

TITLE OF THE INVENTION: LASER ASSISTED BONDING DEVICE AND METHOD FOR LARGE AREA BONDING

Abstract

A laser assisted bonding device includes: a laser emitter array having a plurality of laser emitter units, wherein each of the laser emitter units is operable to be turned on or off independently from the other laser emitter units such that the laser emitter array is capable of emitting a laser beam with a controllable beam shape; a carrier for placing a substrate which an electronic component is disposed on and to be bonded onto via a solder material; a transfer mechanism for moving the laser emitter array relative to the carrier; and a controller electronically coupled to the transfer mechanism to control a movement of the laser emitter array relative to the carrier, and electronically coupled to the laser emitter array to irradiate the laser beam to the substrate with a controllable power profile for the solder material when the electronic component is bonded onto the substrate via the solder material.

[Fig. 1a]

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