

# TL2000

Opto-electronics Chip Tester

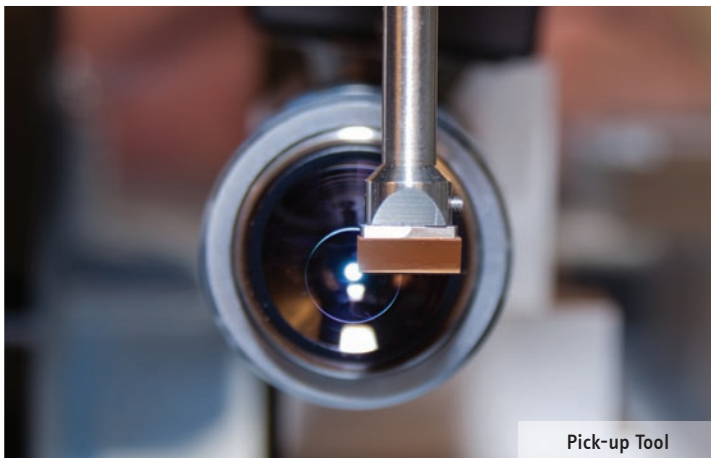


**ficonteC**  
micro assembly machines

# TL2000 Opto-electronics Chip Tester

ficonTEC's series of testing machines is focused on automated electro-optical characterization of semiconductor chips. The ficonTEC TL2000 is a fully automated test and inspection system for unmounted laser diode bars, single chips and chips on submounts.

The system can be configured to perform measurements on the complete bar at once or on each individual emitter of the bar. Typical measurements are LIV tests, spectral characterization, and examination of the far field distribution.



Pick-up Tool

## 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 20°C to 60°C
- Temperature stability +/- 1°C
- Small capacity enables 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.

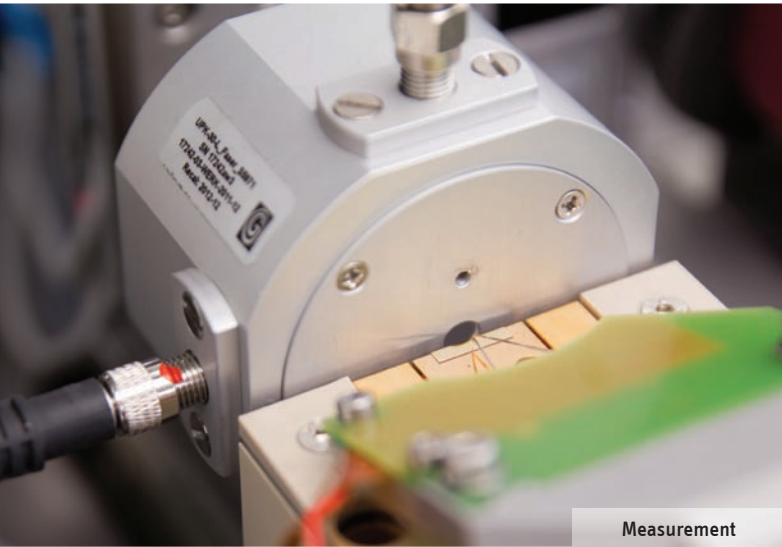
- Laser safety design (Laser Class 1)
- Easy to change probe head
- Electronically adjustable force control
- Camera system for automated process control and process observation
- Integration sphere with option for water cooling



Vacuum Chuck

## Housing & C

- Steel base
- Cover with p
- Control Syst
- 2x 17" TFT-D
- Keyboard &
- Motion Cont
- Linear and m
- Pneumatic s



Measurement

## 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)

## 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 5 A Single
- Emitter: 0 to 100 A Full Bar (higher on request)
- Pulse width: 500 ns to 10 ms
- Spectral range: 100 nm out of 350 to 1600 nm

## Control

Pneumatic door  
 System with PC  
 Displays,  
 Trackball  
 Control System for  
 rotary motion system  
 switchboard panel



Machine, TL2000

## 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

## TL2000 Motion System

| Features        | X, Y, Z Axis     | Phi-Z Axis |
|-----------------|------------------|------------|
| • Travel        | 800, 200, 100 mm | 270°       |
| • Resolution    | 100 nm           | 2 arcsec   |
| • Repeatability | ± 1 µm           | 8 arcsec   |

## Easy Operation Interface

As a unique feature all ficonTEC machines offer a sophisticated component tracking throughout the entire machine process and across ficonTEC machines.

All machines run the same machine software for easy operation and portability.



## Contact us

### EUROPE

ficonTEC Service GmbH, Rehland 8, 28832 Achim, Germany  
Phone: +49 4202 51160-0, Fax: +49 4202 51160-090  
Mail: [info@ficontec.com](mailto:info@ficontec.com)

### USA

ficonTEC (USA) Corporation, 25 Calle Canela, San Clemente, CA 92673, USA  
Phone: +1 949 388-5800, Fax: +1 949 388-1489  
Mail: [usa@ficontec.com](mailto:usa@ficontec.com)

### ASIA

ficonTEC Trading (Shanghai) Limited Company  
Rm. 303, Floor 3, No. 150 Liulin Road, Huangpu District 200021, Shanghai, PRC  
Phone: +86-21-5273 0985, Fax: +86-21-5273 0985  
Mail: [china@ficontec.com](mailto:china@ficontec.com)

[www.ficontec.com](http://www.ficontec.com)



## ISO 9001 Certification

ficonTEC Service GmbH is licensed to ISO 9001:2008 certification, by DNV GL/Hamburg, Germany.