AL500-AA
Automated Micro-Optics Assembly
The AL500-AA from ficonTEC’s AL product series is specialized for the automated production of micro-optical packages. The machine combines unique active assembly capabilities with a rugged industry proven design.

**Typical Fields of Production**

- Fiber laser pump modules
- HPLD modules
- Pico beamer
- RGB modules
- SLED packages

**Machine Layout**

- GelPak vacuum release field
- Camera for machine calibration and component recognition
- PCB probes for emitter operation
- Individually driven single emitters
- Thermal chuck with temperature control

**Unique Automated Functions**

- Active FAC attach
- Active or passive SAC attach
- Active mirror placement
- Active VBG spectral tuning
- Focus lens placement
- General align and attach of micro-optics

**Software Interface**

FAC attach to Diode Laser Stacks
Built for Industrial Usage

- Rugged steel base production cell
- Hardware interlock circuit for safe operation
- Ergonomic HUI
- Full featured machine switchboard
- Integrated air and vac control
- Operation console for comfort access of basic machine function

Key Features

- High precision 6 axes alignment engine
- Fast configurable active alignment routines
- Signal auto-locking
- Closed loop active alignment from beam profiling
- Special precision epoxy dispensing
- Countermeasure against epoxy shrinkage
- Pick & Place for extended operatorless operation
- Extremely flexible machine software

Fully Automatic Assembly of Micro Optics

AL500 has been developed for handling, placing, and aligning or micro-optical components. For building optical modules from such miniaturized components the machine follows an active alignment approach.

Process Control Master

Powerful Machine and Process Software

- Freely programmable machine processes
- User friendly user interface
- Line based process programming
- Recipe based management of process parameters
- Algorithms for active assembly
- SQL data base based storage of process parameters and flexible data import and export
- Component tracking
- Remote service and control via internet
- Same software on all ficonTEC machines for consistent look and feel of machine programming and operation
What we do

ficonTEC designs and produces high precision production equipment for the assembling or testing of components.

We are the market leader when it comes to automated assembly or test of micro-optics or opto-electronics such as laser diode manufacture, medical technology, security and defense engineering, as well as telecommunication.

Contact us

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