

ABSTRACT**LASER REFLOW WITH TEMPLATE FOR SOLDER BALLS OF BGA
PACKAGING**

A system of laser reflow with template on BGA packaging comprising means for template alignment, means for solder ball placement and a laser head. The template is aligned with connection pads located on the surface of the substrate with pre-applied flux. The aligned template allows accurate guiding of the balls onto the pads by the ball placement means. One ball is dropped into each hole in the template directly onto the pads containing a layer of flux. The solder balls positioned on the pads are then exposed to a laser via the laser head, resulting in the rapid melting of the solder balls directly onto the substrate pads. The melted balls are then allowed to cool rapidly. This laser reflow with template method eliminates the use of the reflow oven, which is a bulky equipment involved in the packaging of BGA devices, while increasing the accuracy of the ball placement and alleviates the problem of ball bridging.

FIGURE 4