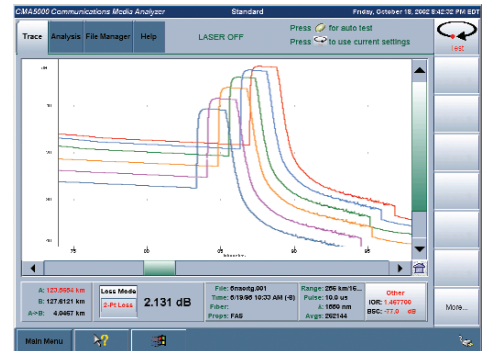


CMA 5000

OTDR/Chromatic Dispersion Application



The OTDR/CD module is an advanced solution for measuring chromatic dispersion and loss in one module.

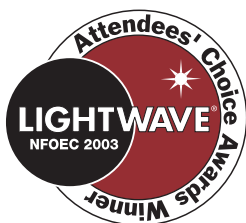
Ideal Solution For Any Test Scenario

As a part of the CMA 5000 platform, the OTDR/CD application is just one other way to accelerate the deployment of services while reducing the cost of measurement. With test and measurement options ranging from connector inspection, polarization mode dispersion and optical spectral analysis to bit error rate, SONET/SDH analysis and Gigabit Ethernet, the CMA 5000 is the ideal single solution for all your testing needs.

The field portable CMA 5000 OTDR/Chromatic Dispersion (OTDR/CD) measurement system is a dedicated module that combines the advanced capabilities of NetTest's OTDR technology with NetTest's experience in Chromatic Dispersion. The CMA 5000 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 CMA 5000 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.

NetTest understands how valuable your time is, so we've provided intuitive, easy-to-use setup menus and single-button operation. The CMA 5000 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 menu guide the user through a few minor settings that minimize the testing and setup times.

The field portable CMA 5000 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.



Notes

- 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

Specifications are subject to change without notice

Please refer to the CMA 5000 Order Guide for valid NetTest module configurations and ordering information at www.nettest.com/products/cma5000/literature.php.

Chromatic Dispersion Specifications

Number of Fibers	One
Fiber End Access	Single
Dispersion Test	1310 through 1625 nm
Test Time	<4 minutes for 50 km
Dynamic Range	28dB (80km 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.
λ_0 Accuracy	Typically ± 10 nm
Dispersion Accuracy¹	± 0.7 ps/nm-km or $\pm 4\%$
Number of Testing Wavelengths	6
Minimum Required End of Line Reflection	4%

OTDR Module Specifications

Fiber Type	Single-mode (Tri-wavelength)
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 Range²	1310 nm: 38 dB 1550 nm: 38 dB 1625 nm: 38 dB
Initial Reflective Deadzone³	1310 nm: 4 meters 1550 nm: 4 meters 1625 nm: 4 meters
Initial Non-Reflective Deadzone⁴	1310 nm: 9 meters 1550 nm: 8 meters 1625 nm: 9 meters
Linearity	0.04 dB/dB
Pulsewidth⁵	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



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NetTest, the pioneer in multi-layer network testing, is a global provider of test and measurement systems, instruments and components for all types of networks and all stages of network development and operation. Our solutions offer leaders in optical, wireless and fixed networking vital insights into network performance, enabling informed business decisions that drive profitability.