




Manufacturer:
Luciol Instruments

Product Name:
Luciol LOR-220 High Resolution OTDR

Manufacturer Part Number:
LOR-220

▶ [Click here for more details on the Luciol LOR-220 High Resolution OTDR](#)



LOR-220

IR

High Resolution Optical Time-Domain Reflectometer

Wavelength range
1000-1650 nm

Single or dual output (SMF/ MMF)

Industry-leading resolution (1 ns pulses)

Fully portable OTDR format

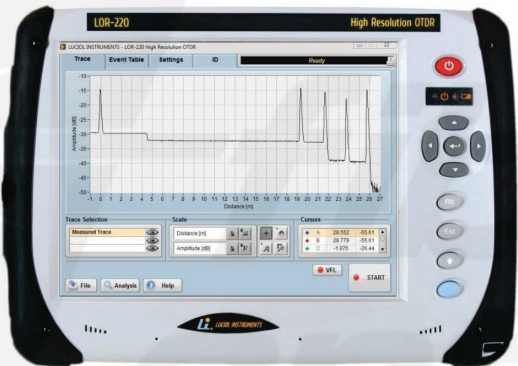
High dynamic range with short pulses

Measures IL and ORL for all types of connectors

Up to four wavelengths

Custom systems for most fiber types and wavelengths

Patented design; US patent # 7,593,098



The LOR-220 from Luciol Instruments is a fully portable high resolution OTDR. It is similar in shape and feel to a standard OTDR but achieves unprecedented resolution.

With a fixed pulse-width of only 1 ns the LOR-220 distinguishes events with 10 cm separation and has a 40 cm attenuation dead-zone. Its unique dynamic range for short pulse lengths (> 14 dB for 1 ns pulses) enables testing optical assemblies with high insertion losses, even over very short distances.

The LOR-220 can **characterize** the original assembly, **monitor** possible evolution for preventive maintenance purposes and **troubleshoot** in case of a fault in the optical link.

The IR version of the LOR-220 is available for up to four wavelengths in the range of 1000-1650 nm and for several fiber types. Even two different fiber types can be combined in a single instrument when choosing the dual output option.

APPLICATIONS

- See and localize events, which no other OTDR can show, such as weak reflections or attenuations immediately after a larger reflection or an optical splitter.
- Fiber optic sensors and fiber assemblies.
- Fiber manufacturing and verification.
- Loss and optical return loss testing for optical components.
- Aviation, aerospace, defense, telecommunication and more

Contact the professionals at Fiber Optic Center for a quote or to get more details.

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Product specifications and data are subject to change without notice. FOC last update 4/8/2026.



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SPECIFICATIONS

Optical

Standard wavelength options* (± 20 nm):
1310 nm, 1480 nm, 1490 nm, 1550 nm, 1625 nm or 1650 nm
Standard fiber types*:
Single Mode (9/125 μ m)
Multimode (50 or 62.5/125 μ m)
Optical connector:
Universal, APC or PC type, with FC, SC or ST adapter
Optical pulse width: 1 ns
Measurement range:
0.5, 1.2, 2.5, 5, 10, 20, 40, 80, 160 km
Distance units:
kilometer, meter, feet, miles, time(ns)
Sampling resolution:
any multiple of 2.5 cm (250 ps)
Dynamic range¹:
Rayleigh backscattering²: > 14 dB (S/N =1)
Deadzones³:
Event dead-zone: 10 cm
Attenuation dead-zone³: 40 cm
Distance accuracy:
 $\pm (10 \text{ mm} + 5 \times 10^{-5} \times [\text{fiber length}])$
Reflectance accuracy⁴: ± 1.5 dB
Loss accuracy⁴: ± 0.1 dB ± 0.02 dB/dB

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:

-FSV
Fiber microscope
End-face verification of connectors, USB connection, Video displayed on LOR screen.
-DOP
Dual output with two different fiber types. **
-OSW
Optical switch for semi-automatic multi fiber testing. Internal (up to 12 channels) or external switch with USB connection. **

Ordering information

LOR-22X-FFF-W1/(W2/W3/W4)-CC;
X= # of wavelengths;
FFF= fiber type: SMF, MMF62, MMF50
W1, W2...: wavelengths with source type (FP lasers, LED
CC= connector type: ASC, AFC, SC, FC, ST, LC

Ordering example:

LOR-223-SMF-1310FP/1480FP/1625FP-AFC
LOR-220 SMF, with 3 wavelengths, one FP laser at 1310 nm, one FP laser at 1550 nm, and one FP laser at 1625 nm, FC/APC connector.

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

** Please contact Lucioli Instruments for details

Notes:

- 1: Typical
- 2: At a wavelength of 1310 nm
- 3: For ORL = 45 dB
- 4: For a LED source (or FP under specific conditions)

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