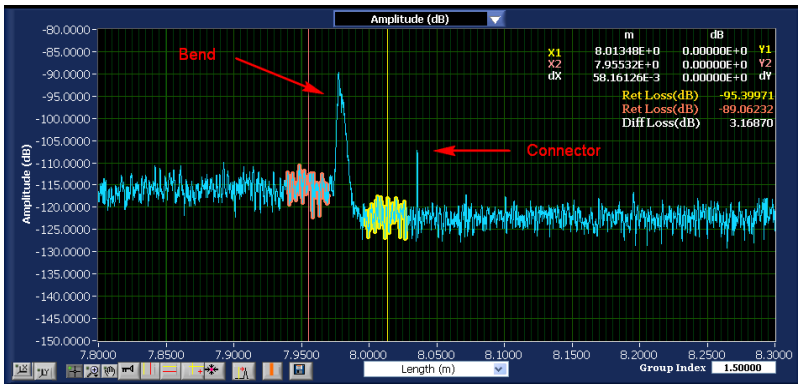
OBR 4610

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 devices and systems
- Wavelength scan centered at 1060 nm
- Spatial sampling resolution of 10's of micrometers
- Backscatter-level sensitivity
- 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		
Center wavelength		~1060 nm
Wavelength scan width		10 nm[1]
Maximum measurement length		30 m or 70 mm
Sampling resolution	30 m mode	40 µm[1]
	70 m mode	80 µm[1]
Effective dead zone		Equals 2-pt sampling resolution
Wavelength resolution (max)		0.01 pm
Wavelength accuracy		*tbd* (no onboard gas cell for wavelength calibration)
Integrated Return Loss Characteristics		
Dynamic range		80 dB
Total range		0 to -125 dB
Sensitivity		-130 dB
RL resolution[2]		±0.05 dB
RL accuracy[2]		±0.10 dB
Integrated Insertion Loss Characteristics		
IL dynamic range[3]		18 dB
IL resolution[2]		±0.05 dB
IL accuracy[2]		±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. Targeted scan range and resolution; final released product capabilities may differ.
2. With integration width of 0.5 m.
3. 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, 1060 nm	OBR 4600 mainframe for 1060 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.

Preliminary Data Sheet

LUNA

OBR4610 REV.0.2 03.03.22

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