

**Anritsu** Advancing beyond

# CMA5 Series

## Optical Loss Tester/Light Source/Optical Power Meter



# Optical Loss Tester/Light Source/Optical Power Meter CMA5 Series

## Compact Lightweight Model for Optical Fiber I&M

The CMA5 series (Optical Loss Tester/Light Source/Optical Power Meter) measures optical loss and power for optical fiber I&M.

The CMA5 series are compact and lightweight, its excellent cost performance and simple operation with the required minimum number of functions make it ideal for onsite I&M. Service engineers can choose from three models — optical loss tester, optical source, and optical power meter — to match the onsite application.

### Optical Loss Tester

- All-in-one light source and optical power meter supporting SM (1310 nm/1550 nm) and MM (850 nm/1300 nm) fiber
- Compact and lightweight (300 g)
- Measures +23 dBm max. optical power\*1
- 20 hours of battery (dry cell) operation\*2
- Useful fiber identification modulation function (270 Hz, 1 kHz, 2 kHz and CW)

\*1: SM type (CATV model) only

\*2: With 9-V alkaline batteries using optical source and optical power meter

Optical Loss Tester*	
SM Model	1310 nm/1550 nm (Power Meter: Standard)
	1310 nm/1550 nm (Power Meter: CATV)
MM Model	850 nm/1300 nm

\*: One 9 V alkaline battery as standard. No AC adapter.



\*: Photographs about same size as actual instruments.

# Optical Loss Tester/Light Source/Optical Power Meter CMA5 Series

## Optical Loss Tester

### Specifications

Model	5LT35	5LT35C	5LT83
<b>Light Source Port</b>			
Supported Optical Fiber	10 μm/125 μm SM fiber, PC-polished		62.5 μm/125 μm MM fiber, PC-polished
Emitter Type	LD		
Wavelength	1310 nm/1550 nm ±20 nm		850 nm/1300 nm ±20 nm
Output Power	≥-7 dBm		≥-7 dBm*1
Source Line Width (FWHM)	≤5 nm		
Modulation Output	CW, 270 Hz, 1 kHz, 2 kHz (±2%)		
Stability	±0.05 dB/15 minutes		
	±0.10 dB/8 hours (1310 nm/1550 nm), ±0.15 dB/8 hours (850 nm/1300 nm)		
Connector Type	FC/PC, SC/PC, ST/PC (user replaceable)		
<b>Optical Power Meter Port</b>			
Supported Optical Fiber	SM (10 μm/125 μm)/MM (50 μm/125 μm, 62.5 μm/125 μm)		
Detector Type	InGaAs		
Calibrated Wavelength	850, 1300, 1310, 1490, 1550, 1625 nm		
Measurement Range*2	-60 to +5 dBm		-60 to +5 dBm
	-50 to +10 dBm (850 nm)		-5 to +10 dBm (850 nm)
Accuracy*2	±0.2 dB @ -10 dBm (±0.5 dB @ 850 nm)		
Linearity*2	±0.2 dB		±0.5 dB
Display Resolution	0.01 dB		
Auto-Zero Setting	Supported		
Warm-up Time	60 s		
Connector Type	FC, SC, ST (user replaceable)		
<b>General Specifications</b>			
Input Power	9 V Alkaline battery, or optional AC adapter (input: 100 V to 240 V, 50 Hz to 60 Hz, output: 7.5 V)		
Battery Operation	40 hours min. (Optical Power Meter), 20 hours min. (Optical Power Meter & Light Source)		
Auto Off Function	5 minutes		
Others	Reference setting function, Loop loss testing function		
Operating Temperature Range	-10°C to +50°C		
Storage Temperature Range	-25°C to +60°C		
Relative Humidity	0 to 95% (no condensation)		
Dimensions	75 (W) × 145 (H) × 25 (D) mm (2.9 × 5.7 × 1 inch) (Excluding Rubber Protective Cover)		
Mass	300 g (0.66 lbs) or less (Excluding Rubber Protective Cover and 9 V Alkaline Battery)		
Warranty	3 years		
Laser Safety*3	IEC 60825-1: 2007 CLASS1, 21CFR 1040.10 Excludes deviations caused by conformance to Laser Notice No. 50 dated June 24, 2007		
CE	EMC	2014/30/EU, EN61326-1, EN61000-3-2	
	LVD	2014/35/EU, EN61010-1	
	RoHS	2011/65/EU, (EU) 2015/863, EN IEC 63000: 2018	
UKCA	EMC	S.I. 2016 No.1091, EN 61326-1, EN61000-3-2	
	LVD	S.I. 2016 No.1101, EN 61010-1	
	RoHS	S.I. 2012 No.3032, EN IEC 63000: 2018	

Specifications assured at 25°C (±3°C)

\*1: If a 50 μm/125 μm MM fiber is connected to the optical output port, the rated output power (≥-7 dBm) can not be obtained due to differences in core diameter, NA, and fiber excitation condition. The optical output power can drop by about 2 to 10 dB from the rated output power.

\*2: When GI fiber (62.5 μm/125 μm) is connected to optical power meter port.

\*3: Safety measures for laser products

This product complies with optical safety standards in 21CFR1040.10 and IEC60825-1; the following descriptive labels are affixed to the product.



THIS PRODUCT COMPLIES WITH 21 CFR 1040.10 AND 1040.11 EXCEPT FOR DEVIATIONS PURSUANT TO LASER NOTICE NO. 50, DATED JUNE 24, 2007

### Ordering Information

Please specify the model/order number, name and quantity when ordering.

The names listed in the chart below are Order Names. The actual name of the item may differ from the Order Name.

Model/Order No.	Description
	<b>Main frame</b>
5LT35-YY*	Optical Loss Tester 1310 nm/1550 nm (Standard Power Meter)
5LT35C-YY*	Optical Loss Tester 1310 nm/1550 nm (CATV Power Meter)
5LT83-YY*	Optical Loss Tester 850 nm/1300 nm (Standard Power Meter)
	<b>Standard accessories</b>
	CMA5 Optical Loss Tester Operation Manual: 1 pc
	Rubber Protective Cover: 1 pc
	9 V Alkaline Battery: 1 pc

\*: Specify one connector adapter at YY (FU = FC/PC, SU = SC/PC, TU = ST/PC).

The specified connector adapter is fitted at each optical source and power meter connector.

Model/Order No.	Description
	<b>Accessories</b>
GN-3HH-CASE	Hard Case (for two CMA5 series)
CMA5-POUCH-A	Carrying Pouch/Shoulder Strap
CMA5-BAT	9 V Alkaline Battery
Z1525A	AC Adapter (CMA5)
CMA5-AD-LS-FC	FC Connector Adapter (Light Source Port)
CMA5-AD-LS-SC	SC Connector Adapter (Light Source Port)
CMA5-AD-LS-ST	ST Connector Adapter (Light Source Port)
CMA5-AD-LS-ALL3	Connector Adapter (FC, SC and ST)
CMA5-AD-PM-FC	FC Connector Adapter (Power Meter Port)
CMA5-AD-PM-SC	SC Connector Adapter (Power Meter Port)
CMA5-AD-PM-ST	ST Connector Adapter (Power Meter Port)
CMA5-AD-PM-ALL3	Connector Adapter (FC, SC and ST)
J1530A	SC Plug-in Converter (UPC(P)-APC(J))
J1532A	FC Plug-in Converter (UPC(P)-APC(J))
J1534A	LC-SC Plug-in Converter (for SM, SC(P)-LC(J))
J1535A	LC-SC Plug-in Converter (for MM, SC(P)-LC(J))
	*62.5 μm/125 μm type

# Optical Loss Tester/Light Source/Optical Power Meter CMA5 Series

## Light Source

- Supports MM model (850 nm/1300 nm), SM model (1310 nm/1550 nm)
- Lightweight at only 250 g
- 16 hours of continuous running with 9 V alkaline battery
- Light source for fiber identification (270 Hz, 1 kHz, 2 kHz and CW)

Light Source*	
SM Model	1310 nm/1550 nm
MM Model	850 nm/1300 nm

\*: One 9 V alkaline battery as standard. No AC adapter.

## Specifications

Model/Order No.	5L83	5L35
Emitter Type	LD	
Wavelength	850/1300 ±20 nm	1310/1550 ±20 nm
Output Power*1	-7 dBm*2 (62.5 μm/ 125 μm MM fiber)	-7 dBm (SM fiber)
Source Line Width (FWHM)	<5 nm	
Modulation Output	CW, 270 Hz, 1 kHz, 2 kHz	
Stability (8 hours)	±0.1 dB (25°C)	
Connector Type	FC, ST, SC (User replaceable)	
Battery Operation Time	16 h (9 V alkaline battery)	
Input Power	9 V (9 V alkaline battery)	
AC Adapter (Option)	Input: 100 V to 240 V, 50 Hz to 60 Hz, Output: 7.5 V	
Operating Temperature Range	-10°C to +50°C	
Storage Temperature Range	-25°C to +60°C	
Relative Humidity	0 to 95% (no condensation)	
Dimensions	75 (W) × 145 (H) × 25 (D) mm (excl. rubber cover)	
Mass	250 g	
Warranty	3 years	
Laser Safety*3	IEC 60825-1: 2007 CLASS 1 21CFR 1040.10 Excludes deviations caused by conformance to Laser Notice No. 50 dated June 24, 2007	
CE	EMC	2014/30/EU, EN61326-1, EN61000-3-2
	LVD	2014/35/EU, EN61010-1
	RoHS	2011/65/EU, (EU) 2015/863, EN IEC 63000: 2018
UKCA	EMC	S.I. 2016 No.1091, EN 61326-1, EN61000-3-2
	LVD	S.I. 2016 No.1101, EN 61010-1
	RoHS	S.I. 2012 No.3032, EN IEC 63000: 2018

\*1: Typical (25°C)

\*2: If a 50 μm/125 μm MM fiber is connected to the optical output port, the rated output power (≥-7 dBm) can not be obtained due to differences in core diameter, NA, and fiber excitation condition. The optical output power can drop by about 2 to 10 dB from the rated output power.

\*3: Safety measures for laser products

This product complies with optical safety standards in 21CFR1040.10 and IEC 60825-1; the following descriptive labels are affixed to the product.



THIS PRODUCT COMPLIES WITH 21 CFR 1040. 10 AND 1040. 11 EXCEPT FOR DEVIATIONS PURSUANT TO LASER NOTICE NO. 50, DATED JUNE 24, 2007

## Ordering Information

Please specify the model/order number, name and quantity when ordering.

The names listed in the chart below are Order Names.

The actual name of the item may differ from the Order Name.

Model/Order No.	Description
5L35-YY*	<b>Main frame</b> Light Source: 1310 nm/1550 nm (Dual wavelength for SM fiber)
5L83-YY*	Light Source: 850 nm/1300 nm (Four wavelength for MM fiber)
	<b>Standard accessories</b>
	CMA5 Operation Manual: 1 pc
	Rubber Protective Cover: 1 pc
	9 V Alkaline Battery: 1 pc
	<b>Accessories</b>
GN-3HH-CASE	Hard Case (for two CMA5 series)
CMA5-POUCH-A	Carrying Pouch/Shoulder Strap
CMA5-BAT	9 V Alkaline Battery
Z1525A	AC Adapter (CMA5)
CMA5-AD-LS-FC	FC Connector Adapter
CMA5-AD-LS-SC	SC Connector Adapter
CMA5-AD-LS-ST	ST Connector Adapter
CMA5-AD-LS-ALL3	Connector Adapter (FC, SC and ST)

\*: Specify one connector adapter for YY.

FU = FC/PC, SU = SC/PC, TU=ST/PC, FA = FC/APC, SA = SC/APC  
(FA = FC/APC and SA = SC/APC cannot be selected for 5L83-YY.)



\*: Photographs about same size as actual instruments.



# Optical Loss Tester/Light Source/Optical Power Meter CMA5 Series

## Optical Power Meter

- Lightweight at only 250 g
- 40 hours of continuous running with 9 V alkaline battery
- Measures up to +23 dBm optical power\*1

\*1: CATV model

### Specifications

Model/Order No.	5P100	5P100C
Connector Type	FC, SC, ST (User replaceable)	
Fiber Type	MM, SM	
Detector Type	InGaAs-PD	
Calibrated Wavelength	850/1300/1310/1490/1550/1625 nm	
Measurement Range	-60 to +10 dBm -50 to +10 dBm (850 nm)	-50 to +23 dBm
Accuracy*1	±0.2 dB, ±0.5 dB (850 nm)	
Linearity*2	±0.2 dB @ 1310/1550 nm (-60 to +5 dBm) ±0.5 dB @ 850 nm (-50 to +5 dBm)	±0.2 dB @ 1310/1550 nm (-40 to +23 dBm) ±0.5 dB @ 850 nm (-40 to +23 dBm)
Display Resolution	0.01 dB	
Modulation Detection	2 kHz modulation	
Display	4-digit, 7-segment display LCD	
Others	Reference setting function, battery level display, automatic power OFF	
Battery Operation Time	40 hours min. (9 V alkaline battery)	
Input Power	9 V (one alkaline battery)	
AC Adapter (Option)	Input: 100 V to 240 V, 50 Hz to 60 Hz, Output: 7.5 V	
Operating Temperature Range	-10°C to +50°C	
Storage Temperature Range	-25°C to +60°C	
Relative Humidity	0 to 95% (no condensation)	
Dimensions	75 (W) × 145 (H) × 25 (D) mm (excl. rubber cover)	
Mass	250 g	
Warranty	3 years	
CE	EMC	2014/30/EU, EN61326-1, EN61000-3-2
	LVD	2014/35/EU, EN61010-1
	RoHS	2011/65/EU, (EU) 2015/863, EN IEC 63000: 2018
UKCA	EMC	S.I. 2016 No.1091, EN 61326-1, EN61000-3-2
	LVD	S.I. 2016 No.1101, EN 61010-1
	RoHS	S.I. 2012 No.3032, EN IEC 63000: 2018

\*1: -10 dBm, 25°C (typ.)

\*2: 25°C

### Ordering Information

Please specify the model/order number, name and quantity when ordering. The names listed in the chart below are Order Names. The actual name of the item may differ from the Order Name.

Model/Order No.	Description
5P100-YY*	<b>Main frame</b> Optical Power Meter (Standard): -60 to +10 dBm
5P100C-YY*	Optical Power Meter (CATV): -50 to +23 dBm
	<b>Standard accessories</b>
	CMA5 Operation Manual: 1 pc
	Rubber Protective Cover: 1 pc
	9 V Alkaline Battery: 1 pc
	<b>Accessories</b>
GN-3HH-CASE	Hard Case (for two CMA5 series)
CMA5-POUCH-A	Carrying Pouch/Shoulder Strap
CMA5-BAT	9 V Alkaline Battery
Z1525A	AC Adapter (CMA5)
CMA5-AD-PM-FC	FC Connector Adapter
CMA5-AD-PM-SC	SC Connector Adapter
CMA5-AD-PM-ST	ST Connector Adapter
CMA5-AD-PM-ALL3	Connector Adapter (FC, SC and ST)

\*: Specify one of FC, SC or ST connector adaptor for YY.

Optical Power Meter*	
(Calibrated for 850, 1300, 1310, 1490, 1550, and 1625 nm)	
Standard Model	-60 to +10 dBm
CATV Model	-50 to +23 dBm

\*: One 9 V alkaline battery as standard. No AC adapter.



\*: Photographs about same size as actual instruments.

## Related Product

### MT9090A Series



#### $\mu$ OTDR Module

Compact OTDR for full automatic verification of optical networks, FTTH-PON, Metro and Core.

#### MU909014/15

#### Gigabit Ethernet Module

Dedicated field test solution for installation and troubleshooting Ethernet links in access networks.

#### MU909060A



MU909014/15



MU909060A

### ACCESS Master MT9085 Series

#### For WAN/MFH/DCI/FTTH Optical Fiber I&M

- Improved operability with powerful synergy of 8-inch touchscreen and hardware keys
- At-a-glance Pass/Fail evaluation using Fiber Visualizer
- All OTDR, OLTS, and Visible Light Source operations on one screen
- Short event dead zone of  $\leq 0.8$  m and high dynamic range of 46 dB max.
- Power meter option for measuring optical power up to +30 dBm





## • United States

### **Anritsu Americas Sales Company**

450 Century Parkway, Suite 190, Allen, TX 75013 U.S.A.  
Phone: +1-800-Anritsu (1-800-267-4878)

## • 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 Eletronica Ltda.**

Praça Amadeu Amaral, 27 - 1 Andar  
Blvd Miguel de Cervantes Saavedra #169 Piso 1, Col. Granada  
Mexico, Ciudad de Mexico, 11520, MEXICO  
Phone: +55-11-3283-2511  
Fax: +55-11-3288-6940

## • Mexico

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

Blvd Miguel de Cervantes Saavedra #169 Piso 1, Col. Granada  
Mexico, Ciudad de Mexico, 11520, MEXICO  
Phone: +52-55-4169-7104

## • United Kingdom

### **Anritsu EMEA Ltd.**

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

## • France

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

12 avenue du Québec, Immeuble Goyave,  
91140 VILLEBON SUR YVETTE, France  
Phone: +33-1-60-92-15-50

## • 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.r.l.**

Spaces Eur Arte, Viale dell'Arte 25, 00144 Roma, Italy  
Phone: +39-6-509-9711

## • Sweden

### **Anritsu AB**

Kistagången 20 B, 2 tr, 164 40 Kista, Sweden  
Phone: +46-8-534-707-00

## • Finland

### **Anritsu AB**

Technopolis Aviapolis, Teknobulevardi 3-5 (D208.5),  
FI-01530 Vantaa, Finland  
Phone: +358-20-741-8100

## • Denmark

### **Anritsu A/S**

c/o Regus Winghouse, Ørestads Boulevard 73, 4th floor,  
2300 Copenhagen S, Denmark  
Phone: +45-7211-2200

## • Russia

### **Anritsu EMEA Ltd.**

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

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

## • Spain

### **Anritsu EMEA Ltd.**

#### **Representation Office in Spain**

Paseo de la Castellana, 141. Planta 5, Edificio Cuzco IV  
28046, Madrid, Spain  
Phone: +34-91-572-6761

## • Austria

### **Anritsu EMEA GmbH**

Am Belvedere 10, A-1100 Vienna, Austria  
Phone: +43-(0)1-717-28-710

## • United Arab Emirates

### **Anritsu EMEA Ltd.**

#### **Anritsu A/S**

Office No. 164, Building 17, Dubai Internet City  
P. O. Box - 501901, Dubai, United Arab Emirates  
Phone: +971-4-3758479

## • India

### **Anritsu India Private Limited**

6th Floor, Indiqube ETA, No.38/4, Adjacent to EMC2,  
Doddanekundi, Outer Ring Road, Bengaluru - 560048, India  
Phone: +91-80-6728-1300  
Fax: +91-80-6728-1301

## • Singapore

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

11 Chang Charn Road, #04-01, Shriro House, Singapore 159640  
Phone: +65-6282-2400  
Fax: +65-6282-2533

## • Vietnam

### **Anritsu Company Limited**

16th Floor, Peakview Tower, 36 Hoang Cau Street, O Cho Dua Ward,  
Dong Da District, Hanoi, Vietnam  
Phone: +84-24-3201-2730

## • P.R. China (Shanghai)

### **Anritsu (China) Co., Ltd.**

Room 2701-2705, Tower A, New Caohejing International  
Business Center No. 391 Gui Ping Road Shanghai, 200233, P.R. China  
Phone: +86-21-6237-0898  
Fax: +86-21-6237-0899

## • P.R. China (Hong Kong)

### **Anritsu Company Ltd.**

Unit 1006-7, 10/F., Greenfield Tower, Concordia Plaza,  
No. 1 Science Museum Road, Tsim Sha Tsui East,  
Kowloon, Hong Kong, P.R. China  
Phone: +852-2301-4980  
Fax: +852-2301-3545

## • Japan

### **Anritsu Corporation**

8-5, Tamura-cho, Atsugi-shi, Kanagawa, 243-0016 Japan  
Phone: +81-46-296-6509  
Fax: +81-46-225-8352

## • Korea

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

5FL, 235 Pangyojeok-ro, Bundang-gu, Seongnam-si,  
Gyeonggi-do, 13494 Korea  
Phone: +82-31-696-7750  
Fax: +82-31-696-7751

## • Australia

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

Unit 20, 21-35 Ricketts Road, Mount Waverley, Victoria 3149, 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