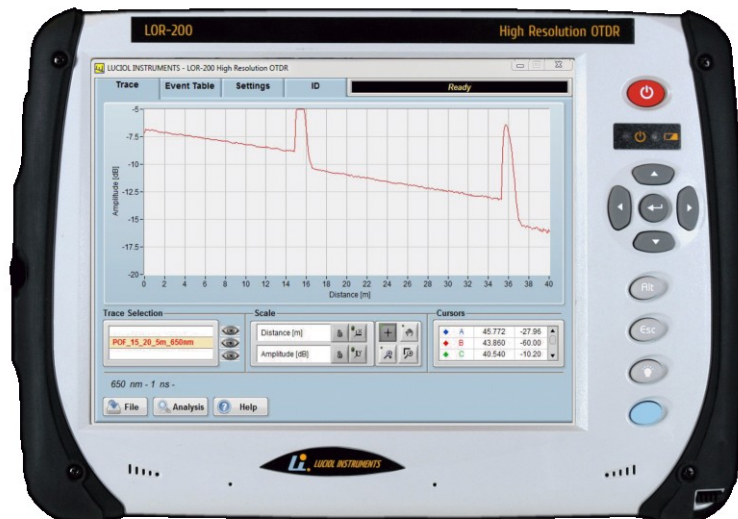


# LOR-220 POF

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



Fully portable OTDR  
format

Industry-leading  
resolution (1 ns  
pulses)

High dynamic range

Custom systems for  
most fiber types up  
to 1mm

Patented design; US  
patent # 7,593,098

The LOR-220 POF from Luciol Instruments is new member of the LOR-200 family. It 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 deadzones 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

Wavelength options (standard)<sup>1</sup>:  
650 nm, 520 nm  
Fiber type: PMMA 1mm (standard)  
others on request  
Optical connector:  
SMA, ST (others on request)  
Optical pulse width: 1 ns  
Measurement range:  
1.25 km  
Distance units:  
kilometer, meter, feet, miles, time(ns)  
Sampling resolution:  
Any multiple of 2.5 cm (250ps)  
Dynamic range<sup>2</sup> :  
Rayleigh backscattering: >20 dB (S/N=1)  
Deadzones<sup>2</sup>:  
Attenuation deadzone (RL=45dB): 40 cm.<sup>3</sup>  
Attenuation deadzone (RL=14dB): <1 m.<sup>3</sup>  
Loss accuracy:  
 $\pm 0.1 \text{ dB} \pm 0.02 \text{ dB/dB}$

### Hardware

OS: Windows Embedded POSReady 7  
Processor: AMD G T40E, 2x 1 GHz  
RAM: DDR3, 2 GB  
Storage: SSD, 60 GB (more optional)  
Display: Touchscreen TFT 10.4"; 800X600  
Interfaces: 1x Ethernet RG45;  
2x USB Type 2;  
1x VGA,  
1x Serial port  
Power rating: 15V; 3.2 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)  
Humidity: 0% to 90%; non-condensing

## OPTIONS AVAILABLE

### -VFL

Visual Fault Locator on the OTDR output; can  
be used as Fiber Identifier.

### -OPM: Optical power meter for 850 nm, 1310, 1550 and 1610 nm.

Range: -50 dBm to +8 dBm for 850 nm ;  
-55 dBm to +3 dBm for 1310, 1550 and 1610 nm;  
Linearity:  $\pm 0.05 \text{ dB}$  (between -45 and  
0 dBm)  
Absolute power uncertainty:  $\pm 0.2 \text{ dB}$   
Resolution:  $\pm 0.01 \text{ dB}$

## ORDERING INFORMATION

LOR-22X-POFYyyy-W1(/W2/W3/W4)-CC;  
X = # of wavelengths;  
YYYY = Fiber diameter  $\mu\text{m}$ ;  
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, fiber types and  
configurations are available on a custom basis.  
Contact the factory with your special  
requirements.

### Notes:

- 1:  $\pm 10 \text{ nm}$ .
- 2: Typical
- 3: The attenuation deadzone will be increased by the fibers  
modal dispersion