



ficonTEC

FIBERLINE LW4000S

Automated laser welding system for fiber pigtailed

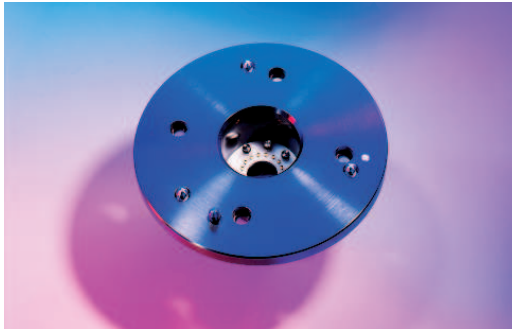
The Model LW4000S is designed for both 2-beam, horizontal configuration, and 3-beam, vertical configuration welding. The system can handle coaxial LD or PD modules, 2- and 3-port passive devices, butterfly, and DIP packages. For 3-beam configuration, Beam Angle of Separation (BAS) is fixed at 120°, and Beam Angle of Incidence (BAI) is fixed at 45° (standard). The 2-beam configuration comes with a fixed BAI of 25° and BAS of 180°. The LW4000S comes standard with ficonTEC's exclusive AccuView™ Welding Beam Output Housings.



HIGHLIGHTS

- + Full automated operation
- + 6 axis bar to heatsink alignment
- + $\pm 1 \mu\text{m}$ post bond accuracy
- + Full automated visual bar/chip inspection

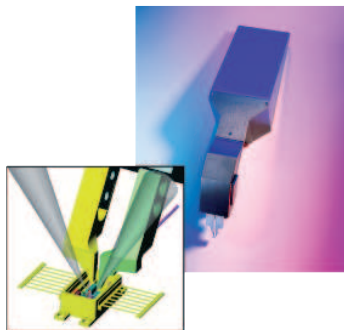
- + Heatsink and Submount compatibility
- + Indium and AuSn bonding capability
- + Minimal smile due to ultra flat bond tool
- + Electronically adjustable bond force
- + Switch between products in minutes
- + Online formic acid gas generation
- + Formic Acid Gas/Forming Gas supply
- + Total temperature profile control
- + Oven with 100 °C/s heating rate
- + Online temperature monitoring
- + Optical Character recognition on heatsinks for serial number tracking



Lower Tooling Dock

LOWER TOOLING AND PACKAGES

The simple yet very precise lower dock design can accommodate tooling for both active and passive package designs of any geometry. It incorporates electronic contacts and a pneumatic pass-through. Tooling changes can be achieved in about a minute. Butterfly package tooling as well as TO package tooling offering one-handed clamping, reproducible gripping and integral electronic contacts are readily available. Tooling for other package types can be created.



2-Beam application upper tooling

2-BEAM APPLICATIONS

Direct fiber-chip coupling designs, as well as confocal optical trains can be assembled with the 2-beam configured LW4000S. Pneumatically actuated tweezers Upper Tooling Assembly of the LW4000S provides precise gripping pressure control for handling small components. Interchangeable blades with wire-cut features handle cylindrical fibers and lenses as well as rectangular shapes of nearly any size. The narrow profile design reaches into tight spaces inside of rectangular packages, and incorporates an inert gas delivery nozzle for superior weld quality.



3-Beam application upper tooling

3-BEAM APPLICATIONS

Coaxial laser diode module and coaxial isolator or WDM module can be processed with Beam Angle of Incidence of 45° for fillet-type welds, or 90° for butt and lap-style welds. Both single-fiber (active) and multi-fiber (passive) coaxial devices can be assembled with the LW4000S. An upper collet can be mounted into the upper tooling assemblies to assure firm, reproducible gripping of fiber ferrules in vertical welding applications.

Please contact us for further information

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