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# CMA5 Series

Optical Loss Tester/Light Source/Optical Power Meter



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

## 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.

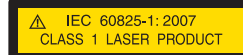
## Specifications

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 -50 to +10 dBm (850 nm)		-60 to +5 dBm -5 to +10 dBm (850 nm)
	-40 to +23 dBm		
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° to +50°C		
Storage Temperature Range	-25° 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		
EMC	EN61326-1, EN61000-3-2		

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
5LT35-YY*	<b>Main frame</b> 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
	<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

\*: 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.

## ■ 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° to +50°C	
Storage Temperature Range	-25° 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	
EMC	EN61326-1, EN61000-3-2	

\*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
	<b>Main frame</b>
5L35-YY*	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 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

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.

## ■ 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° to +50°C	
Storage Temperature Range	-25° 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	
EMC	EN61326-1, EN61000-3-2	

\*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.



\*: Photographs about same size as actual instruments.

# Related Product

## MT9090 Series Network Master

### MU909014x/15x $\mu$ OTDR

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

### MU909011A Fault Locator Module

Compact fault locator instrument for an easy and accurate verification of drop cable installation.

### MU909020A OCA Module

Compact CWDM channel analyzer to verify power levels, drift and channel presence of CWDM networks.

### MU909060A GigE Module

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



MU909014x/15x



MU909011A



MU909020A



MU909060A

## MT9083 Series

### ACCESS Master Mini-OTDR

All-in-one test tool for fiber construction and maintenance.



## CMA 3000

### All-in-one Field Tester

Test of many interfaces including Ethernet



## CMA5000a Multi-Layer Network Test Platform

A wide selection of test modules including Gigabit Ethernet and 10 Gbps Ethernet.



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