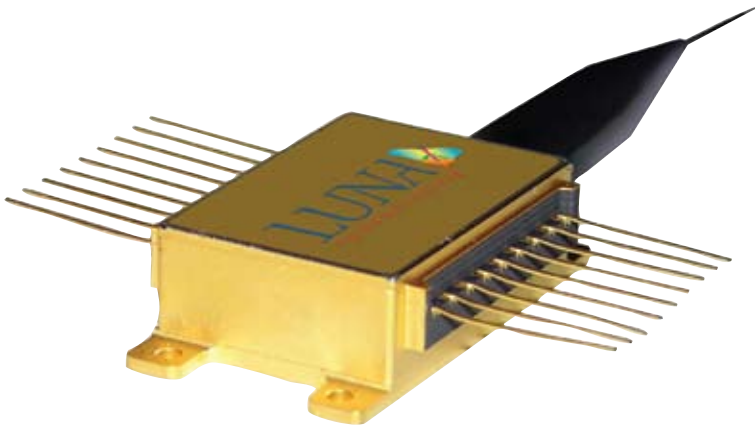


# Breakthrough Functionality in Fiber Optic Testing



## TUNABLE LASER SOURCE (Model PHOENIX™ 1000)

### KEY FEATURES AND PRODUCT HIGHLIGHTS

- Full C-band tunability
- Fast tuning up to 500Hz
- Rugged design withstands testing rigors
- Narrow linewidth
- Superior noise characteristics

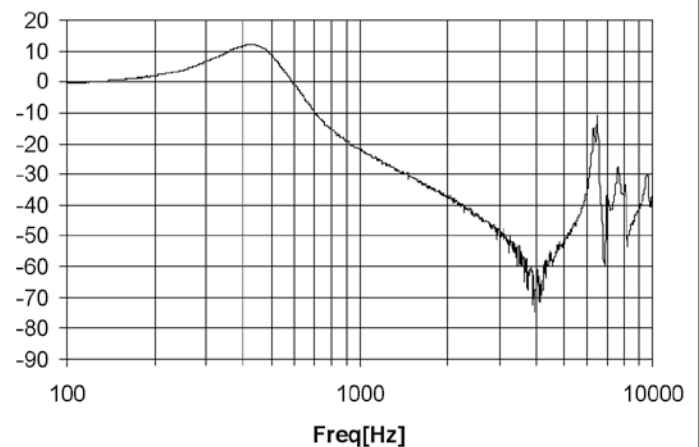
The Phoenix 1000, built upon the former Iolon swept tunable platform, offers superior performance and noise reduction.

**The PHOENIX™ 1000** Swept Laser Module is a tunable laser with an optical fiber coupled output. The laser is a miniaturized, tunable external cavity laser offering high performance in a compact footprint. This Phoenix 1000 was designed with systems integration in mind and is well-suited to a range of fiber optic test and measurement and sensing instrumentation. The small form factor layout is compatible with high-volume manufacturing and is housed in a compact 18-pin TEC cooled package that provides improved scalability, ruggedness and speed compared to similar tunable lasers.

### APPLICATIONS

- Fiber optic test and measurement
- Spectroscopy
- Fiber grating-based sensing
- Metrology

### Mirror Motor Magnitude Response



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## PHOENIX 1000

### Absolute Maximum Ratings and Normal Operating Conditions

PARAMETER	MIN	MAX	UNIT
Storage temperature	-40	+85	°C
Storage relative humidity	5	95 <sup>1</sup>	%
Operating case temperature range	-5	+70	°C
Operating relative humidity <sup>1</sup>	5	85	%
Operational Air Flow	TBD		fpm
Optical reflection back into swept laser		-15	dBc
Non operational shock <sup>2, 3</sup>		TBD	g
Non operational vibration (20-2000Hz) <sup>3</sup>		TBD	g

<sup>1</sup>Non-condensing.

<sup>2</sup>A 1 ms half sine

<sup>3</sup>Shock and vibration survivability based on a representative sample.

### General Optical and Sweep Specifications

PARAMETER	MIN	TYP	MAX	UNIT
C-band Tuning Range (mode hop free)	1515		1565	nm
Tuning Modulation Bandwidth (Mirror Motor)	10			Hz
Fiber output power <sup>1</sup>	8	10		mW
Spectral line width <sup>2</sup>		1.0	2.0	MHz
Side mode suppression ratio (nearest mode)	43	50		dB
Relative intensity noise		-152	-145	dB/Hz
Source spontaneous emission		-50	-43	dBc/nm
Polarization extinction ratio	TBD <sup>3</sup>			dB
Optical isolation	40			dB

<sup>1</sup>Fiber output power is typical at 250 mA drive current.

<sup>2</sup>Phase noise distribution full width at half maximum with 0V on PZT and 75V on mirror motor control inputs, integrated over 1 ms.

<sup>3</sup>20 dB available at a later date.