The Luna **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%.
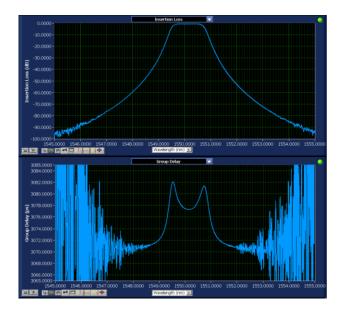
KEY FEATURES AND PRODUCT HIGHLIGHTS

- **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**

PARAMETER	FAST MODE*	AVERAGING MODE*	UNITS
Wavelength Range:			
	1270-1340 or 1525-1610		nm
Wavelength:			
Standard Resolution	1.6	1.6	pm
Accuracy[1]	±1.5	±1.5	pm
Repeatability	±0.1	±0.1	pm
Optical Phase Error:			
	±0.05	±0.0075	radians
Loss Characteristics:			
Dynamic range[2]	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
Chromatic Dispersion:			
Accuracy	±10	±5	ps/nm
Group Delay:			
Range[3]	6	6	ns
Accuracy	±0.2	±0.1	ps
Loss range[2]	45	60	dB
PMD:			
Range[3]	6	6	ns
Accuracy – First Order	±0.03 (100pm steps) ±0.15 (30pm steps)	±0.08	ps
Accuracy – Second Order	±10	±2	ps^2
Loss range[2]	40	50	dB
PDL:			
Extinction ratio	40	50	dB
Accuracy	±0.05	±0.03	dB
Measurement Timing:			
Laser sweep rate	70	70	nm/s
All-parameter measurement rate[4]	30	30	ms/nm
Fully specified measurement time[5]	12	55	s
Real-time mode update rate[6]	1	NA	Hz
Maximum Device Length (including leads):			
Transmission	150	150	meters
Reflection	75	75	meters
Physical			
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

Optical Vector Analyzer™ is a trademark of Luna Innovations Incorporated.