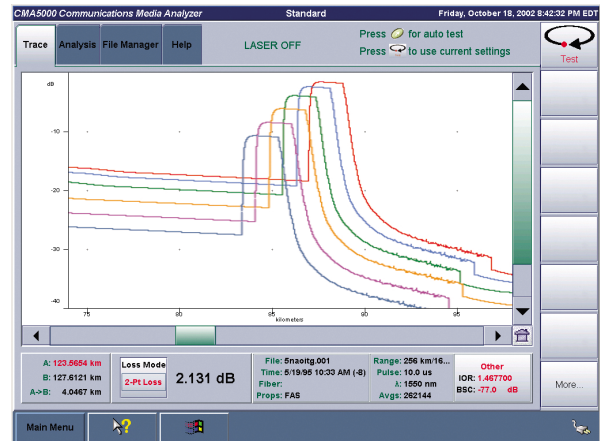


CMA5000a CD-OTDR SPECIFICATIONS

OTDR/Chromatic Dispersion Application



The field portable CMA5000a OTDR/ Chromatic Dispersion (OTDR/CD) measurement system is a dedicated module that combines the advanced capabilities of Anritsu’s OTDR technology with Anritsu’s experience in Chromatic Dispersion. The CMA5000a OTDR/CD measurement system gives installers and network providers a combined module that can be used as an OTDR and a chromatic dispersion measurement system, reducing testing times while increasing network performance. The CMA5000a OTDR/CD measurement system is based upon the industry accepted time-of-flight measurement method (FOTP-168) that can evaluate chromatic dispersion of individual fiber links. Utilizing a single fiber for the test and multiple wavelengths results in an increase in the accuracy of the measurement, as well as a reduction in the testing time. This translates into improved network performance and efficiency, resulting in increased revenue for the network provider.

Chromatic Dispersion Specifications

Anritsu understands how valuable your time is, so we’ve provided intuitive, easy-to-use setup menus and single-button operation. The CMA5000a OTDR/CD measurement system has been designed to provide optimal test efficiency to facilitate quicker turn-up of services and reduce the cost of testing. The combined unit has an auto-test feature that will determine the optimum settings. In addition, intuitive setup menus guide the user through a few minor settings that minimize the testing and setup times. The field portable CMA5000a OTDR/CD is an accurate system available for measuring both Chromatic Dispersion, loss and attenuation on all single-mode fiber types providing installers, carriers and system providers increased revenue through optimized network bandwidth, while improving efficiency and reducing operational expenses through proper CD mitigation and compensation techniques.

Chromatic Dispersion Specifications	
Wavelength Range	1310 nm through 1625 nm
Dynamic Range	37 dB (100 km is the typical range when using all 6 wavelengths)
Dispersion Range	There is no physical limitation on either the negative or positive dispersion that can be measured.
Dispersion Accuracy *1	± 0.7 ps/nm*km or $\pm 4\%$ (greater number)
λ_0 Accuracy	Typically ± 10 nm
Number of Testing Wavelengths	6
Test Time	<4 minutes for 50 km
Number of Fibers Required	One

OTDR Module Specifications	
Fiber Type	Single-mode (Tri-wavelegth)
Center Wavelength	1310 nm ± 20 nm 1550 nm ± 20 nm 1625 nm ± 15 nm
Spectral Width (RMS)	1310 nm: <15 nm 1550 nm: <15 nm 1625 nm: <15 nm
Dynamic Range (typical) *2	1310 nm: 38 dB 1550 nm: 38 dB 1625 nm: 38 dB
Initial Reflective Deadzone (typical) *3	1310 nm: 4 meters 1550 nm: 4 meters 1625 nm: 4 meters
Initial Non-Reflective Deadzone (typical) *4	1310 nm: 9 meters 1550 nm: 8 meters 1625 nm: 9 meters
Linearity	0.04 dB/dB
Pulsewidth *5	5 ns to 20 μ s
Distance Resolution	0.0001 km, 0.1 m, 1 ft, 0.0001 mi
Distance Range Setting	5, 20, 50, 125, 250, 300 km
Loss Resolution	0.001 dB
Distance Sampling (Range Dependent)	0.125, 0.25, 0.5, 1, 2, 4, 8, 16 m
Data Points	Up to 256,000
Distance Accuracy	0.0025% of distance measurement \pm distance resolution \pm index uncertainty
Laser Safety	Meets IEC60825-1 Class I and CDRH Class 1 Requirements (Eye Safe) 21 CFR 1040

*1: C- and L- bands

*2: SNR=1 with up to 256k averages (typical, subtract approximately 2 dB of range to 98% peak noise. Bellcore TR-TSY-000196 Issue 2)

*3: Using Bellcore TR-TSY- 000196 Issue (typical)

*4: Deadzones measured on -45 dB reflections (typical)

*5: Wavelength dependent

Ordering Information

The CMA5302 OTDR based Chromatic Dispersion unit is a single bay module that can be used in either an SBA, MBA or LBA. It features time of flight CD measurements as well as traditional tri-wavelength OTDR testing.

- **Module Number:**

5302 - A -CDOTDR- B

A = Select a Meter and Light Source Options
210 = +20 dBm Meter and Light Source

B = Reflector/Power Meter Connector
UFC = FC/UPC USC = SC/UPC UST = ST/UPC

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