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

[Image of OVA 5000 analyzer]

[Graphs showing measurement results]

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**Luna OVA 5000**

(Model OVA 5000)

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Support phone: 1.866.586.2682
### PARAMETER | FAST MODE* | AVERAGING MODE* | UNITS
--- | --- | --- | ---
Wavelength Range: | 1270-1340 or 1525-1610 nm | | |
Wavelength: | | | |
Standard Resolution | 1.6 | 1.6 | pm
Accuracy¹ | ±1.5 | ±1.5 | pm
Repeatability | ±0.1 | ±0.1 | pm
Optical Phase Error: | ±0.05 | ±0.0075 | radians
Loss Characteristics: | | | |
Dynamic range² | 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: | | | |
Range³ | 6 | 6 | ns
Accuracy | ±0.2 | ±0.1 | ps
Loss range⁴ | 45 | 60 | dB
PMD: | | | |
Range³ | 6 | 6 | ns
Accuracy – First Order | ±0.03 (100pm steps) ±0.15 (30pm steps) | ±0.08 | ps
Accuracy – Second Order | ±10 | ±2 | ps²
Loss range⁵ | 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 rate⁶ | 30 | 30 | ms/nm
Fully specified measurement time⁷ | 12 | 55 | s
Real-time mode update rate⁸ | 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