

LASER DIODE ANALYZER

v1.0

Expand your testing capability and accelerate your optics system development with the World Star Tech Laser Analyzer. Powerful yet compact, the Laser Analyzer is a standalone instrument that includes everything you need to quantify key laser diode parameters of interest.



The Laser Analyzer is designed for laser parametric analysis. Generate high resolution LIV (light, current, voltage) curves in seconds, revealing diode performance metrics such as threshold current and slope efficiency.

View the results on the modern touchscreen interface or connect the system to your computer to download and process the raw data. The high-performance smart driver automatically detects your diode pinout and can drive the diode in auto-current or auto-power control modes. The integrated TEC controller maintains your diode at its operating temperature ensuring accurate and repeatable measurements.

Multiple levels of laser diode protection include adjustable current limiters, automatic pinout detection, and frequent sensor range checks. Passcode-protection prevents the system from being used by unauthorized personnel. Multiple operator roles allow a manager to lock in system parameters, eliminating the risk of technicians accidentally changing settings which could harm a diode or invalidate results. Hardware interlocks can be connected to disable the laser in response to emerging unsafe lab conditions.

Included with the system is a calibrated optical powermeter and a thermally controlled laser head for 5.6 mm package laser diodes. A sliding quick-change mechanism makes it easy to swap diodes between tests. 3.8 mm and 9 mm package laser diode laser heads are available upon request. Custom connectors to test butterfly laser diode packages and user-designed laser heads can also be used.

SUMMARY:

- Fast and accurate LIV curve generation with 0.1 mA resolution
- 15-bit powermeter resolution
- Drive current up to 500mA
- 3W output temperature controller
- Password protection, hardware interlock and overcurrent shut-off circuitry for safety
- Built-in smart driver for diode pinout autodetection and temperature control
- Touchscreen control and accompanying Windows software

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TECHNICAL SPECIFICATIONS

Setpoint Resolution:	0.1 mA
Setpoint Accuracy:	±0.05%
Compliance Voltage:	0.0–8.0 V
Photodiode Current Range:	0–600 µA
Photodiode Current Resolution:	0.1 µA
TE Current Range:	1 A
TE Voltage Range:	±8.00 V
TE Output Power:	3 W
Temperature Control Range:	10–50 °C
Operating Humidity:	<85% relative, non-condensing

MECHANICAL SPECIFICATIONS

	Analyzer Only	Unit + Accessories
Size:	110mm x 63mm x 30mm (4.3" x 2.5" x 1.2")	110mm x 115mm x 45mm (4.3" x 4.5" x 1.8")
Weight:	300g (0.66lb)	1000g (2.20lb)

ACCESSORIES INCLUDED

- Optical Powermeter
- Thermally Controlled Laser Head for 5.6 mm laser diode packages
- Quick-Change Sliding Baseplate for Powermeter and Laser Head
- 12V 1A Power Supply
- Additional Laser/TEC Cable: Easy-Connect Multi-Terminated Interface Cable*
- USB Cable
- Windows Software

* For independent operation of laser diode and TEC, mainly used for laser diodes with built in TEC and custom laser diode and TEC configurations.