

yelo

**Burn-in
Expertise**



www.yelo.co.uk

Burn-in Expertise

Low power laser diode burn-in

ABOUT SYSTEM

Yelo's Y1000L burn-in and life test system is designed to test the reliability of low power laser diodes up to 1 Amp in current. The modular design means it can test up to 2,048 lasers, however due to the flexibility of the system, it can be adapted to suit both low volume R&D environments and high volume production environments.

BURN-IN

The system performs burn-in stress tests on all laser diodes. The data from these tests can be used to identify and remove defective devices from reaching the end customer.

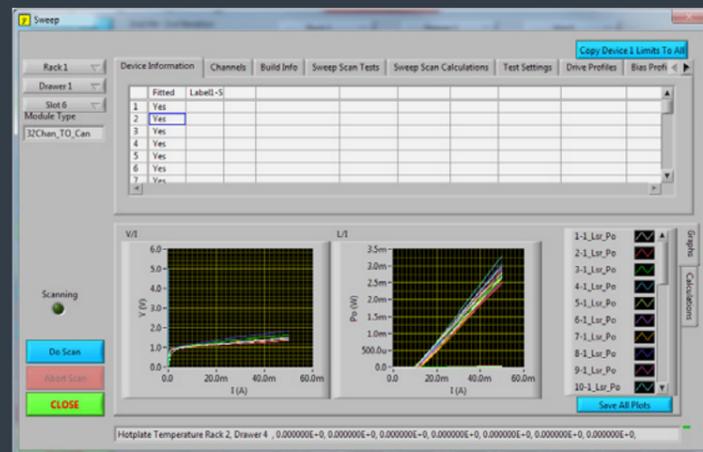
LIFE TEST

The system can also perform life testing on a representative sample of laser diodes from a wafer. This test data can be used to establish the long term reliability of the laser.

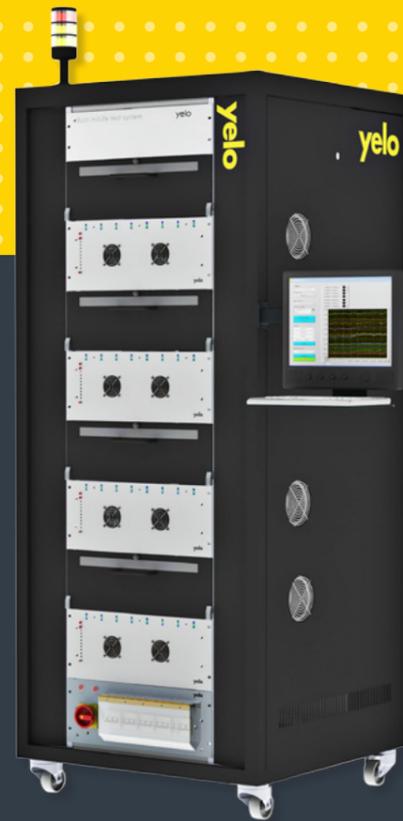
FUNCTIONAL TESTS

After the lasers have been stressed during burn-in, the system software can perform a number of functional tests to monitor any post burn-in change in laser performance. Functional tests include:

- Threshold current (Ith)
- Linearity
- Wavelength
- Side mode suppression ratio



Post Burn-in Sweep



WHAT CAN YELO TEST?

PACKAGES

- ✓ Chip on carrier
- ✓ Chip on submount
- ✓ TO-Cans
- ✓ Butterfly
- ✓ Custom packages

DEVICES

- ✓ Lasers
- ✓ Avalanche Photodiodes
- ✓ Photodiodes
- ✓ Integrated Devices

BURN-IN SOFTWARE

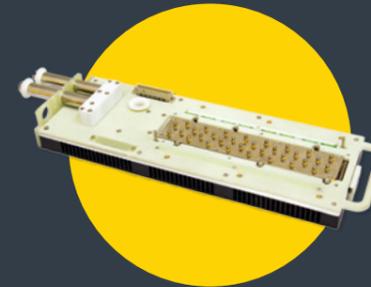
An example of Yelo's burn-in software showing the post burn-in functional tests that were performed on 32 TO-Can lasers.

LEFT: The voltage drop across the lasers changes as more current is driven into the laser. One laser is showing an open circuit failure, displayed as a straight 5 Volt measurement.

RIGHT: The graph on the right shows an LIV curve, where the devices have begun to lase at approximately 10mA. Threshold calculations are automated by the system software.

Testing laser diodes at volume

With the demand for optical devices growing rapidly in the 100G data center market, device manufacturers need to perform burn-in at high volumes in order to ensure a maximum throughput of reliable devices reaching the end customer.



MODULES

Up to 32 devices can be placed into mini oven modules. Each mini oven module is custom made to suit each customer's device.



DRAWERS

The mini oven modules are then slotted into a drawer in the rack. There are a maximum of 4 drawers in a rack and each drawer holds up to 8 modules.



RACKS

The image shows the burn-in rack at full capacity, loaded with 32 mini oven modules.

Which system is for you?

	Standard	Production
18U Control Rack	✓	-
39U Slave Rack	✓	-
42U Master Rack	-	✓
Keithley Instrumentation	✓	Optional
Yelo Instrumentation	-	✓
PCs (more PCs provide drawer redundancy)	1	1 or 4
Temperature Range	25-150°C	25-150°C
Maximum Current Drive for Device	1Amp	1Amp
Air Cooled	✓	✓
Uninterruptable Power Supply (UPS)	✓	✓
Floor Space Usage (Length x Depth)	1400mmx800mm	800mmx800mm
Suitable for Production Environment	✓	✓
Suitable for R&D Environment	✓	-

Each system typically has a 16 – 18 week turnaround time although this can vary.



ABOUT YELO

Yelo is a leading manufacturer of automated test equipment, founded in 1983. We specialise in the manufacture of automated burn-in and life test equipment for photonic devices - especially laser diodes and we are a market leader in the field.

HOW MANY SYSTEMS SHIPPED?

Yelo have over 300 burn-in systems installed globally.

TECHNICAL ABILITY

Yelo has a team of highly skilled and experienced electronic engineers, mechanical design engineers, software developers, test engineers, production operatives and commissioning/support engineers.

CUSTOMER SUPPORT

Yelo has a dedicated team of support engineers to assist with technical enquires. Our support engineers can travel to assist international based customers. We also have support staff based in China.

NEW FACTORY

Our growth has enabled us to build a new 25,000 sq ft factory in Northern Ireland with state-of-the art engineering facilities and a clean room.

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ASSOCIATIONS

