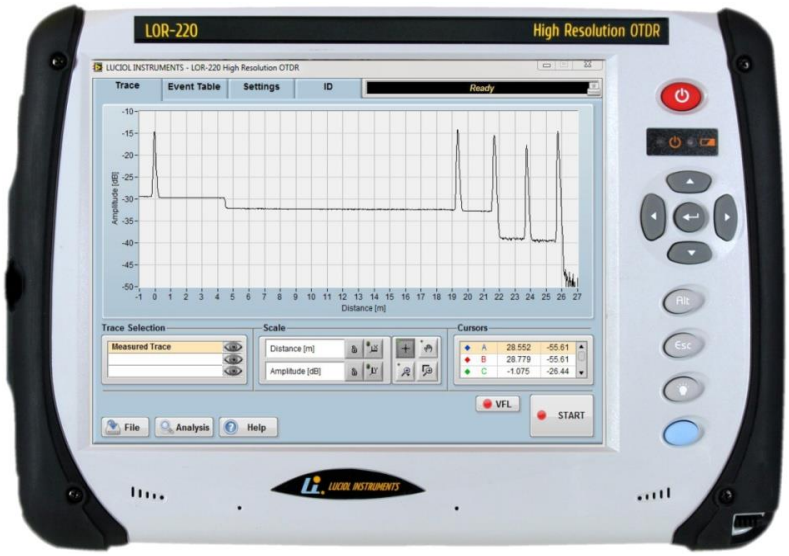
LOR-220

High Resolution
Optical Time-Domain Reflectometer



Single output SMF or 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

1625 nm option

Up to four wavelengths (1000 – 1650 nm)

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. The LOR-220 distinguishes events with 10 cm separation and has a 40 cm attenuation deadzone. Its unique dynamic range for short pulse lengths (over 14 dB for 1 ns pulses) enables to see through optical splitters, even over very short distances.

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 and aerospace.
- And more…

LUCIOL INSTRUMENTS

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 µm)
Multimode (50 or 62.5/125 µm)
Optical connector:
Universal, APC or PC type, with FC, SC or ST adapter
Optical pulse width: 1 ns
Measurement range:
1.25, 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 range[1]:
Rayleigh backscattering[2]:
> 14 dB (S/N =1)
Deadzones[1]:
Event deadzone: 10 cm
Attenuation deadzone[3]: 40 cm
Distance accuracy:
$\pm (10\ mm + 5x10^{-5} \times [fiber\ length])$
Reflectance accuracy[1]: ± 1.5 dB
Loss accuracy[4]: ± 0.1 dB ± 0.02 dB/dB

Hardware

OS: Windows 10 Home
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: ≤80% (0 to 30°C), decreasing linearly to 50% at 40 °C
Maximum operation altitude: 2000 m
Pollution degree: 2

OPTIONS AVAILABLE

-FSV
Fiber microscope
End-face verification of connectors, USB connection, Video displayed on LOR screen.

ORDERING INFORMATION

LOR-220
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

Ordering example:
LOR-223-SMF-1310FP/1480FP/1625FP-AFC
LOR-200 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. Contact the factory with your special requirements.

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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