

MACHINES

TestLine TL2000



TestLine - Laser Bar Characterization

This ficonTEC series of machines is focused on automated laser bar characterization. The ficonTEC TL2000 is a full automated test and inspection system for unmounted laser diode bars, single chips and chip on submount. The devices are loaded to the machine on GelPaks and the machine runs all tests fully automatic. The system can be configured to perform measurements on the complete bar at once or on each individual emitter on the bar. Typical measurements are LIV, spectrum and far field at a temperature range of 15 °C to 85 °C. All measurement results are stored in an SQL Database.

Applications

- + Electro-optical characterization of unmounted laser diode bars
- + Characterization of VCSEL
- + Characterization of bare single chips
- + Test of photodiode bars
- + Test of chip on submount (COS)
- + Full test of high power laser diode bars (Full Bar Test)

Key Features

- + LIV, spectral and far & near field tests
- + Fully automatic handling of devices
- + Easy to change probe head
- + Option for component top side and facet inspection
- + Flexible integration of external test algorithms and test systems
- + Compatible to SQL and other database systems for data traceability



Housing & Control

- + Steel base
- + Cover with pneumatic door
- + Control System with PC
- + 2x 17" TFT-Displays, Keyboard & Trackball
- + Motion Control System for Linear and rotary motion system
- + Pneumatic switchboard panel

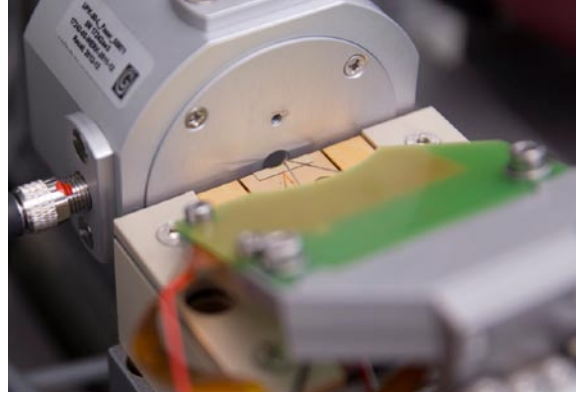
As a unique feature all ficonTEC machines offer a sophisticated component tracking throughout the entire machine process. All machines run the same machine software for easy operation and portability.

Measurement Technology

Current driver, integrating sphere, photo diodes, spectrum analysers and test equipment is chosen according to the customer application.

The following boundaries can be set:

- + Current range: 0 to 5A Single
- + Emitter: 0 to 100 A Full Bar
(higher on request)
- + Pulse width: 500 ns to 10 ms
- + Spectral range: 355 nm to 1600 nm



Vacuum Chuck

The temperature controlled vacuum chuck is the element responsible for reliable fixture of the device under test (DUT) and temperature control.

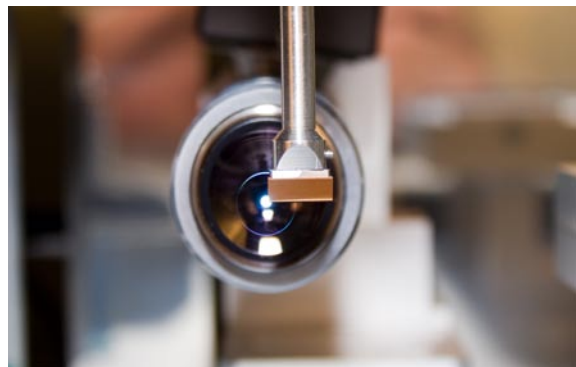
- + Changeable chuck allows various DUT designs
- + Temperature range 15 °C to 85 °C
- + Temperature stability can be better 0.1 °C
- + Small capacity enable fast current pulsing
- + 1 or 3 chuck geometry possible



Test Chamber

The test chamber is the area where the characterization of the DUT is performed.

- + Laser safety design (Laser class 1)
- + Easy to change probe head
- + Electronically adjustable force control
- + Camera system for automated process control and process observation
- + Integration sphere with option for water cooling



Main Motion Systems

	X, Y, Z Axis	Phi-Z Axis
Travel	800, 200, 100 mm	> 90°
Speed	1000 mm/s	100°/s
Resolution	200 nm	< 2°/s
Repeatability	± 1 µm	10°/s

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