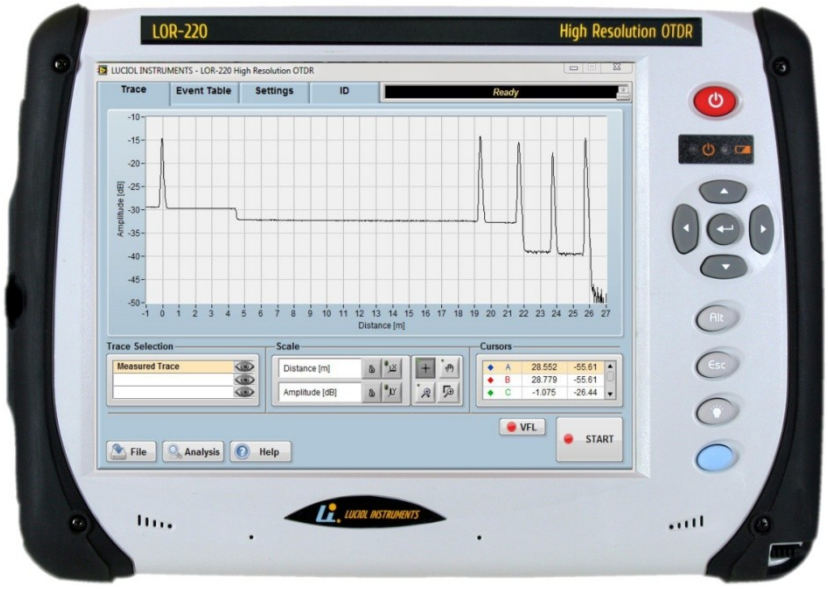
LOR-220 SMF/MMF

High Resolution
Optical Time-Domain Reflectometer



Dual output SMF and 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 (> 12 dB for the 1 ns pulse-width) 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.
- Insertion loss and return loss testing for optical components.
- Aviation and aerospace.
- And more…

LUCIOL INSTRUMENTS

SPECIFICATIONS

Optical

Standard wavelength options* (±20 nm):
1310 nm; 1550 nm; 1625 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 widths: 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] :
Return loss: 98 dB (-10 dB to -108 dB)
Rayleigh backscattering[2]:
> 12 dB (S/N =1)
Deadzones[1]:
Event deadzone: 10 cm
Attenuation deadzone[3]: 40 cm
Distance accuracy:
± (10 mm + $5x10^{-5}$ x[fiber length])
Reflectance accuracy[1]: ± 1.5 dB
Loss accuracy[4]: ± 0.1 dB ± 0.02 dB/dB

Hardware

OS: Windows 10 Home 32-bit
Processor: AMD G T40E, 2x 1 GHz
RAM: DDR3, 4 GB
Storage: SSD, 120 GB (more optional)
Display: Touchscreen TFT 10.4”; 800x600
Interfaces: Ethernet RG45; 2x USB Type 2; VGA; 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˚C (-4° to 140° F)
Humidity: 0% to 90% noncondensing

OPTIONS AVAILABLE

-OPM : Optical power meter
Wavelength: 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: ± 0.05 dB (between -45 and 0 dBm)
Absolute power uncertainty: ± 0.2 dB
Resolution: ± 0.01 dB

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

ORDERING INFORMATION

LOR-220

LOR-22X-SMF/W1-MMFTT/W2-CC/CC;
X= # of wavelengths;
TT= fiber type: 62 for 62.5/125
50 for 50/125
W1, W2…: wavelengths with source type (FP or LED) *(DFB upon request)*
CC= connector type: ASC, AFC, SC, FC, ST.

Ordering example:
LOR-222-MMF62/SMF-1310FP/1550FP-FC/AFC
LOR-220 with one MMF62.5/125 channel (FC/PC) with 1310nm FP laser source and one SMF channel (FC/APC) with 1550 nm laser source.

*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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