



# FX50

## Optical Loss Test Set (OLTS)

**Premium, multi-function tester to measure Power, bi-directional Loss and Optical Return Loss (ORL) on fiber optic systems.**

This compact, handheld and robust device is ideally suited for a variety of test applications for today's Telco, FTTx and PON access networks.



### Key Features

- High-power InGaAs detector integrated into the front panel adaptor
- Laser source (up to 3 wavelengths) with internal power meter (6 calibrated wavelengths)
- Fully automated bi-directional loss testing for up to three wavelengths in < 10 seconds
- Optical Return Loss (ORL) meter
- Visual Fault Locator (VFL)
- PONT mode to measure 1490 and 1550 nm PON ONT wavelengths simultaneously
- Frequency detection for fiber identification
- Interchangeable optical adaptors for OPM and OLS
- Rechargeable Lilon battery with > 80 hours operation
- Client USB software for data transfer, remote control
- Single mode or multimode options
- Advanced Test Result Saving
- Rugged, pocket-sized form factor

### Fiberizer™ Cloud

Fiberizer Cloud, powered by Optixsoft, empowers the FX50 Optical Loss Test Set and the workforce. Going beyond traditional OLTS reporting methods, test results can be transferred easily from the unit to a PC via USB connection and uploaded to Fiberizer Cloud. This cloud-based solution provides superior centralized test data management capabilities and is a full online web service allowing you to work from almost anywhere, at any time.

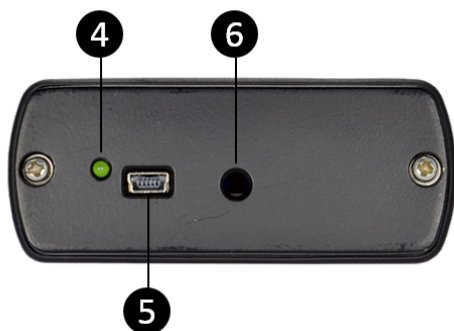


Add value with  
**Fiberizer Cloud**  
[www.fiberizer.com](http://www.fiberizer.com)

Product Overview



- 1 Test Port 1 - Visual Fault Locator**  
650 nm laser with universal 2.5 mm connector
- 2 Test Port 2 – Loss/ORL Testing**  
Light source, internal power meter, Optical Return Loss, Bi-directional loss testing for up to three wavelengths, PONT power meter for PON ONT side measurements
- 3 Test Port 3 – Optical Power Meter**  
Level and Loss measurements using 1 mm InGaAs detector  
Universal interface compatible with most industry adaptors



- 4 Charge LED**  
Indicates charge status
- 5 Mini USB port**  
+ 5 Volt DC input, PC connection for data transfer, remote control
- 6 Talk Set port**  
Headset/Microphone mini-jack for clear digital communication

## Optical Specifications

| Light Source                         |                                       |                             |
|--------------------------------------|---------------------------------------|-----------------------------|
| Wavelength (nm)                      | 1310/1490/1550/1625 ± 20              | 850/1300 ± 20 nm            |
| Output power (dBm)                   | > -5                                  |                             |
| Power Stability (dB)                 | ≤ ± 0.03 (15 min)                     | < ± 0.05 (15 min)           |
| Modulation                           | CW, 270, 1 kHz, 2 kHz                 |                             |
| Optical connectors                   | Interchangeable adaptors (FC, SC, LC) |                             |
| Power Meter                          |                                       |                             |
| Calibration wavelength (nm)          | 1310/1490/1550/1625                   | 650/850                     |
| Power range (dBm)                    |                                       |                             |
| - Standard (PM1), InGaAS (1 mm)      | -70 to +7                             | -30 to +3/-60 to +3         |
| - High (PM2), InGaAS (1 mm)          | -50 to +25                            | -10 to +23/-40 to +23       |
| - AutoTest BiDir (PM3), ORL hardware | - 85 to + 3                           | N/A                         |
| - PONT (1490, 1550 nm – ONT side)    | - 50 to + 25                          | N/A                         |
| Power measurement accuracy, % (dB)   | ± 5 (± 0.22)                          | ± 12 (± 0,5) / ± 8 (± 0.33) |
| Linearity, % (dB)                    | ± 2, 5 (± 0.11)                       | ± 6 (± 0.25) / ± 4 (± 0.17) |
| Resolution (dB)                      | 0.01                                  | 0.01                        |
| Optical Loss Test Set (OLTS)*        |                                       |                             |
| Wavelength (nm)                      | 1310/1490/1550/1625                   |                             |
| Loss Range (dB) (1310/1550)          | 60                                    |                             |
| Loss Precision (dB)                  |                                       |                             |
| - Side-by-side                       | 0.15                                  |                             |
| - Loopback                           | 0.25                                  |                             |
| Length Indicator Range* (km)         | 200                                   |                             |
| Length uncertainty resolution (m)    | ± 10 (< 150 km)                       |                             |
| Optical Return Loss (ORL)            |                                       |                             |
| Wavelength (nm)                      | 1310/1490/1550/1625                   |                             |
| ORL Range (UPC/APC) (dB)             | -14 to -45/- 14 to -65                |                             |
| ORL Uncertainty (dB)                 | ± 0.5                                 |                             |
| Resolution (dB)                      | 0.1                                   |                             |
| Visual Fault Locator (VFL)           |                                       |                             |
| Emitter Type                         | Laser                                 |                             |
| Wavelength (nm)                      | 650                                   |                             |
| Output Power (mW)                    | ± 1                                   |                             |
| Talk Set *                           |                                       |                             |
| Emitter Type                         | Laser                                 |                             |
| Wavelength/Communication             | 1310/1550 symmetrical/digital         |                             |
| Range (dB)                           | > 45                                  |                             |
| Accessories                          | Headphones and microphone included    |                             |

\*Check factory for Availability

## Ordering Information

### Chassis Part # FX50 - Optical Loss Test Set

|             |                                     |
|-------------|-------------------------------------|
| Z06-99-037P | FX50-OPM Optical Power Meter        |
| Z06-99-041P | FX50-OLS Optical Light Source Meter |
| Z06-99-042P | FX50-ORL Optical Return Loss Meter  |
| Z06-99-043P | FX50-OLTS Optical Loss Test Set     |

### Feature 1 FX50-OPM: OPM/PONT Hardware

|             |  |
|-------------|--|
| 000-00-001  | No Selection   |
| Z66-00-154P | Standard OPM/+7 dBm to -70 dBm, incl. one 2.5 mm adaptor                 |
| Z66-00-155P | High Power (CATV) OPM/+25 dBm to -50 dBm, incl. one 2.5 mm adaptor       |
| Z66-00-156P | PONT, 1490/1550 nm (ONT Side), +25 dBm to -50 dBm, Fixed FCUPC Connector |

### Feature 2 FX50-OLS: Optical Light Source Hardware

|             |  |
|-------------|--|
| 000-00-002  | No Selection   |
| Z66-00-158P | LS15 - 1310/1550 nm, > -5 dBm, $\pm 0.03$ dB/15 min, CW/270 Hz/1 KHz/2 KHz/Wave ID, Fixed FCUPC Connector      |
| Z66-00-159P | LS16 - 1310/1550/1625 nm, > -5 dBm, $\pm 0.03$ dB/15 min, CW/270 Hz/1 KHz/2 KHz/Wave ID, Fixed FCUPC Connector |
| Z66-00-160P | LS14 - 1310/1490/1550 nm, > -5 dBm, $\pm 0.03$ dB/15 min, CW/270 Hz/1 KHz/2 KHz/Wave ID, Fixed FCUPC Connector |
| Z66-00-161P | LS85 - 850/1300 nm, $\pm 0.05$ dB/15 min, CW/270 Hz/1 KHz/2 KHz, Fixed FCUPC Connector                         |

### Feature 3 FX50-ORL: Optical Return Loss Hardware

|             |   |
|-------------|---|
| 000-00-003  | No Selection  |
| Z66-00-157P | LS15-ORL - 1310/1550 nm, -14 dBm to -65 dBm, Fixed FCAPC Connector      |
| Z66-00-163P | LS16-ORL - 1310/1550/1625 nm, -14 dBm to -65 dBm, Fixed FCAPC Connector |
| Z66-00-164P | LS14-ORL - 1310/1490/1550 nm, -14 dBm to -65 dBm, Fixed FCAPC Connector |

### Feature 4 FX50-OLTS: Port 1 - OPM Hardware

|             |  |
|-------------|--|
| 000-00-004  | No Selection   |
| Z66-00-154P | Standard OPM/+7 dBm to -70 dBm, incl. one 2.5 mm adaptor           |
| Z66-00-155P | High Power (CATV) OPM/+25 dBm to -50 dBm, incl. one 2.5 mm adaptor |

### Feature 5 FX50-OLTS: Port 2 - Optical Light Source/Return Loss Hardware

|             |  |
|-------------|--|
| 000-00-005  | No Selection   |
| Z66-00-157P | LS15-ORL - 1310/1550 nm, -14 dBm to -65 dBm, Fixed FCAPC Connector |

|             |  |
|-------------|--|
| Z66-00-158P | LS15 - 1310/1550 nm, > -5 dBm, $\pm 0.03$ dB/15 min, CW/270 Hz/1 KHz/2 KHz/Wave ID, Fixed FCUPC Connector      |
| Z66-00-159P | LS16 - 1310/1550/1625 nm, > -5 dBm, $\pm 0.03$ dB/15 min, CW/270 Hz/1 KHz/2 KHz/Wave ID, Fixed FCUPC Connector |
| Z66-00-160P | LS14 - 1310/1490/1550 nm, > -5 dBm, $\pm 0.03$ dB/15 min, CW/270 Hz/1 KHz/2 KHz/Wave ID, Fixed FCUPC Connector |
| Z66-00-161P | LS85 - 850/1300 nm, $\pm 0.05$ dB/15 min, CW/270 Hz/1 KHz/2 KHz, Fixed FCUPC Connector                         |
| Z66-00-163P | LS16-ORL - 1310/1550/1625 nm, -14 dBm to -65 dBm, Fixed FCAPC Connector  |
| Z66-00-164P | LS14-ORL - 1310/1490/1550 nm, -14 dBm to -65 dBm, Fixed FCAPC Connector  |

### Feature 6 VFL Hardware (applicable to Port 3)

|             |   |
|-------------|---|
| 000-00-006  | No Selection  |
| Z66-00-162P | VFL, equipped with universal 2.5 mm receptacle and dust cap |

### Software Options

|             |  |
|-------------|--|
| 499-05-627  | Auto Test Bi-Directional, +3 dBm to -85 dBm (requires ORL hardware)                                |
| 499-05-647  | High Power OPM/+25 dBm to -50 dBm (requires PONT hardware for regular optical power measurement)   |
| Z88-00-026G | Talk Set, 1310/1550 nm Symmetrical/Digital, incl. Headset with 2.5 mm Jack (requires ORL hardware) |
| Z88-00-027G | Talk Set, 1310/1550 nm Symmetrical/Digital, incl. Headset with 2.5 mm Jack (requires LS hardware)  |

### Recommended Accessories

|             |                          |
|-------------|--------------------------|
| C01-00-001G | V100 Nylon Carrying Case |
|-------------|--------------------------|

## General Specifications

|                 |   |
|-----------------|---|
| Dimensions      | 185 x 83 x 32 mm (H x W x D)  |
| Weight:         | < 0.4 kg (< 0.88 lbs)   |
| Construction:   | Rugged, metal chassis   |
| Battery:        | Lilon battery, 1800 mAh (80 hours)  |
| Power Supply:   | mini USB interface, 5 VDC charger   |
| PC connection:  | mini USB interface, remote control & data transfer via Windows Utility software |
| Storage:        | 4096 results  |
| Display:        | High contrast LCD (128 x 64 pixels) with backlight, 30.5 x 59.0 mm visible area |
| Operating Temp: | -10 °C to +50 °C  |
| Storage Temp:   | -20 °C to +70 °C  |
| Humidity:       | 0% to 95%, non-condensing   |



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