



The Luna OBR 5T-50 delivers fast, accurate return loss, insertion loss, and length measurements with 20 micron spatial resolution.

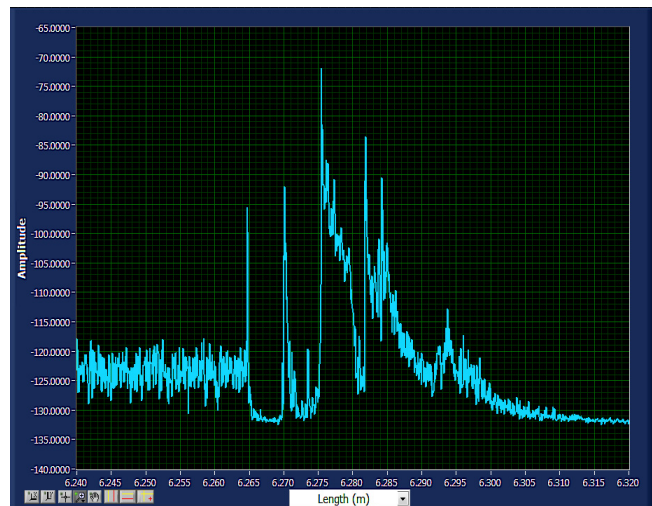
PERFORMANCE HIGHLIGHTS

- Industry-leading combination of measurement speed, range, accuracy and resolution.
 - 11.9 Hz acquisition rate
 - 8.5 meter measurement range
 - 0.015% length measurement accuracy
 - 20 micron spatial resolution
- Streamlined Graphical User Interface + Software Development Kit included
 - Optimize throughput with customized interface
- Automatically locates reflective events and yields RL, IL and event location

The Luna **OBR 5T-50** is a fast, simple-to-use, low cost precision reflectometer that measures the Insertion Loss (IL) and Return Loss (RL) distribution of passive optical components and modules including PLCs, optical cables, connectors, switches, couplers and more. This instrument utilizes swept-wavelength interferometry to measure backscattered light as a function of distance with -125 dB sensitivity and 20 micron spatial resolution. The OBR 5T-50 reduces cost and complexity, while increasing throughput by measuring RL, IL and length with a single instrument.

APPLICATIONS

- Fault location- Measure RL, IL, length
- Automated pass/fail inspection and reporting
 - Precision optical cables and connectors
 - PLC and waveguide devices
 - Couplers, switches, beam splitters
- Skew measurement with sub picosecond resolution
- Real-time optical alignment



Return Loss vs. length measurement of a MEMS-based optical switch. The first two reflections are 5.0 mm apart. This measurement was recorded with 20 micron spatial resolution.

PARAMETER	SPECIFICATION		UNITS
	SINGLE SCAN	10 AVERAGES	
Length Characteristics:			
Maximum Device Length	8.5		meters
Spatial Resolution (two-point) ¹	20		μm
Length Accuracy ²	± 0.015% of Length		--
Dead Zone:			
Dead Zone	20		μm
Wavelength:			
Wavelength Range	40		nm
Wavelength Accuracy ²	1.5		pm
Center Wavelength	1546.69		nm
Integrated Return Loss Characteristics:			
Dynamic Range ³	60	65	dB
Total Range ⁴	-14 to -120	-14 to -125	dB
Sensitivity ⁴	-120	-125	dB
Resolution ⁵	± 1.0	± 1.0	dB
Accuracy ⁵	± 1.0		dB
Insertion Loss Characteristics:			
Dynamic Range ⁶	10	15	dB
Resolution ⁷	± 0.5	± 0.5	dB
Accuracy ⁷	± 0.5		dB
Measurement Timing:			
	11.9		Hz
Maximum Optical Power:			
	8		mW
Physical:			
Optical Connector Type	FC/APC		
Dimensions	14 x 12.5 x 6.75 (36 x 32 x 17)		In (cm)
Weight	17.3 (7.85)		lb (kg)
Maximum Power Consumption	50		W

- 1 Distance between two sample points along the length axis in SMF-28.
- 2 Accuracy is guaranteed via NIST-traceable HCN gas cell.
- 3 Range between strongest reflection greater than -30 dB and noise floor.
- 4 Noise floor return loss at half maximum length.

- 5 Measured with 1 cm integration width.
- 6 Two way loss before backscatter reaches noise floor, and IL measurements are no longer possible.
- 7 Measured with 10 cm integration width.

CLASS 1 LASER PRODUCT