**TestLine**
**T800 / T1200 / T1600**

Automated electro-optical testing

TestLine production systems are fully-automated machine solutions for LIV testing as well as for spectral and near/far-field beam characterization of single laser chips, VCSELs, unmounted laser diode bars and chip-on-submount (CoS) sources. They also routinely undertake other complex tasks such as singulated opto-electronic chip testing and optical facet inspection. High-end models can be optionally equipped for wafer handling and wafer-level testing.

Traditional stand-alone systems are designed to provide as much multi-functional test-&-qualify capability as possible in a single cell format and are best suited to complex testing requirements requiring multiple steps within a single machine.

Alternatively, our next-generation TestLine systems utilize a re-designed layout and state-of-the-art feed in/out capabilities, making them production-line-capable from the ground up. They can be supplied individually as a versatile tester cell designed to complement an existing or proposed production line, or they can be supplied in combination with multiple, task-optimized AssemblyLine and/or BondLine systems as entire production segments.

Software Control

Process Control Master (PCM) is our user-friendly and process-oriented software control interface that is shipped with all turn-key systems and multiple machine configurations. PCM features an intuitive UI that includes all machine vision, high-resolution positioning and system management routines required to reliably and repeatably drive test process hardware.

PCM comes fully enabled for automated electro-optical test and characterization tasks and employs AI-based Deep Learning capability for chip facet defect recognition and classification. PCM also monitors and logs single or multiple production line performance and can even sync parallel lines remotely.
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**TestLine now PXI capable**

New is compatibility with PXI-based electrical & optical instrumentation modules that leverage National Instruments' LabVIEW. Integration with PCM is seamless, thus enabling sophisticated, combined electro-optical test solutions to match individual requirements. A similar goal can also be achieved within non-LabVIEW and alternative instrumentation environments using modular bench-top and IOT-focused test equipment.

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**Key features**

- High-precision motion system
- Mixed-signal electro-optical testing
- On-wafer waveguide I/O measurement
- Chip & wafer-level handling/processing
- Optional AI-managed facet inspection
- PXI instrumentation integration

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**General tasks & applications**

- Full LIV testing
- Spectral and near/far-field beam characterization
- Test-&-qualify chips, single emitters, laser bars
- Wafer-level components and devices
- PICs, Silicon Photonics, hybrid integrated devices

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**Flexible, modular & (re-)configurable**

- State-of-the-art feed IN/OUT options
- FAB & HVM-ready – scalable and parallelizable
- Single systems to complement production line strategy
- Combine with multiple systems for production line segments
- Operate, monitor and sync parallel lines remotely
- Add and/or swap modules to re-configure & re-purpose

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www.ficontec.com
### What we do

ficonTEC is a recognized market leader for automated assembly and testing systems for high-end opto-electronic components and photonic devices, including PICs. Considerable process capability and dedicated assembly technologies have been accumulated in serving requirements for telecom and datacom, high-power diode laser assembly, micro-optical systems, sensing from bio-med to automotive to IoT, and more.

A unique and modular approach to production equipment design means that each system delivered is the automated and optimized embodiment of a customer-defined process.

### Contact us

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<table>
<thead>
<tr>
<th>Core system specifications</th>
<th>T800</th>
<th>T1200</th>
<th>T1600</th>
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</thead>
<tbody>
<tr>
<td><strong>Motion system</strong></td>
<td>gantry system with minimum 6-axis high-precision alignment*</td>
<td>gantry system with minimum 6-axis high-precision alignment* or cantilever system w/o multi-axis system</td>
<td>cantilever system with minimum 6-axis high-precision alignment*</td>
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<tr>
<td><strong>Handling options</strong></td>
<td>single conveyor</td>
<td>single or dual conveyor</td>
<td></td>
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<tr>
<td><strong>Wafer capable</strong></td>
<td>no</td>
<td>up to 6”</td>
<td>up to 12”</td>
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<tr>
<td><strong>Machine vision</strong></td>
<td>standard/dual positioning and observation camera options</td>
<td></td>
<td></td>
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<tr>
<td><strong>Feed options</strong></td>
<td>suitable for Jede, Auer boats, or for customer trays</td>
<td></td>
<td></td>
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<tr>
<td><strong>Software features</strong></td>
<td>ergonomic, flexible and powerful process software – extended operator-less control – remote control server option</td>
<td></td>
<td></td>
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<tr>
<td><strong>Physical features</strong></td>
<td>rugged steel-base production cell – access door lifts vertically without affecting footprint</td>
<td></td>
<td></td>
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<tr>
<td><strong>Minimum connections</strong></td>
<td>400 VAC (or country specific), air/vacuum, 100 Mbit/s network</td>
<td></td>
<td></td>
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<tr>
<td><strong>Cleanroom compliance</strong></td>
<td>ISO 6**</td>
<td></td>
<td></td>
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<tr>
<td><strong>Dimensions</strong></td>
<td>800 x 1200 x 1600/2000</td>
<td>1200 x 1200 x 1600/2000</td>
<td>1600 x 1200 x 1600/2000</td>
</tr>
<tr>
<td><strong>Weight (typ., kg)</strong></td>
<td>1300</td>
<td>1800</td>
<td>2500</td>
</tr>
</tbody>
</table>

* alternative multi-axis configurations optional  ** others available on request

**TestLINE** electro-optical tester systems are suitable for in-line applications in high-volume manufacturing (HVM), including multiple remotely-controlled production lines operating in parallel and in sync. Custom systems, special purpose cells and robotic systems can be flexibly incorporated to suit customer requirements. Some **TestLINE** functionality is available for **AssemblyLINE** systems.