CMA50

SPECIFICATIONS

Loss Test Sets, Light Sources, Power Meters

KEY FEATURES

- One button automated multi-wavelength bi-directional measurement option
- Calibrated CWDM wavelengths
- Interchangeable connectors for easy testing of assorted connector styles
- Wizard driven for simplified set- ups and use
- Selectable modes to meet any testing requirement
- Ethernet testing option
- Rugged, lightweight, cost-effective to own and use

Fast, accurate, and easy-to-use, Anritsu's CMA50 Family helps assure your loss budgets are met without burdening your operating budget. Available as light sources, power meters, and the dual purpose loss test set, the entire family is designed for simplicity, efficiency, and reliability. Based on real-life field experiences, and backed by Anritsu's standard three year warranty, the CMA50 will provide years of use in a variety of applications including FTTx networks, campus LANs, long-haul telephony, and CATV distribution.

The CMA50 Family makes your measuring experience simple and error free, and include pass or fail threshold analysis, large capacity for test results storage, and an Ethernet network testing option. In addition, when equipped with the EZ-Test option, CMA50 Loss Test Sets will automatically perform bi-directional end-to-end loss measurements at each selected wavelength, process the results, and present them on both units in just a few seconds.

Delivering the right performance, features and options, the CMA50 is the ideal tool for installation, test, and maintenance of fiber networks without the increased cost of extra features that don't provide extra benefits. Designed with your needs in mind, this lightweight, rugged family is built for the most demanding cable installation environments and will provide years of valuable service.

Key Benefits

- Allows testing of end-to-end PON links with a single operator.
- Up to 4 high power sources per unit out of a single port.
- EZTest one button auto bi-directional measurement option.
- Pass or fail indicators for in-field compliance.
- Rugged design provides years of use in the most challenging environments.
- Stores up to 100,000 data sets (4 MB of user data).
- Visual Fault Locator source option.
- LAN Access and network testing option via RJ45 port.
- File Transfer via USB port.
- Three year standard warranty.

Anritsu

General Family Specifications

Power	4 x AA Alkaline Batteries or Rechargeable NiMH battery pack, 110/220Vac Adapter
Battery Life	20 hours, typical
Auto Shut-Off	Programmable (1 to 99 minutes) or disabled
Connector Ports - Sources	Universal Latching connector with choice of adapter
Connector Ports - Meters	Universal Screw-type connector with choice of adapter
Dimensions	210 x 110 x 41 mm (8.3 x 4.3 x 1.6 in)
Weight	<550gm (<1.25lbs) including batteries
Operating Temperature	-10°C to +50°C (+14°F to 122°F)
Storage Temperature	-25°C to +60°C (-13°F to 140°F)
Warranty	3 years

Light Sources

Multimode

Center Wavelength[1]	**850nm**	**1300nm**
Wavelength Accuracy	+/- 20nm	+30/-20nm
Emitter Type	LED	LED
Output Power (62.5/125 µm fiber)	-20dBm	-20dBm
Source Linewidth (FWHM)	<50nm	<200nm
Stability (1 hour)[2]	+/-0.1dB	+/-0.1dB
Output Modes	CW (Continuous Wave), 270Hz, 1KHz, 2KHz Modulation	

Singlemode

Center Wavelength[1]	**1310nm**	**1490nm**	**1550nm**	**1625nm**
Wavelength Accuracy	+/- 20nm	+/- 20nm	+/- 20nm	+/- 20nm
Emitter Type	Laser Diode	Laser Diode	Laser Diode	Laser Diode
Output Power (G.652 fiber)	-7dBm	-7dBm	-7dBm	-7dBm
Source Linewidth (FWHM)	<5nm	<5nm	<5nm	<5nm
Stability (1 hour)[2]	+/- 0.05dB	+/- 0.05dB	+/- 0.05dB	+/- 0.05dB
Output Modes	CW (Continuous Wave), 270Hz, 1KHz, 2KHz Modulation			

Visual Fault Locator (Option V)

Center Wavelength[1]	**650nm +/- 20nm**
Emitter Type	Laser Diode
Output Power	1mW (0dBm) Max, 0.8mW (-1.0dBm) Typ
Output Modes	CW (Continuous Wave), 2Hz Modulation

Power Meters

Model	**Standard**	**CATV (Option C)**
Wavelengths of Operation	850nm, 1300nm, 1310nm, 1490nm, 1550nm, 1625nm plus CWDM wavelengths from 1270nm to 1610nm in 20nm increments	
Detector Type	InGaAs	
Measurement Range	-75dBm to +10dBm	-50dBm to +27dBm
Measurement Accuracy[3,4,7]	+/-0.2dB with Pin = -65dBm to +5dBm	+/-0.2dB with Pin = -37dBm to +27dBm
Linearity[5]	+/-0.1dB	+/-0.1dB
Maximum Input Power[6,7]	+10dBm	+27dBm
Modulation Detection[8]	270Hz, 1KHz, and 2KHz	
Wavelength Detection	Automatic recognition of calibrated wavelengths (when used in conjunction with a CMA50 light source)	
Display Resolution	0.01 (mW, µW, nW, dBr, dBm)	

Auto Bi-Direction Test Mode (Option B)

Wavelengths	**All Equipped Singlemode Wavelengths**
Link Loss Range[1]	50dB (approximately 200km at 1550nm)
Link Loss Accuracy[1]	+/-0.25dB excluding connector pair uncertainty
Testing Time	2.5 seconds per wavelength

Optical Return Loss (ORL) Measurements (Option O)	
Wavelengths	All Equipped Singlemode Wavelengths
ORL Range[1]	0 to 55dB
ORL Accuracy[1]	+/-0.75dB with P_{in} = 0dB to +50dB Derates above P_{in} =+50dB to +/-1.5dB at +55dB
ORL Stability[1]	+/-0.5dB at 20dB +/- 0.5dB

Options	
V Option Visual Fault Locator	Visible light source at 650 nm allowing to visually detect a fiber fault up to 5 km.
N Option Network Test	LAN access and network level continuity and frame time delay through TCP/IP protocol over its built-in 10/100 Mbps Network Interface Card.
B Option EZTest	Avalable on Loss Test Set configurations, provides one button multiple wavelength automatic bi-directional measurement. When readings are taken between two EZ Test equipped units, this feature automatically takes loss measurements at all wavelengths in each direction, and presents the combined results on both units.
O Option ORL	Optical Return Loss (ORL) option allows the measurement of optical return loss readings required for high speed transmission systems.

Notes:

[1] Typical at +23°C.

[2] After 10 minute warm-up period.

[3] At time of calibration. Calibration conditions: 1310nm, -10dBm, +23°C.

[4] Accuracy derates below 1000nm. At 850nm, Measurement Accuracy is +/-0.35dBm with P_{in}= -60dBm to +5dBm (or P_{in} = -32dBm to +27dBm for CATV Option C units).

[5] At +23°C, from -65dBm to +2dBm (or -37dBm to +23dBm for CATV Option C units).

[6] Do not exceed maximum input power.

[7] If the power meter is routinely used to measure optical signals in excess of 0dBm (+20dBm for Option C), more frequent calibration is recommended to insure measurement accuracy.

[8] $P_{in} \geq$ -50dBm

Available Configurations							
	Multimode Sources		Singlemode Sources				Power Meter
Model Number	850nm	1300nm	1310nm	1490nm	1550nm	1625nm	
CMA50 Light Sources							
50LS35			X		X		no
50LS83	X	X					no
50LS345			X	X	X		no
50LS356			X		X	X	no
50LS3456			X	X	X	X	no
50LS8335	X	X	X		X		no
CMA50 Loss Test Sets (Include Light Source and Power Meter)							
50LTS35			X		X		yes[a]
50LTS83	X	X					yes[a]
50LTS345			X	X	X		yes[a]
50LTS356			X		X	X	yes[a]
50LTS3456			X	X	X	X	yes[a]
50LTS8335	X	X	X		X		yes[a]
CMA50 Power Meters							
50PMS	no	no	no	no	no	no	Standard
50PMC	no	no	no	no	no	no	CATV

[a] CMA50 Loss Test Sets can be ordered with Standard or CATV (Option C) Power Meter

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