

CMA 5000

Polarization Mode Dispersion Application



With its fast measurement time and superior accuracy, the PMD application will reduce testing time while optimizing the network's bandwidth.



Ideal Solution For Any Test Scenario

As a part of the CMA 5000 platform, the PMD 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 OTDR, connector inspection and chromatic dispersion to optical spectral analysis, bit error rate, SONET/SDH analysis and Gigabit Ethernet, the CMA 5000 is the ideal single solution for all your testing needs.

The CMA 5000 PMD application increases revenue through complete PMD characterization, to optimize high data rate networks. By utilizing the CMA 5000's PMD application to characterize the data rate capability of each fiber and transmitting at each fiber's maximum data rate, the negative effects of PMD may be minimized. As a result, installers, carriers and system providers can release the full potential of high data rate optical networks.

Increased revenue through accurate PMD characterization:

The CMA 5000 PMD application employs a proprietary broadband interferometric technique based on the Michelson interferometer, as recommended by EIA/TIA FOTP-124 and IEC-61941, to quickly and accurately provide all of the necessary PMD parameters. At each measurement, the PMD, the length PMD coefficient and the second order PMD values are automatically computed in order to fully characterize each fiber for maximum data rate operation.

Added value through performance:

The CMA 5000's patented implementation of the Michelson Interferometric method provides

the fastest measurement time in the industry.

This method provides fast and accurate measurements with relative immunity to vibrations on the fiber during the measurement. In addition, it does not require any communication in either direction between the source and the receiver, making it the ideal tool for measuring PMD on installed cables.

Reduced cost of measurement:

The power of the PMD application is easily accessed through an inherent, easy-to-use touch screen interface. Through an innovative parameter setup scheme, technician training is minimized and productivity is enhanced. In addition, data can be saved in a variety of formats allowing the unit to remain in the field collecting data (where it belongs), while test results are reviewed and analyzed in the office on a desktop PC. A cable may contain more than one hundred fibers so each second spent in measurement counts. Due to the CMA 5000 PMD application's unique, patented design, you have the fastest instrument on the market: taking less than 8 seconds for a single measurement.



Polarization Mode Dispersion Specifications

Operating Wavelengths	1310 nm and 1550 nm
Minimum Measurable PMD	0.06 ps
Random PMD Measurement Range¹	40 ps
Deterministics Measurement Range²	80 ps
Standard Dynamic Range³	40 dB
Optional Dynamic Range⁴	65 dB
Accuracy	1% ±0.06 ps (for weakly coupled fiber)
Repeatability	1% ±0.06 ps (for strongly coupled fiber)
Measurement Time for 35 ps Scanning Range	8 seconds
Measurement Time for 80 ps Scanning Range	15 seconds

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

Notes

- ¹ Typical telecommunication fibers
- ² Polarization maintaining fiber or artifact measurements
- ³ For 1 ps PMD
- ⁴ With Fiberwhite-IN-P source, the minimum PMD with this source is 0.3 ps



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