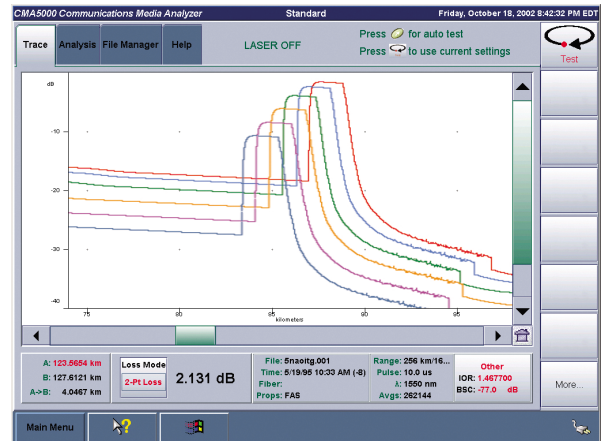


# CMA5000a CD-OTDR SPECIFICATIONS

## 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	$\pm 0.7$ ps/nm*km or $\pm 4\%$ (greater number)
$\lambda_0$ Accuracy	Typically $\pm 10$ 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 $\pm 20$ nm 1550 nm $\pm 20$ nm 1625 nm $\pm 15$ 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 $\mu$ 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



## **Anritsu Corporation**

5-1-1 Onna, Atsugi-shi, Kanagawa, 243-8555 Japan  
Phone: +81-46-223-1111  
Fax: +81-46-296-1238

## • U.S.A.

### **Anritsu Company**

1155 East Collins Blvd., Suite 100, Richardson,  
TX 75081, U.S.A.  
Toll Free: 1-800-267-4878  
Phone: +1-972-644-1777  
Fax: +1-972-671-1877

## • Canada

### **Anritsu Electronics Ltd.**

700 Silver Seven Road, Suite 120, Kanata,  
Ontario K2V 1C3, Canada  
Phone: +1-613-591-2003  
Fax: +1-613-591-1006

## • Brazil

### **Anritsu Eletrônica Ltda.**

Praca Amadeu Amaral, 27 - 1 Andar  
01327-010-Paraiso-São Paulo-Brazil  
Phone: +55-11-3283-2511  
Fax: +55-11-3288-6940

## • Mexico

### **Anritsu Company, S.A. de C.V.**

Av. Ejército Nacional No. 579 Piso 9, Col. Granada  
11520 México, D.F., México  
Phone: +52-55-1101-2370  
Fax: +52-55-5254-3147

## • U.K.

### **Anritsu EMEA Ltd.**

200 Capability Green, Luton, Bedfordshire, LU1 3LU, U.K.  
Phone: +44-1582-433200  
Fax: +44-1582-731303

## • France

### **Anritsu S.A.**

16/18 avenue du Québec-SILIC 720  
91961 COURTABOEUF CEDEX, France  
Phone: +33-1-60-92-15-50  
Fax: +33-1-64-46-10-65

## • Germany

### **Anritsu GmbH**

Nemetschek Haus, Konrad-Zuse-Platz 1  
81829 München, Germany  
Phone: +49-89-442308-0  
Fax: +49-89-442308-55

## • Italy

### **Anritsu S.p.A.**

Via Elio Vittorini 129, 00144 Roma, Italy  
Phone: +39-6-509-9711  
Fax: +39-6-502-2425

## • Sweden

### **Anritsu AB**

Borgafjordsgatan 13, 164 40 KISTA, Sweden  
Phone: +46-8-534-707-00  
Fax: +46-8-534-707-30

## • Finland

### **Anritsu AB**

Teknobulevardi 3-5, FI-01530 VANTAA, Finland  
Phone: +358-20-741-8100  
Fax: +358-20-741-8111

## • Denmark

### **Anritsu A/S**

Kirkebjerg Allé 90, DK-2605 Brøndby, Denmark  
Phone: +45-72112200  
Fax: +45-72112210

## • Russia

### **Anritsu EMEA Ltd.**

#### **Representation Office in Russia**

Tverskaya str. 16/2, bld. 1, 7th floor.  
Russia, 125009, Moscow  
Phone: +7-495-363-1694  
Fax: +7-495-935-8962

## • United Arab Emirates

### **Anritsu EMEA Ltd.**

#### **Dubai Liaison Office**

P O Box 500413 - Dubai Internet City  
Al Thuraya Building, Tower 1, Suit 701, 7th Floor  
Dubai, United Arab Emirates  
Phone: +971-4-3670352  
Fax: +971-4-3688460

## • Singapore

### **Anritsu Pte. Ltd.**

60 Alexandra Terrace, #02-08, The Comtech (Lobby A)  
Singapore 118502  
Phone: +65-6282-2400  
Fax: +65-6282-2533

## • India

### **Anritsu Pte. Ltd.**

#### **India Branch Office**

3rd Floor, Shri Lakshminarayan Niwas, #2726, 80 ft Road,  
HAL 3rd Stage, Bangalore - 560 075, India  
Phone: +91-80-4058-1300  
Fax: +91-80-4058-1301

## • P.R. China (Hong Kong)

### **Anritsu Company Ltd.**

Units 4 & 5, 28th Floor, Greenfield Tower, Concordia Plaza,  
No. 1 Science Museum Road, Tsim Sha Tsui East,  
Kowloon, Hong Kong  
Phone: +852-2301-4980  
Fax: +852-2301-3545

## • P.R. China (Beijing)

### **Anritsu Company Ltd.**

#### **Beijing Representative Office**

Room 2008, Beijing Fortune Building,  
No. 5, Dong-San-Huan Bei Road,  
Chao-Yang District, Beijing 100004, P.R. China  
Phone: +86-10-6590-9230  
Fax: +86-10-6590-9235

## • Korea

### **Anritsu Corporation, Ltd.**

8F Hyunjuk Building, 832-41, Yeoksam Dong,  
Kangnam-ku, Seoul, 135-080, Korea  
Phone: +82-2-553-6603  
Fax: +82-2-553-6604

## • Australia

### **Anritsu Pty. Ltd.**

Unit 21/270 Ferntree Gully Road, Notting Hill,  
Victoria 3168, Australia  
Phone: +61-3-9558-8177  
Fax: +61-3-9558-8255

## • Taiwan

### **Anritsu Company Inc.**

7F, No. 316, Sec. 1, Neihu Rd., Taipei 114, Taiwan  
Phone: +886-2-8751-1816  
Fax: +886-2-8751-1817

Please Contact: