

## PRODUCT OVERVIEW

The OP940 is an Insertion Loss (IL) and Return Loss (RL) meter designed for **speed, accuracy, and simplicity**. Perform the fastest RL measurements in the industry without using mandrels or index matching gel. Full test functionality in a compact size makes the OP940 the ideal test system for any stage of fiber optic cable production and installation.

## KEY FEATURES & BENEFITS

### • Robust and Intuitive Front Panel

The user experience through the front panel of the OP940 is simple and easy to navigate without sacrificing functionality. Test IL and RL simultaneously with results updating in real time. Adjust the RL reference position and measure both front and back connectors. Set pass/fail criteria and engage the colored display to quickly verify a batch of cables. If you're ever unsure of what to do, help menus are accessible on every screen to guide you through the different features and options.

### • Identify and Fix Issues with Minimal Downtime

Minimize your production downtime by identifying and troubleshooting issues right through the front panel. Use the optical reflectance trace to find reflections along the optical path caused by dirt or misaligned connectors. If there is a reflection at the front panel, you can remove it to access the connector and perform maintenance without exposing the rest of the unit to the elements.

### • Wide Dynamic Range for RL Measurements

By making use of a wide dynamic range (SM, FTTX: -10dB to -80dB | MM: -10dB to -58dB) for RL measurements, the OP940 can adjust for attenuation in the reference setup, which results in the most accurate RL results in the industry.

### • Fastest IL/RL Measurement

Utilizing the OP940, you can test a single channel, dual wavelength, IL and RL in less than 4 seconds.

### • Customizable

The OP940 is available with SM, MM, and FTTX wavelengths and a variety of core sizes and detector options to meet your needs.



### CALIBRATION

This product can be calibrated in-house, on-site, or remotely.



### TECH SUPPORT

Our team of experts is ready to assist with your setup.



### WARRANTY

OptoTest offers a three-year warranty on this product.

## APPLICATIONS

- Manufacturing Testing
- R&D Testing

### SOFTWARE

When paired with OptoTest software, the OP940 gains additional benefits as part of a larger and multi-faceted test system.

- Expandability**

Multiple units and different kinds of units can be controlled simultaneously through USB. For instance, you can pair the OP940 with any in our range of switches to expand into multichannel and/or bi-directional testing.

- Automation**

Every step of the test process is fully controlled by the software, making your testing experience simple, repeatable, and reliable.

- Customization**

Test configurations, pass/fail criteria, and result exporting are fully customizable to create a tailored experience for you.

- DLLs Available**

The single channel OP940 can be operated through custom software to easily integrate into already established systems.



### COMPATIBLE SOFTWARE

- **OPL-Pro** simplex or duplex testing, ideal for production
- **OPL-Max** multifiber connectors with production applications
- **OPL-CLX** multifiber connectors with production applications with database integration
- **OPL-Log** optical datalogging for temperature and humidity



#### ISO CERTIFIED

Our Quality Management System is certified in ISO 9001:2015.



#### MADE IN THE USA

We proudly design & manufacture our equipment in California, United States.



Visit [www.optotest.com](http://www.optotest.com) or contact one of our sales engineers at +1 (805) 987-1700 | [sales@optotest.com](mailto:sales@optotest.com) to learn more.

### PRODUCT SPECIFICATIONS

Return Loss	Single Mode, FTTX	Multimode
Source Wavelength	1310nm, 1550nm 1490nm*, 1625nm*	850nm, 1300nm
Calibrated Measurement Range	-10dB to -80dB	-10dB to -58dB
Measurement Linearity	±1dB (-12dB to -72dB)	±1dB (-10dB to -45dB)
Distance Range	up to 2500 meters	
Mandrel-free minimum distance	1.7 meters (both reflections <-45dB)	

\*FTTX only.



Insertion Loss	Single Mode	FTTX	Multimode
Source Center Wavelength	±30nm from nominal	±30nm from nominal	±30nm from nominal
Source Bandwidth	<10nm	<10nm	<140nm (850nm) <200nm (1300nm)
Internal Fiber	9/125µm (SMF28)	9/125µm (SMF28)	50/125µm, 62.5/125µm, 105/125µm
Launch Condition	N/A	N/A	Available upon request
Output Power* (typical)	-1.5dBm	-2.5dBm	-18dBm(850nm) -20dBm(1300nm): 62.5/125µm
Insertion Loss Stability**	±0.02dB	±0.02dB	±0.02dB
<b>Measurement Linearity (Relative Accuracy)***</b>			
Deviation ± 0.05dB	0dBm to -65dBm at 1490nm		
Deviation ± 0.01dB	<10dB power variation		

\*For single channel systems. \*\*Over 1 hour with a max. change of 1°C. \*\*\*For 1, 2, and 3mm detectors.

Measurement Timing	Single Mode	FTTX	Multimode
IL and RL, Dual Wavelength	3s*	6s	3s*
Switching Time (Multichannel)	100ms		

\* Using the front panel in Dual ILRL mode or running OPL-Pro with real-time update enabled.

Mainframe	OP940
Dimensions	8.5" x 3.5" x 12"
Power Supply	90VAC ... 264VAC; 47Hz to 63Hz; 0.7Amps (115VAC) 0.4Amps (230VAC); Fuse: T1A, 250V
Warm-up time	5-15 minutes
Operating Temperature	0°C to 50°C
Maximum Relative humidity*	95%

\* For temperatures up to 31°C, decreasing linearly to 50% relative humidity at 40°C.

### Laser Classifications

All **OP940 Insertion Loss and Return Loss Test Sets** utilize a **Class I Laser Source**. Unless otherwise noted, all **OP250**, **OP715**, and **OP750** source units with internal laser sources utilize a **Class I Laser Source**. Unless otherwise noted, all **OP815** and **OP850 Insertion Loss Test Sets** with internal laser sources utilize a **Class I Laser source**. All **OP280 Visual Fault Finder** units utilize a **Class III Laser Source**.

*OptoTest strongly suggests that all necessary precautions be taken whenever any Class I or Class III laser source is used.*

Specifications are subject to change, please confirm specific performance characteristics of the product at the time of ordering. All specifications are valid within temperature range of 18°C to 24°C unless otherwise noted. For additional specifications please contact OptoTest.