

RIO ORION™ Laser Source

A compact and turn-key benchtop laser source based on the industry-proven ORION™ laser module

RIO's ORION™ Laser Source is based on the proven performance of RIO's ORION™ product series. The ORION laser source is designed with the customer's need in mind: user-friendly, highly integrated and turn-key operation.

In addition to unrivaled reliability and performance, the ORION laser-based system provides exceptional value and ease-of-use with up to 20mW output power, very low RIN, ultra low phase noise and narrow linewidth, excellent wavelength stability and fast frequency tuning.

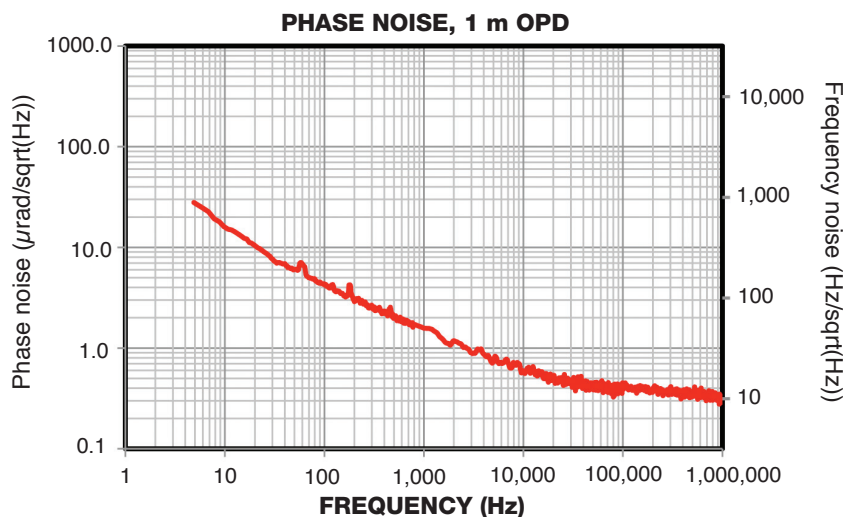
This solution is positioned for reducing the development cycle time and allow for simple integration into R&D lab environments and advanced fiber optic sensing systems. External monitoring and control can be achieved via a Graphical User Interface (GUI) and a USB connection.

The ORION laser source is ideally position as the best ease-of-use system for a multiple of lab-orientated applications where absolute accuracy, stability, lifetime reliability and high resolution are vital, such as remote sensing, distributed temperature, strain, or acoustic fiber optic monitoring, LIDAR and other precision metrology applications.



Performance Highlights

PARAMETER	VALUE	UNITS
Output Power	up to 20	mW
Spectral linewidth (Lorentzian)	< 3	kHz
RIN (at frequency >1 kHz)	< -140	dB/Hz
Thermal wavelength tuning range	up to 60	pm
Direct frequency modulation range	> 200	MHz
Direct frequency modulation speed	up to 100	kHz
Operating temperature range	15 to 50	°C
Dimensions (LxWxH)	227x129x55	mm



KEY FEATURES

- Single longitudinal mode
- Ultra low phase noise and RIN
- Low sensitivity to vibration and acoustic noise
- Narrow linewidth (< 3 kHz), long coherence length
- 1528nm-1565nm, ITU-T DWDM wavelength or custom
- Guaranteed mode hop free operation over life and temperature
- Wavelength tunability
- Turn-key and small footprint
- Excellent SMSR
- SMF or PMF connector options
- 15 to 50 °C operating temperature range
- Telcordia GR-468 Qualified
- RoHS Compliant

APPLICATIONS

- Acoustic and seismic sensing
- Laser spectroscopy
- Test & Measurement
- LIDAR and remote sensing
- Interferometric fiber optic sensing
- Metrology
- RF and microwave photonics
- Coherent communication