

***testforce***

THE  
**MEASUREMENT  
EXPERTS GUIDE**

Optical Edition



Works in both reflection or transmission



LUNA

6415 OFDR

### Lightwave Component Analyzer

- Spectral analysis of Return loss (RL) and insertion loss (IL)
- Trace distributed RL over length of optical path
- Detect, locate reflective events and measure path length
- 20  $\mu\text{m}$  sampling resolution, 200 m measurement range
- 6 Hz scan/acquisition

LUNA

OVA 5100

NEW!

### Optical Vector Analyzer

- All-parameter linear characterization of single-mode optical components in a single scan
- Component characterization of dispersion compensation modules, AWGs, Fiber Bragg Gratings
- IL, RL, PDL, phase response, GD, CD characterization
- PMD / Second Order PMD, Min/Max Loss due to Polarization
- High resolution C and L band or O band capability



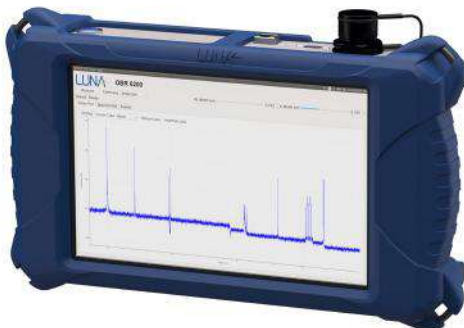
NEW!

LUNA

OBR 6235

### Portable Optical Backscatter Reflectometer

- Trace distributed RL over length of an optical path with ultra-high spatial resolution
- Measures distributed RL and IL with excellent accuracy
- Extended measurement length range to 500 m
- Detects and precisely locates reflective events
- Measures optical path length with high precision
- Ideal for precision testing of data center interconnects



Anritsu

MS9740B

### Optical Spectrum Analyzer (OSA)

- Active optical component and module analyzer
- 600 nm to 1750 nm wavelength support (+/-20 pm to +/-300 wavelength accuracy)
- Wide dynamic range of >58 dB, -90 dB lowest optical sensitivity
- Maximum measurement processing time of 2 of 0.35s (sweeping 30-nm wavelength)



BERT +  
Sampling  
Oscilloscope

Anritsu

BERTWave MP2110A

### All-in-One BERT & Sampling Oscilloscope



- Provides simultaneous 4ch BER measurements with eye pattern
- Supports optical module and device measurements up to 800 Gbit/s
- High-quality waveform PPG
- Optical attenuator and switch modules available to complete system
- NRZ and PAM4 Signal Analysis
- NRZ Jitter Component Analysis

Anritsu

MT1000A

### Network Master Pro - Network Performance Visibility

- Compact, rugged battery-powered design
- Supports testing from 1.5 Mbps to 100 Gbps
- Excellent expandability and operability for 10/100 G, OTDR and CPRI tests
- 5G base-station interface eCPRI/RoE, delay measurements and time synchronization tests
- Configurable with various transport testing functions and OTDR modules



Optical PXI test modules for mixed-signal test and measurement systems, reducing complexity, lowering the cost of test and accelerating time to market. All of the Quantifi Photonics products shown below and to the right are available in PXI or MatriQ.

## Laser 1000 Series

### Tunable Telecom-Grade Lasers

- Continuous Wave (CW), tunable laser source offering high-power output, narrow 100 kHz linewidth and 0.01 pm resolution tunability
- State of the art user interface – web browser access from any network device
- Extremely cost-effective

## BERT 1000 Series

### Bit Error Rate Tester

- 4-channel Pulse Pattern Generator (PPG) and Error Detector for the design, characterization and production of optical transceivers and opto-electrical components at data rates up to 30 Gb/s
- High speed SerDes, clock-data-recovery, and laser-driver testing and characterization



## Power 1500 Series

### Fiber Optical Power Meter with Logarithmic Analog Output

- -60 to +10 dBm and broad wavelength range of 750 nm to 1700 nm with analog RF output and 1 MHz response for active fiber alignment applications
- Ideal for analog control loops that require feedback of the optical power, and wafer-level testing for silicon photonics

# or MATRIQ?

QUANTIFI  
PHOTONICS™

Same high-performing test capabilities as PXIe modules in a compact benchtop design. MATRIQ instruments are simple to setup and easy to operate via USB or Ethernet, making them the perfect choice for your optical lab or test bench!

## O2E Series

### Optical to Electrical Converter

- High bandwidth, broadband O-to-E converter
- Broad wavelength coverage up to 50 GHz
- AC or DC coupling, various conversion gain and operating wavelength range

## Doppler 1000 Series



### Photonic Doppler Velocimetry (PDV) Module

- Purpose-built module for Photonic Doppler Velocimetry (PDV)
- A circulator, two VOAs and a passive coupler all built into one compact instrument
- Accurate control and measurement of target, probe and reference power

## EDFA 1000 Series

### C-band and L-band Erbium-Doped Fiber Amplifier

- High power Erbium-Doped Fiber Amplifier for signal power amplification in C and L bands with various control modes, including automatic gain control
- Three control modes: constant power, constant current and constant gain mode

QUANTIFI  
PHOTONICS™

OMA



### Optical Modulation Analyzer

- Quantifi Photonics receiver is integrated with Tektronix's high performing oscilloscope
- Up to 70 GHz and up to 140 GBaud
- Software controls both instruments for seamless operation
- Polarization-multiplexed QPSK, QAM, differential BPSK/QPSK, and other advanced modulation formats
- Support for custom modulation formats

QUANTIFI  
PHOTONICS™

IQTransmitter

40 GHz

### Optical Modulation Transmitter

- Generate and control phase modulated optical signals
- 11 GHz to 40 GHz BW with support for up to 80 GBaud
- Ideal for 600 Gbps based on 56 GBaud 64QAM modulation format
- Perfect for M-QAM, M-PSK and custom modulation formats



spirent™

TestCenter

### 800G High-Speed Ethernet Performance Test

- End-to-end test solution - test, measure and validate networks and deploy service
- Cloud computing, and mobile backhaul
- High-speed Ethernet - multiple speed form factors
- Benchmarking - using IETF RFC 2544, RFC 2889 and RFC 3918
- Verify scale, reliability, performance of Layer 2-7 services
- Supports latest IEEE 802.11ax standard and legacy



LUNA

## ODiSI 6100

Up to 8  
Channels

### Multichannel Optical Distributed Sensor Interrogator

- Multichannel measurements of strain and temperature
- Measure anywhere along fiber as opposed to discrete TCs or strain gauges
- Passive, corrosion resistant, dielectric, flexible sensors
- Configured with 1, 4 or 8 active measurement channels



LUNA

## Micron Optics Hyperion si255

### Optical Sensing Interrogator

- Measure up to 1000 sensors on 16 parallel, 160 nm wide channels
- Rapid full-spectrum data acquisition and flexible peak detect of (Long Period) FBG and FP sensors
- High-performance on-board DSP and real-time FPGA processing
- Low-latency access to data for closed loop feedback applications

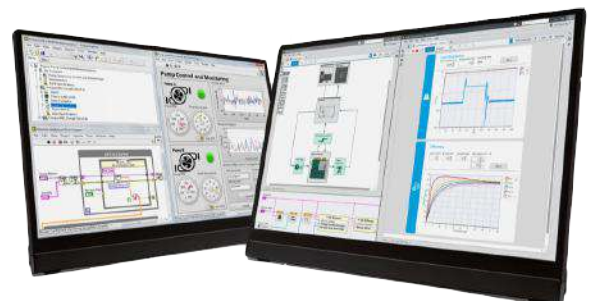


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## LabVIEW

### Graphical Programming Environment

- Industry's tool of choice for developing automated test systems
- Program the way you think, using a graphical approach
- Extensive analysis and signal processing capabilities
- Interoperability with Python and MATLAB
- Extensive third-party driver library for most OEMs of test equipment





Being a leading Canadian supplier of test and measurement products for a wide variety of optical applications, Testforce specializes in helping determine the best solution to the most complex applications. Our Technical Account Managers have extensive experience in the optical industry, and understand the technical, business, and financial challenges which are unique to this field. We will work with your team to come up with a practical solution from the leading test and measurement OEMs around the world.

Whether characterizing optical components for signal integrity, or measuring BER to maximize throughput, Testforce has exactly what you need with accurate and robust equipment, which provide consistent and repeatable results. Our Technical Account Managers will also ensure that your instrument is functioning properly and has all the correct accessories and options such as cables, connectors, calibration kits, amplifiers and switches.

Having the best equipment is only part of the solution. Knowing how to use the tools maximizes the effectiveness of a team. We stand behind the products we sell by providing training to your team either through on-demand training and webinars, or on-site training.



Optical Spectrum and Network Analyzers, Time Domain Reflectometers



Modular Signal Switching, Simulation and Software



Optical Component Analyzers, Reflectometers, Distributed Sensing, Tunable Lasers



Cybersecurity, Ethernet, WIFI Connected Devices, Mobile Networks, Positioning



Data acquisition, instrument control, automated test equipment, software solutions



Optical Tunable Lasers, Attenuators, Power Meters, O-E Converters, Modulation Analyzers

**Additional resources available on the Testforce Academy:**



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**Calgary**  
Tel: (403) 247-3725  
**Ottawa**  
Tel: (613) 829-6859

**Vancouver**  
Tel: (604) 557-0715

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