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LTS 9300

Laser Diode Life-test and Burn-in System

Specifications

Drive Current Output:	up to 5 A
Control Modes:	ACC (constant current) or APC (constant power)
Case Temperature Control Range:	5°C—125°C, depending on DUT specifications
Heat Rejection Method:	Air or liquid cooled
Temperature Control Accuracy:	1°C
Internal Temperature Control Output:	Up to 5 A, up to 12 V compliance
Control Algorithm:	PID loop, implemented via DSP
Power Meter Range:	1 mW to 5 W rated DUT output
Detectors Supported:	Si, Ge, or InGaAs
Electrical Input:	208 - 220 VAC, single or three phase
Size (HXWXD):	89" x 36" x 28"
Weight:	approx. 600 lbs.

NOTES

In keeping with our commitment to continuing improvement, ILX Lightwave reserves the right to change specifications without notice and without liability for such changes.

ORDERING INFORMATION

LTS-9300 Laser Diode Lifetest and Burn-in System

Product Features

Concurrent flexibility

Re-configurable over time

Accepts standard package
devices and Chip-on-Carrier

Accessible DUT space for custom
and customer-supplied fixturing

Up to 5 A laser current output

The LTS-9300 is ILX Lightwave's breakthrough life-test/burn-in system for laser diode testing. The LTS-9300 is the most configurable life-test/burn-in system available, capable of everything from precise, highly instrumented qualification and life-test, to high-density, low cost-per-DUT production burn-in. With unmatched modularity, changing a few circuit boards and DUT fixtures upgrades the LTS-9300 to keep pace with your evolving test needs—the rack never has to leave your test floor. The LTS-9300 truly lives up to ILX's commitment to provide you with a reliable and flexible laser diode test system.



A Flexible, Configurable
Life-test/Burn-in System for
Laser Diode Production



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Laser Diode Life-test and Burn-in System

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email: sales@ilxlightwave.com



5/25/02

 **ILX Lightwave**
Photonic Test & Measurement Instrumentation

LTS 9300

Laser Diode Life-test and Burn-in System

The Ultimate in Laser Diode Test Flexibility

The LTS-9300 offers concurrent flexibility: configure one drawer with COC devices in long-term qualification and use another drawer for burn-in testing of packaged butterfly devices.

When you install the LTS-9300, you guarantee future flexibility. Specify the test system you need today, and the LTS-9300 allows you to modify the system as your test requirements evolve. You can add more channels, higher power laser drive, internal temperature control, or new DUT fixtures—and the rack never leaves your test floor.

The LTS-9300 is essentially six burn-in systems. That means each drawer can be operated independently. You can even load new DUTs while the other drawers are running.

Open-Architecture Software

The LTS-9300 includes a comprehensive software package. Our standard application software runs your rack quickly and smoothly. Once the test is running you can monitor drawer status, individual DUT status, and even set alarms to flag your test floor operators when a DUT operates outside of your specifications.

If test requirements change outside the scope of the standard application software, your software engineers can use the ActiveX® programming tools to quickly develop the exact test software required.

Designed for Low Power and High Power Lasers

The LTS-9300 is designed to handle everything from low power transmission lasers to high power pumps. Thanks to expandable power supplies and a variable-attenuation optical power monitoring system, the LTS-9300 can handle laser diodes all the way up to 5 A drive current and 5 W output power.

Versatility is Built-in to Every Test System.

The LTS-9300 design team is driven by one vision: to provide you with the most versatile and reliable laser diode test system. With built-in flexibility, the LTS-9300 is a

valuable and reliable tool that advances your product line and keeps you ahead of evolving semiconductor technology.

Application Flexibility: Life-Test or Burn-In.

Each drawer has eight slots for any combination of current source boards and internal temperature control circuit boards. For life-test systems, four slots can be loaded with four-channel current source boards for a total of 16 current sources, and the other four slots can accommodate four-channel internal temperature control boards.

For high-density burn-in applications, all eight slots can be loaded with four-channel current source boards for a total of 32 independent laser current sources.



Convenient pull-out drawers makes DUT loading and removal easy.

Precision 5A Internal Temperature Control.

For comprehensive DUT burn-in and characterization, the LTS-9300 can be equipped with high-precision internal temperature controllers (ITC) for each DUT channel. Each ITC will output up to 5 A, and you can enter the thermistor calibration constants to suit your devices.

Highly Accurate Case TEC Control.

Each drawer is equipped with a four-channel, high-precision, PID-feedback temperature controller that divides the drawer into four control zones. Combined with calibrated thermistor sensors, this approach guarantees high accuracy temperature control and low DUT-to-DUT temperature variation.

Monitor Laser Power Output During Test Cycle.

Each DUT channel is instrumented with a back facet photodiode measurement circuit. This circuit is used to either monitor the laser power output through the course of the test, or in the laser control feedback loop for constant power mode operation. You can also choose to apply a 5 V reverse bias to the back facet photodiode.

Laser Voltage Measurement, Standard.

Laser forward voltage measurement is standard for each DUT channel, giving you the ability to monitor all the critical parameters of each laser during the burn-in test.

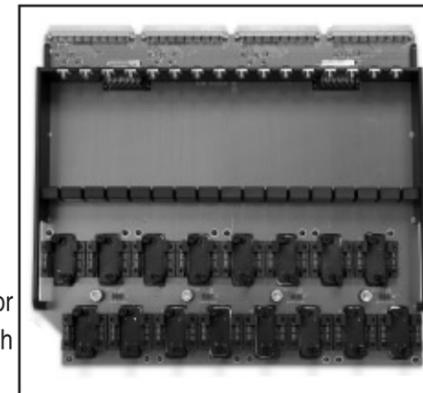
Versatile Power Measurement Capabilities.

Front facet detectors for relative power measurement are also included for each DUT channel in the LTS-9300. As with the back facet diode circuit, the front facet circuit can be used to monitor the laser output power or in the feedback loop to control the laser at constant output power.

A variable attenuation mechanism lets you use the same drawer for low and high-power lasers without switching the detector bank.

Add or Remove DUTs Easily.

The LTS-9300 features ample DUT space in each drawer. This makes it easy to load butterfly, DIL, mini-DIL, TO can, or Chip-On-Carrier devices simply by changing the DUT fixturing tray. This removable fixturing tray makes



DUT modules are interchangeable for versatile testing.

it a snap for you to load your DUTs away from the rack, at your ESD-safe workbench. Load COC devices while they're still in their manufacturing fixtures, minimizing the handling at a delicate stage of assembly.

With a standardized instrument interface, you can create any type of device fixtures you may need as your product line evolves.

16 Years of Leadership in Laser Diode Control

Investing in the LTS-9300 gives you everything ILX has learned about laser diode protection, low-noise operation, precision temperature control, and repeatable power measurement, all in the new standard for life-test/ burn-in systems: The LTS-9300.

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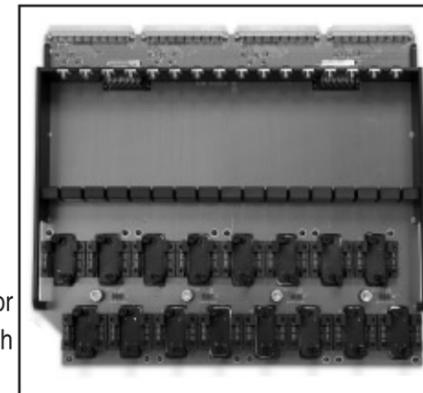
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