



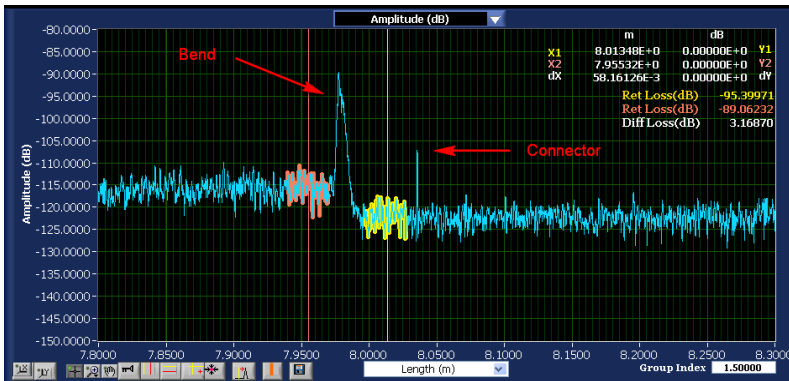
OBR 4610

Optical Backscatter Reflectometer™



The Luna OBR 4610 extends Luna's award winning Optical Backscatter Reflectometer™ technology to 1060 nm applications.

Designed for component and short optical network testing and troubleshooting, the OBR 4610 delivers ultra-high resolution reflectometry with backscatter-level sensitivity. With sampling resolution as low as 10 microns, zero dead zone, an extremely low noise floor, the OBR 4610 allows you to “see inside” your components and systems and map reflection loss along the entire length of the optical path. Backscatter-level sensitivity allows distributed IL measurements as well. The OBR 4610 provides spectral analysis of the optical path and phase measurements.



Use convenient cursor tools to measure and examine scatter level and reflection events to measure RL and IL for closely spaced events.

“Zero Dead Zone” reflectometer designed to “see inside” components and systems

KEY FEATURES

- “Zero Dead Zone” reflectometer for optical components and systems
- Operates at 1040 - 1080 nm
- Sampling resolution of 10 μm at 30 m length
- 80 dB dynamic range
- Backscatter-level sensitivity (-130 dB)
- High-speed scanning
- Measure IL, RL, distributed loss, distance, polarization states, phase derivative and group delay

APPLICATIONS

- Analyze distributed loss in components and short optical networks
- Easily locate, identify and troubleshoot macro-bends, splices, connectors and breaks
- Test and troubleshoot short-run networks and systems
- Unprecedented visibility into miniaturized components

Preliminary Data Sheet

SPECIFICATIONS (PRELIMINARY)

| Parameter | | Specification |
|--|-----------|---|
| Measurement | | |
| Wavelength ranges | | 1040 - 1080 nm |
| Maximum measurement length | | 30 m or 70 m |
| Sampling resolution | 30 m mode | 10 μ m |
| | 70 m mode | 20 μ m |
| Effective dead zone | | Equals 2-pt sampling resolution |
| Wavelength resolution (max) | | 0.01 pm |
| Wavelength accuracy | | tbd |
| Integrated Return Loss Characteristics | | |
| Dynamic range | | 80 dB |
| Total range | | 0 to -125 dB |
| Sensitivity | | -130 dB |
| RL resolution ¹ | | \pm 0.05 dB |
| RL accuracy ¹ | | \pm 0.10 dB |
| Integrated Insertion Loss Characteristics | | |
| IL dynamic range ² | | 18 dB |
| IL resolution ¹ | | \pm 0.05 dB |
| IL accuracy ¹ | | \pm 0.10 dB |
| Group Delay Measurement | | |
| Accuracy | | 1.0 ps |
| Physical | | |
| Class 1 Laser | | <10 mW |
| Operating power | | 100 W |
| Weight (controller not included) | | 25 lb (11.4 kg) |
| Case size (W x D x H) | | 14.4 x 13.6 x 6.5 in (366 x 345 x 165 mm) |

NOTES

Specifications are for single-mode performance. For multimode operation, specifications are nominal.

1. With integration width of 0.5 m.

2. IL dynamic range is the two-way loss that can be suffered before the scatter level of standard SMF is lower than the noise floor (~ -118 dB/mm).

ORDERING

| Catalog # | Description | Includes |
|-----------------|--|---|
| OBR 4610 | Optical Backscatter Reflectometer, 1040 nm - 1080 nm | OBR 4600 mainframe for 1040-1080 nm, instrument controller (workstation-class laptop) and accessory kit. |
| OPT06004 | Desktop Analysis Software | Software providing all of the analysis and data visualization of the OBR 4600, using only saved OBR measurement data files. |
| OPT06008 | Custom Software Development Kit | SDK toolkit with DLLs allowing custom GUI development. |



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