatable parameters in commercial applications under small batch production conditions.

Construction

Presented frame has a base (1) with attached arms (6a and 6b) connected to each other by a connector (5). In both the base (1) and the arms (6a and 6b) of the frame there is a bump (2) with a depth that is about half the thickness of the frame and with a width that is slightly larger than the width of the wall of the optoelectronic housing on which it will be applied. On the other hand, in the center of the frame, on the same side as the bump (2), there are two pins (3a and 3b) whose diameters are slightly smaller than the diameters of the holes in the centered radiator and with a height greater than half the thickness of the frame. Mentioned pins are separated from each other by a longitudinal slot (4), with the pin (3a) located in the base (1) of the frame and the pin (3b) on the connector (5).



Application

Positioning frame can be used mainly in laser structure, inside an optoelectronic enclosures.

Collaboration type

License agreement or sale agreement

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