

High Resolution Optical Time-Domain Reflectometer For Large Core Optical Fibers

**Wavelength range
500-1064 nm**

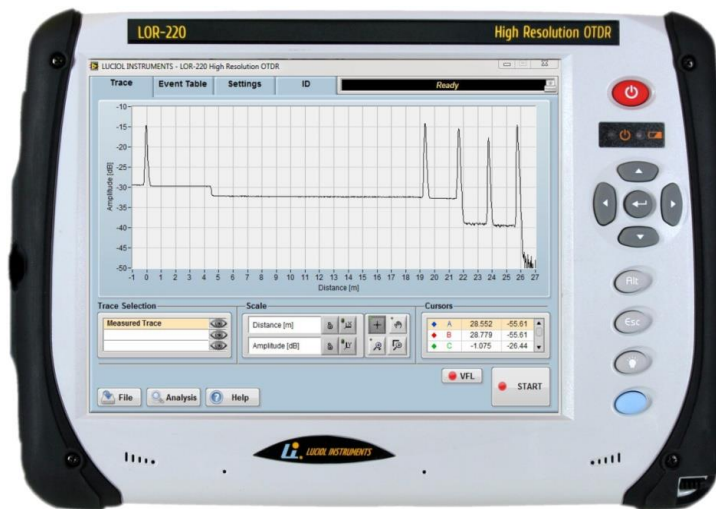
**Industry-leading
resolution (1 ns
pulses)**

**Fully portable OTDR
format**

**High dynamic range
with short pulses**

**Custom systems for
large core fibers up
to 1mm**

**Patented design; US
patent # 7,593,098**



The LOR-220 POF is a portable high resolution OTDR specially designed for testing large core optical fibers such as 1mm PMMA (POF) or others. The LOR-220 POF is a universal tool to characterize insertion losses and fiber attenuation. You can characterize the original assembly, monitor possible degradation for preventive maintenance purposes and troubleshoot in case of a fault in the system. The extremely short dead-zones ensure that you can detect, localize and measure events, which no other OTDR can show, such as fiber breaks and bend-loss, even after a large reflection.

The LOR-220 POF is available on a custom basis for most large core optical fibers and it has several wavelengths options.

APPLICATIONS

- Fiber, cable manufacturing
- Characterization/monitoring/troubleshooting of fiber assemblies
- Fiber optic sensors
- And more...

SPECIFICATIONS

Optical

Standard wavelength options* (± 10 nm):

650 nm, 520 nm

Standard fiber types*:

PMMA 1 mm

Optical connector:

SMA, ST (others on request)

Optical pulse width: 1 ns

Measurement range:

0.5 km

Distance units:

kilometer, meter, feet, miles, time(ns)

Sampling resolution:

any multiple of 2.5 cm (250 ps)

Dynamic range¹:

Rayleigh backscattering: > 20 dB (S/N =1)

Deadzones¹:

Attenuation dead-zone² (RL = 45 dB): 40 cm

Attenuation dead-zone² (RL = 14 dB): < 1 m

Loss accuracy¹:

± 0.1 dB ± 0.02 dB/dB (MMF)

Hardware

OS: Windows 11 (Windows 10 on request)

Processor: Intel N4200

RAM: DDR3L, 4 GB

Storage: SSD, 120 GB (more optional)

Display: Touchscreen TFT 10.4" (800x600)

Interfaces: 2x Ethernet RJ45

4x USB 3.0

1x HDMI

1x Headphone/Microphone

WiFi/Bluetooth (optional)

Power rating: 15V/4 A

Power input: AC operation with 100 to 240 VAC,

50/60 Hz universal adapter, DC operation on

batteries (Li Ion, 6.2 Ah)

Battery operating time: 5 h

Battery charging time: 3.5 h

Size: 320 x 240 x 90 mm, Weight: 3.1 kg

Environmental

Operating temperature: 0° to +40°C (32° to 104° F)

Storage temperature: -20° to +60° (-4° to 140°F)

Relative humidity: $\leq 80\%$ (0 to 30°C), decreasing linearly to 50% at 40 °C

Maximum operation altitude: 2000 m

Pollution degree: 2

Options:

-VFL

Visual Fault Locator on the OTDR output; can be used as fiber identifier.

Ordering information

LOR-22X-POFYYYY-W1(/W2/W3/W4)-CC

X = # of wavelengths

YYYY = Fiber diameter μm

W1, W2...: wavelengths

CCC: connector type (ASC, AFC, SC, FC, ST)

Ordering example:

LOR-222-POF1000-650/520-SMA-VFL

LOR-220 for 1 mm POF, with 2 wavelengths (650 nm and 520 nm), SMA connector, with VFL.

*Other wavelengths and configurations are available on a custom basis. Please contact Luciol Instruments with your special requirements.

** Please contact Luciol Instruments for details

Notes:

1: Typical

2: The attenuation dead-zone will be increased by the fibers modal dispersion