

OPTICAL FREQUENCY DOMAIN REFLECTOMETER (OFDR)

FINDING FAULTS

In optical devices, it's like hunting for a needle in a haystack. Which part of the optical path is the culprit? Most test equipment can't help you analyze windowed, time domain portions of your optical device to determine the cause for degraded specifications. By the time you get to final test, your device has a problem and you don't have the time or equipment to find out why.

Let the team at Luna help. With our new OFDR, you can improve yields by seeing where designs and the production processes break down.

Check interfaces introduced by multiple bonds, lenses, and filters, and discover the solutions to processing errors before they become habits. All of this is possible with 20 micron resolution, zero dead zone, and up to 70 meter device length. That's right, now you can characterize devices and subsystems alike — no more 3 meter limitations.

Luna's state-of-the-art OFDR provides isolation of faults and problems well before final test, saving hours in rework and hard dollars in yield loss. Industry-leading 20 micron resolution with zero dead zone will pinpoint even the smallest contributors to loss: amplifiers, ball lenses, filters, splices, you name it — we find it. Discover what you don't know about your component and what the Luna Technologies' OFDR can do for you.

APPLICATIONS

- Incoming Inspection: Rapid troubleshooting of individual parts.
- Failure Analysis: Total system analysis isolating individual connectors, fibers, and other components.
- Design Verification: Including group delay measurement.
- Manufacturing Process Troubleshooting: Verify optical systems during development or production.



Improve yields by seeing where designs and the production processes break down with the Luna OFDR.

WHY LUNA?

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- Measure IL, RL, and GD simultaneously
- Isolate effects of each device in the optical path
- Determine sources of ripple and loss
- View with near-zero dead zone
- Minimum resolve to 20 microns
- Examine maximum optical 70 meter device lengths

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(after one hour warm-up at 20 °C)

Parameter Measurement Performance	Specification		Units
	CTe	STe	
Wavelength range:	1525-1605		nm
Wavelength:			
Resolution ¹	0.02		pm
Accuracy ²	± 1.5		pm
Spatial resolution (two-point)³:	20	40	microns
Maximum device length (including leads):			
Reflection	15	30	meters
Transmission	30	70	meters
Integrated return loss characteristics:			
Dynamic range	60		dB
Sensitivity	90		dB
Ripple	± 0.05		dB
Resolution	± 0.02		dB
Accuracy	± 0.15		dB
Group delay:			
Range	150	300	ns
Accuracy	± 0.25		ps
Measurement Timing⁴	< 4 s for 20 nm scan		

1 Determined by width of time domain window.

2 Accuracy maintained by an internal NIST traceable HCN gas cell.

3 Over 20 microns over 30 meters for CTe option and 40 microns over 70 meters for the STe option

4 Combined scan and analysis time.

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Purchasing Options

Part Number	Description
OFDR Analyzer	Contains: Personal computer, 17" flat screen monitor, OFDR mainframe, software, all associated cables to measure device lengths of up to 70 meters in optical length in transmission or 35 meters in optical length in reflection, 40 micron resolution.
Select either option 001 or 002	
Option 001C	C Band
Option 001L	L Band
Option 001O	O Band (1290-1370 nm)
Option 002	C+L Band
Option 003	GPIB remote control card and cable
Option 004	Desktop Analysis
Option 30	30 Meter Device Length (transmission) 15 meters device length (reflection), 20 micron resolution

Calibration & Repair
www.raeservices.com