



**OPTICAL VECTOR ANALYZER™**  
(Model 5000)

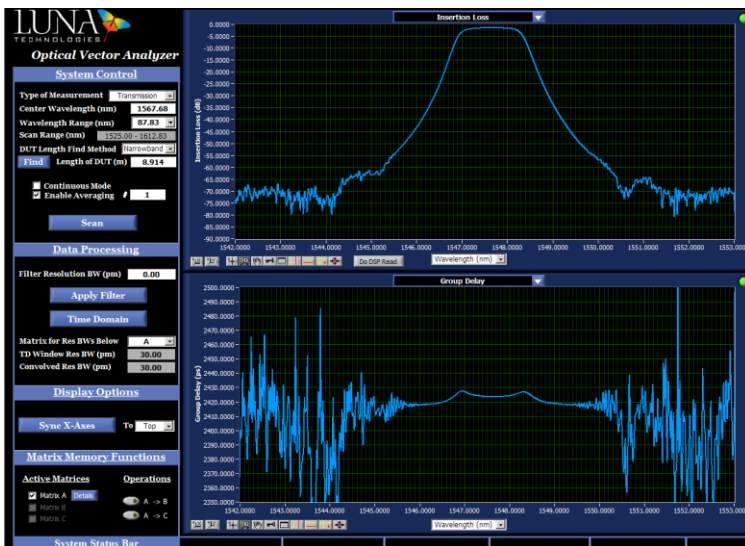
### KEY FEATURES AND PRODUCT HIGHLIGHTS

- Single measurement, all-parameter analysis of devices up to 150 m in length
- Full C and L band characterization in under 3 seconds
- High resolution C and L band or O band capability
- Complete polarization response
- Real-time measurements
- User-friendly interface

**The OVA 5000** is the fastest, most accurate and economical tool for loss, dispersion and polarization measurements of modern optical networking equipment. It is the ideal device for single-connection, all-parameter characterization of fiber components from couplers to specialty fiber and everything in between (Fiber Bragg Gratings, arrayed waveguide gratings, free-space filters, tunable devices, amplifiers, etc.), all with a single sweep of a tunable laser.

Luna's patented characterization technique allows direct measurement of a passive device's linear transfer function allowing the OVA instant access to:

- Insertion Loss (IL)
- Polarization Dependent Loss (PDL)
- Polarization Mode Dispersion (PMD) and Second Order PMD
- Chromatic Dispersion (CD)
- Group Delay (GD)
- Optical Time Domain Response
- Jones Matrix Elements
- Optical Phase Response



With the OVA 5000, development cost, production cost and time to market for DWDM components can be reduced by up to 60%.

[www.lunatechnologies.com](http://www.lunatechnologies.com)

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# OVA 5000

PARAMETER	FAST MODE*	AVERAGING MODE*	UNITS
<b>Wavelength Range:</b>			
	1265-1335 or 1525-1610		nm
<b>Wavelength:</b>			
Standard Resolution	1.6	1.6	pm
Accuracy <sup>1</sup>	±1.5	±1.5	pm
Repeatability	±0.1	±0.1	pm
<b>Optical Phase Error:</b>			
	±0.05	±0.0075	radians
<b>Loss Characteristics:</b>			
Dynamic range <sup>2</sup>	60	80	dB
Ripple	±0.05	±0.01	dB
Resolution	±0.05	±0.002	dB
Insertion loss accuracy	±0.1	±0.05	dB
Return loss accuracy	±0.2	±0.1	dB
<b>Chromatic Dispersion:</b>			
Accuracy	±10	±5	ps/nm
<b>Group Delay:</b>			
Range <sup>3</sup>	6	6	ns
Accuracy	±0.2	±0.1	ps
Loss range <sup>2</sup>	45	60	dB
<b>PMD:</b>			
Range <sup>3</sup>	6	6	ns
Accuracy – First Order	±0.03 (100pm steps) ±0.15 (30pm steps)	±0.08	ps
Accuracy – Second Order	±10	±2	ps <sup>2</sup>
Loss range <sup>2</sup>	40	50	dB
<b>PDL:</b>			
Extinction ratio	40	50	dB
Accuracy	±0.05	±0.03	dB
<b>Measurement Timing:</b>			
Laser sweep rate	70	70	nm/s
All-parameter measurement rate <sup>4</sup>	30	30	ms/nm
Fully specified measurement time <sup>5</sup>	12	55	s
Real-time mode update rate <sup>6</sup>	1	NA	Hz
<b>Maximum Device Length (including leads):</b>			
Transmission	150	150	meters
Reflection	75	75	meters
<b>Physical</b>			
Weight (Processor not Included)	16.24 35.8		kg lbs
Case Size (W X D X H)	473 X 420 X 206 18.62 X 16.54 X 8.08		mm inches

- 1 Accuracy maintained by an internal NIST-traceable HCN gas cell.
- 2 80, 60 and 50 dB dynamic ranges in 'Averaging Mode' for IL, GD and PMD are with the "High Dynamic Range Averaging" option installed and enabled.
- 3 Specifies the total device impulse-response duration that may be captured.
- 4 Rate calculated from combined laser sweep and analysis time per scan.
- 5 Measurement with full specification (see note 2) over Fast Mode: 40 nm range, and Averaging Mode: 2.5 nm range. Excludes calibration time.
- 6 For 2.5 nm scan range.

Fast Mode: no averaged calibration scans, 4 averaged measurement scans, 30 pm resolution bandwidth, 8 m device length (accuracies verified using NIST certified artifacts except for IL). High dynamic range option enabled.

Averaging Mode: 4 averaged calibration scans, 64 averaged measurement scans, 30 pm resolution bandwidth, 8 m device length (accuracies verified using NIST certified artifacts except for IL). High dynamic range option enabled.

\*results are typical

CLASS 1 LASER PRODUCT

