OptoTest Test Solutions for Fiber Optics

Multichannel Environmental Test Station

How do your components perform in changing environmental conditions?

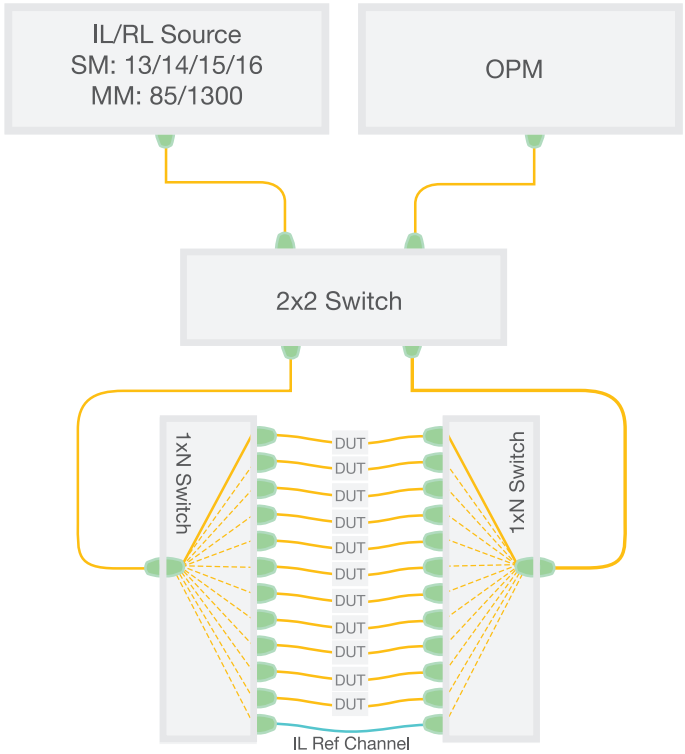
As new connectors are constantly being developed and existing connector designs are improved, there is an increasing need to perform qualification tests for insertion loss and return loss relative to certain environmental changes. Long term testing standards, **GR-326-CORE** and **GR-1435-CORE**, often require tight specifications for the test setup, equipment, and data acquisition. As such, test stations for performing these assessments need to be up to date with the latest standards and have the best possible stability and accuracy.

Tests often need to run for days or weeks and require data points to be taken at routine intervals while changing the environment around the connectors, such as temperature and humidity. It is often best if the test station can integrate the controls for the environmental chamber and any auxiliary devices to centralize the controls to a single terminal and acquire data to a single output file.

Achieving Accurate Results with OptoTest's OP-METS

OP-METS Test Tower for up to 72 channel IL/RL qualification of MTP/MPO connectors with two monitor channels.

OptoTest's **Multichannel Environmental Test System** provides an optimized turnkey solution for performing long term testing of Insertion Loss and Return Loss with respect to changes in environment. Each system is designed uniquely for each application and can be customized to meet almost any requirement. **The OP-METS combines the most accurate measurements, the fastest channel-to-channel switching time, and the most stable equipment on the market** and comes with the option of being built into a 32U rack enclosure with its own dedicated computer.



Sample schematic for a bidirectional configuration of an OP-METS system.

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Key Benefits

- Completely customized; built to meet customer requirements
- Facilitates environmental testing per **GR-326-CORE, GR-1435-CORE, Verizon FOC**
- Qualify single fiber (FC, SC, LC, etc) or multifiber connectors (MPO/MTP, MXC, PRIZM-LT, etc)
- Multimode and Single Mode wavelengths: 850 / 1300 / 1310 / 1490 / 1550 / 1625nm
- Multimode IL sources can be configured to meet IEC/TIA specifications (Encircled Flux) – *upon request*
- Mandrel-free Return Loss testing
- Can run up to two tests simultaneously (e.g. short term tests alongside ongoing long term tests)
- Used by industry leaders in fiber optic connector manufacturing, military, aviation, and academics
- Available in unidirectional and bidirectional configurations
- Power meter options include large area detector, multichannel power meter, integrating sphere, and remote head
- Compatible with all Windows operating systems after Windows XP, including Windows 8 and Windows 10

Specifications

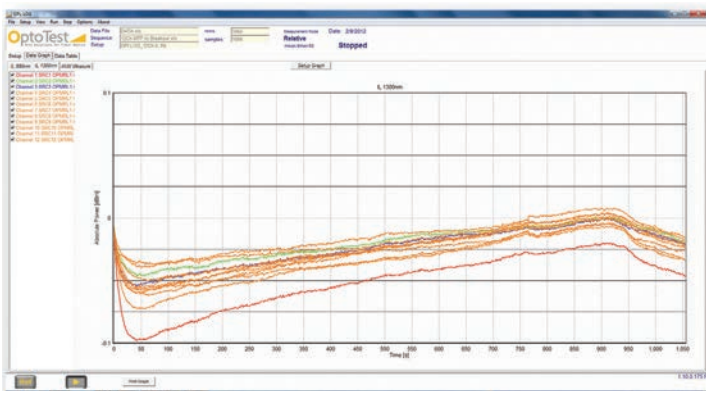
	Single Mode	Multimode
Source Channels	Up to 144 Channels *(more upon request)*	
Insertion Loss Source (±30nm)	1310nm, 1550nm 1490nm, 1625nm	850nm, 1300nm Launch Condition TIA compliant *(upon request)*
Return Loss Source	1310nm, 1550nm 1490nm, 1625nm	850nm, 1310nm
Source Stability*	±0.02dB	
Optical Power Meter Range	IN1: +10dBm to -80dBm IN3: +6dBm to -70dBm SI3: +3dBm to -70dBm IN5: +6dBm to -60dBm IN10: 0dBm to -45dBm	
Insertion Loss Accuracy**	±0.01dB	
Return Loss Range	-10dB to -80dB	-10dB to -58dB
Return Loss Accuracy	±1dB	
Channel Repeatability	±0.05dB	

** Per hour, per temperature variation of 1ºC.*
*** At constant temperature with less than 10dB power fluctuation.*

OPL-LOG

OPL-LOG is a data acquisition and logging software that controls OptoTest instruments via USB along with thermal chambers, thermocouples, and other auxiliary sensors* for monitoring testing parameters. OPL-LOG provides graphs for IL, RL, and supported data acquisition devices and records the data in an Excel spreadsheet. This logging capability makes OPL-LOG well-suited for standards compliant long-term testing of fiber optic components. Tests can be configured to perform measurements at arbitrary, fixed time intervals over an arbitrary duration. For increased testing efficiency, OPL-LOG can run two simultaneous tests with different configurations on a single **OP-METS** system.** The OP-METS system and the accompanying OPL-LOG software can be further customized for your application requirements.

** Contact OptoTest for supported chambers and sensors.*
*** Due to the physical configuration of the OP-METS system each measurement is performed sequentially.*



OPL-LOG Data Logging Software showing a graph of the change in optical power over time.

Contact us

To learn more about this product and schedule a free demonstration,
contact our Sales Team or one of our worldwide Distributors.
Let OptoTest help you with the right test solution.
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