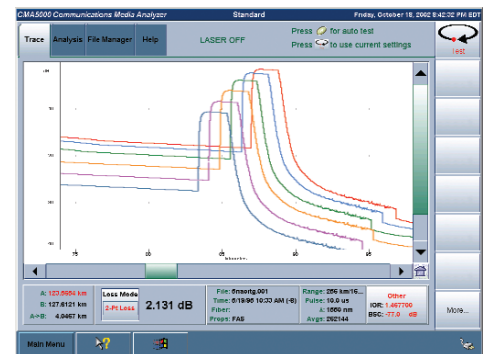


# CMA 5000

## OTDR/Chromatic Dispersion Application



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

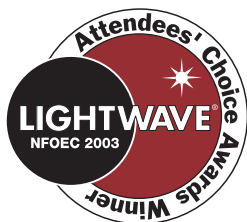
### Ideal Solution For Any Test Scenario

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 menus 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**

- <sup>1</sup> C- and L- bands
- <sup>2</sup> SNR=1 with up to 256k averages (typical, subtract approximately 2 dB of range to 98% peak noise. Bellcore TR-TSY-000196 Issue 2)
- <sup>3</sup> Using Bellcore TR-TSY-000196 Issue (typical)
- <sup>4</sup> Deadzones measured on -45 dB reflections (typical)
- <sup>5</sup> 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](http://www.nettest.com/products/cma5000/literature.php).

Chromatic Dispersion Specifications	
<b>Number of Fibers</b>	One
<b>Fiber End Access</b>	Single
<b>Dispersion Test</b>	1310 through 1625 nm
<b>Test Time</b>	<4 minutes for 50 km
<b>Dynamic Range</b>	28dB (80km is the typical range when using all 6 wavelengths)
<b>Dispersion Range</b>	There is no physical limitation on either the negative or positive dispersion that can be measured.
<b><math>\lambda_0</math> Accuracy</b>	Typically $\pm 10$ nm
<b>Dispersion Accuracy<sup>1</sup></b>	$\pm 0.7$ ps/nm-km or $\pm 4\%$
<b>Number of Testing Wavelengths</b>	6
<b>Minimum Required End of Line Reflection</b>	4%

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