

ABSTRACT**SOLDER BALL PLACEMENT WITH FLUX, TEMPLATE AND
LASER TAG**

A system for solder ball placement on BGA packaging comprising means for template alignment, means for solder ball placement and a laser head. A 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 a pad. The balls positioned on the pads are then exposed for a short time to a laser via the laser head to cause partial melting of the balls. This short exposure to laser results in a gentle attachment or tagging of the balls onto the pad of the substrate. Once the balls are tagged, they can be transferred to the reflow oven without being easily displaced.

FIGURE 3