

CAPILLARY TUBE OF SOLDER BALL CONNECTION DEVICE
AND SOLDER BALL CONNECTION DEVICE

ABSTRACT

To position a solder ball accurately at a predetermined position so as to carry out solder ball connection between a bonding pad formed at a slider and a lead pad formed at a lead wire, then apply a laser beam to the solder ball stabilized accurately at the connection point and make the solder ball reflow, thereby preventing the solder connection point from displacement or connection failure to be caused by distortion, etc., as well as to prevent the laser beam from energy loss to be caused by reflections in a capillary tube.

A method for solder ball connection, which enables the extreme tip of the capillary tube to be positioned slightly downwards from the center point P1 of the solder ball held at the extreme tip of the capillary tube by forming tapered portions at the tip 6a of the capillary tube, thereby preventing the idle width of the solder ball from being excessively increased, as well as having a laser beam hitting portion in the capillary tube mirror-finished.

Figure 4