



# ficONTEC

## TESTLINE TL500

Semi-Automated Laser Bar Characterisation System

The TL500 is a tabletop test system for unmounted laser diode bars. The devices must be loaded manually onto the system's temperature-controlled vacuum chucks. The system then moves the temperature chucks into the enclosed test area where the devices are automatically aligned towards the probe needles by means of computer vision. The system now starts the test sequences according to the predefined test plan. 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.

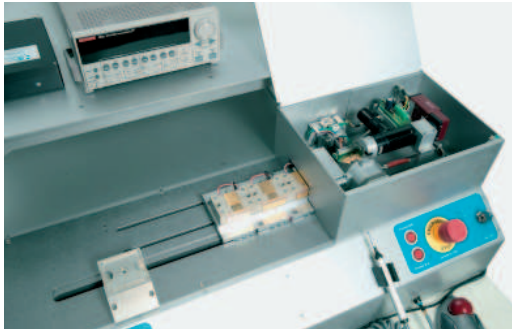


### APPLICATIONS

- + Electro optical characterisation of un-mounted Laser Diode Bars
- + Characterisation of VCSEL
- + Characterisation of bare single chips
- + Test of Photodiode bars
- + Test of Chip on Submount
- + Full of High Power Laser Diode Bars (Full Bar Test)

### HIGHLIGHTS

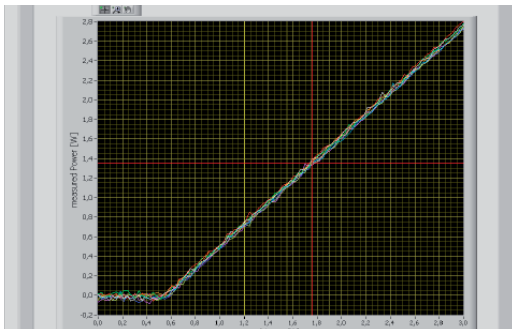
- + LIV, Spectral and Far and Near Field Tests
- + Table top design requires minimum clean room space
- + Automated device alignment ensures safe process and short operator training
- + Flexible integration of external test algorithms and test systems
- + Compatible to SQL and other database systems for Data traceability



Clear and tidy work space enables efficient and reliable production



A sophisticated vacuum chuck and probe head design allows the reliable tests of various component designs



Easy to use software ensures high process stability

#### MEASUREMENT TECHNOLOGY

Current driver, integrating sphere, photo diodes, spectrum analysers and test equipment is chosen according the customer application. The following boundaries can be set:

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

#### TEMPERATURE CONTROLLED VACUUM CHUCK

The 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 characterisation 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
- + Highly integrated integration sphere with the option for water cooling

#### SOFTWARE

The ficonTEC fiMAP- software is the heart of the system.

- + Recipe based processes for different DUT and test parameters
- + Easy to use for even untrained operators
- + 3 different user level
- + High flexibility due to ficonTEC process sequencer
- + SQL database connectivity of report generator in Excel-Format

Please contact us for further information

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