



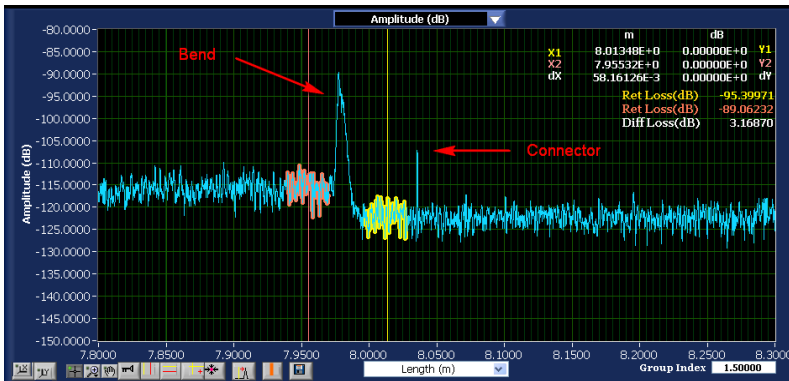
OBR 4610

Optical Backscatter Reflectometer™



The Luna OBR 4610 extends Luna's award winning Optical Backscatter Reflectometer™ technology to 1064 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 40 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
- 1064nm window operation
- Sampling resolution of 40 μm at 70 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 optical components and subassemblies.
- Easily locate, identify and troubleshoot macro-bends, splices, connectors and breaks.
- Test and troubleshoot short-run networks and systems
- Unprecedented visibility into miniaturized components, including Photonics Integrated Circuits.

SPECIFICATIONS

Parameter	Specification
Measurement	
Center Wavelength ¹	1060 ~ 1070 nm
Wavelength scanning range	10 nm
Maximum measurement length	70 m
Sampling resolution	40 μ m
Effective dead zone	Equals 2-pt sampling resolution
Wavelength resolution (max)	0.01 pm
Wavelength accuracy	± 0.5 nm
Integrated Return Loss Characteristics	
Dynamic range	80 dB
Total range	0 to -125 dB
Sensitivity	-130 dB
RL resolution	± 0.05 dB
RL accuracy	± 0.25 dB
Integrated Insertion Loss Characteristics	
IL dynamic range ²	18 dB
IL resolution ³	± 0.05 dB
IL accuracy ³	± 0.25 dB
Group Delay Measurement	
Accuracy	$\pm 0.3\%$ of the DUT Delay
Repeatability	$\pm 0.02\%$ of the DUT Delay
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. Unit dependent (Preliminary, subject to update)

2. IL dynamic range is the two-way loss that can be suffered before the scatter level of HI1060 SMF (~ 95.5 dB/mm) is lower than the noise floor (less or equal -113.5 dB/mm).

3. With integration width of 0.5 m.

ORDERING

Catalog #	Description	Includes
OBR 4610	Optical Backscatter Reflectometer, for 1064 nm window	OBR 4600 mainframe for 1064 nm operation (~10 nm scanning range), 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.

