OPTICAL VECTOR ANALYZER *EL*

Luna Technologies' Optical Vector Analyzer (OVA) is the fastest, most accurate and economical tool for loss, dispersion and polarization measurements of modern optical networking equipment. The OVA is the ideal tool 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, …)

With the OVA, development cost, production cost, and time to market for passive optical components and modules can be reduced by up to sixty percent. Luna's OVA-EL characterizes passive optical components with industry-leading speed and accuracy, all with a single sweep of a tunable laser. Our patented technique allows direct measurement of a passive device's linear transfer function. Using the linear transfer function the OVA provides **instant access** to:

- Insertion Loss (IL)
- Polarization Dependent Loss (PDL)
- Polarization Mode Dispersion (PMD) and 2nd order PMD
- Chromatic Dispersion (CD)
- Group Delay (GD)
- Optical Time Domain response
- Jones Matrix elements
- Optical Phase Response

…and more across the S, C and L bands using one test instrument.

EXTERNAL LASER CAPABILITY

The OVA is available in an external laser version. Compatible with the Agilent 81640(A/B)/81600 series tunable laser sources, the OVA-EL maintains the same high level of performance and accuracy delivered by the Optical Vector Analyzer family at a very competitive price.

The Luna OVA, the industry's first single-scan, self-calibrating solution for all-parameter characterization of passive optical components, is available with an optional external laser.

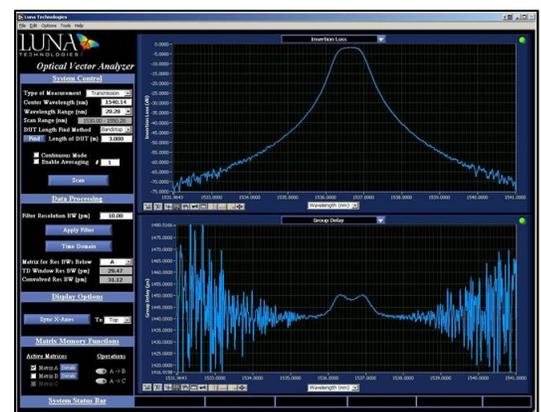## KEY FEATURES AND PRODUCT HIGHLIGHTS

All-parameter analysis

High resolution S-C-L band capability

High-speed measurements

Integrated, easy to use interface

Time domain viewing

Complete polarization response

Parameter	Specification	Units
Wavelength range[1]:	1460-1625	nm
Wavelength:		
Standard Resolution	3.2	pm
High Resolution	1.6	pm
Accuracy[2]	± 1.5	pm
Repeatability[2]	± 0.1	pm
Optical phase error	± 0.01	radians
Insertion loss characteristics[3]:		
Dynamic range	60	dB
Ripple	± 0.02	dB
Resolution	± 0.01	dB
Accuracy	± 0.05	dB
Chromatic dispersion[3]:		
Accuracy	± 5	ps/nm
Group delay:		
Range[4]	3 or 6	ns
Accuracy[3]	± 0.1	ps
PMD:		
Range[4]	3 or 6	ns
Accuracy[3] – 1st Order	± 0.02 (100pm steps)	ps
	± 0.08 (30pm steps)	
Accuracy[3] – 2nd Order	± 10	ps^2
PDL:		
Extinction ratio	35	dB
Accuracy[3]	± 0.05	dB
Measurement Timing:		
Laser sweep rate	40	nm/s
All-parameter measurement rate[5]	350	ms/nm
Typical measurement time[6]	10	s
Maximum device length (including leads) [7]	30	meters

1 - Outside of this range, specifications are not guaranteed

2 – Accuracy maintained by internal NIST-traceable HCN gas cell

3 - Measured using 40 averaged calibration scans, 64 averaged measurement scans, 30 pm resolution
   bandwidth, 4 m device length (verified using NIST certified artifacts)

4 - Specifies the total device impulse-response duration that may be captured

5 - Combined laser sweep and analysis time per scan

6 – Single scan measurement over C and L bands

7 - In transmission mode

Purchasing Options

Part Number	Description
OVA EL All Parameter Analyzer	**Contains: Personal computer, 17" flat screen monitor, OVA mainframe, software, GPIB interface and cables to connect Agilent TLS to the OVA to measure IL, RL, Time domain impulse response window, PMD and PDL, CD, GD, Jones Matrix Amplitude, Jones Matrix Wavelength, Time domain amplitude, Storage of Jones Matrix, linear transfer function data files, for devices up to 30 meters in optical length in transmission or 15 meters in reflection**
Option 003	GPIB remote control card and cable
Option 004	Desktop Analysis Software
Option 005	Adds OFDR analysis to the all parameter analyzer
Option 006	Polarization Analysis Software
Option 007	Expanded Dynamic Range