Product Brochure

Anritsu

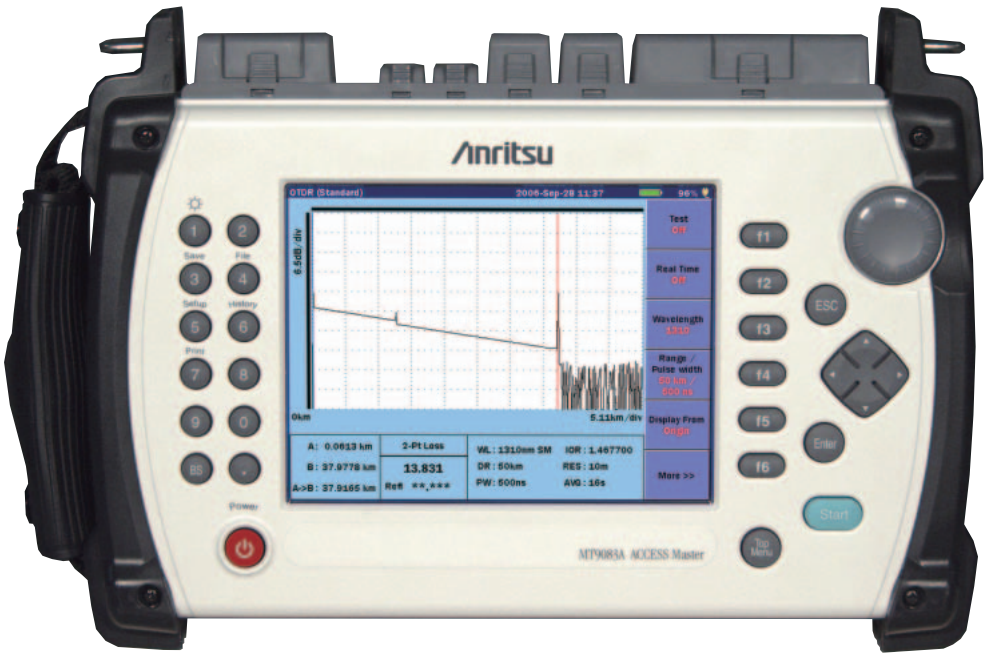
MT9083A

ACCESS Master™

850/1300 nm OTDR for MMF
780/1310/1383/1490/1550/1625/1650 nm OTDR for SMF

All-in-One Solution for Optical Fiber Construction and Maintenance of Access, FTTx, LAN and Metro Networks

850/1300 nm OTDR for MMF
780/1310/1383/1490/1550/1625/1650 nm OTDR for SMF



MT9083A ACCESS MASTER OVERVIEW

Optical fibers are a key technology in today's modern communications systems, including access networks such as FTTx, CATV, and optical LANs. Moreover, optical-fiber technologies are playing increasingly important roles in mobile communications and digital broadcasting systems. Technicians maintaining these diverse systems are forced to carry a large variety of test equipment on-site, including OTDRs, Light Sources, Optical Power Meters, Visible Light Sources, etc., as well as a notebook computer for evaluating the FTTx QoS. On the other hand, fiber construction requires measuring instruments with different functions and performance. As an example, FTTx access networks use single mode (SM) fiber whereas optical LANs use multimode (MM) fiber. In addition, core and backbone networks utilize long fibers while optical access networks use short fibers, both requiring different types of measuring instruments with different performance. But now Anritsu's new line of MT9083A ACCESS Master OTDRs solves all these problems by providing all the measurement functions and performance required for optical fiber construction and maintenance in a compact, lightweight, all-in-one unit that eliminates the burden of carrying many different test sets and instruments on-site. Whatever your work, construction or maintenance, long haul or intra-building, Anritsu has an MT9083A model for your needs.

Key Features

- Ready to test in less than 15 seconds…and all day without recharging
- Specialized testing modes simplify operation
- High resolution and high dynamic range ensure thorough and complete fiber evaluation
- Intelligent analysis software identifies problem splices, connectors and even macrobends
- Rugged, sealed design provides years of service in the most challenging environments
- IP testing option verifies throughput, frame loss and point-to-point connectivity
- Test up to four wavelengths with a single unit-single mode, multimode or both
- Unique in-service testing without the need for external filters

Designed with the Features that Matter Most

When buying products, you tend to choose ones that are innovative and from established companies.When you need to install and maintain optical networks, this should also apply. With over 50 years of combined OTDR design, Anritsu, which now includes NetTest, delivers the features that matter.
Having been in the test and measurement business for a long time, we understand that things like performance, portability, reliability, easy operation and of course price are important.

Quick Startup

The MT9083A is ready for measurement just 15 seconds after power-on so productive work can start immediately.

Long Battery Life

Since AC power is not always available where you need it, especially at fiber pedestals, the MT9083A typically provides up to 8 hours of operation on a single charge. This coupled with an optional car cord (for cigarette lighter operation) guarantees the MT9083A is ready when you are.

Portable

With its light weight design and user friendly dimensions, the MT9083A is perfect for the outside plant environment and can easily be managed with one hand. The shoulder strap (part of the protector option) further increases portability when travelling from the truck to the testing site.

Rugged

The MT9083A features a solid casework with no fans or vents to keep dust or moisture from entering the unit.In addition, the protector option (MT9083A-010) includes rubber bumpers and a display cover for additional protection from those minor mishaps.

Generous Data Storage

With the ability to store up to 1,000 traces in internal memory and up to 30,000 via a USB device, the MT9083A offers plenty of storage for collecting and managing data.

No Experience Required

With the MT9083A, the experience is built in. With specialized testing modes, automatic parameter selection, PASS/FAIL indicators as well as features to virtually eliminate the chance to get “bad” results, the MT9083A can make anyone seems like a 20 year veteran. It’s not called the ACCESS Master for nothing!

Easy “drag and drop” File Transfers

When the MT9083A is connected to a PC via a USB cable, the internal memory of the ACCESS Master can be directly accessed. Data can be selected, dragged and dropped into the PC memory, greatly simplifying file transfers.The MT9083A also supports use of USB memory sticks.

Common OTDR Data Format

The MT9083A supports the universal Telcordia SR-4731 (issue 2) format making it compatible with not only legacy Anritsu and NetTest products, but with many other vendors data.

Free and Simple Software Upgrades

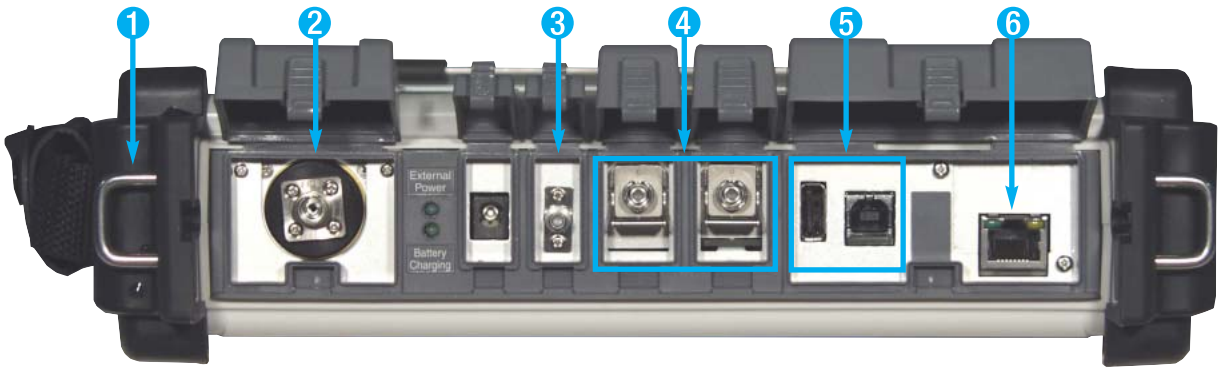
Firmware upgrades are easily performed via USB and available from the Anritsu website for registered users or through Anritsu customer support.

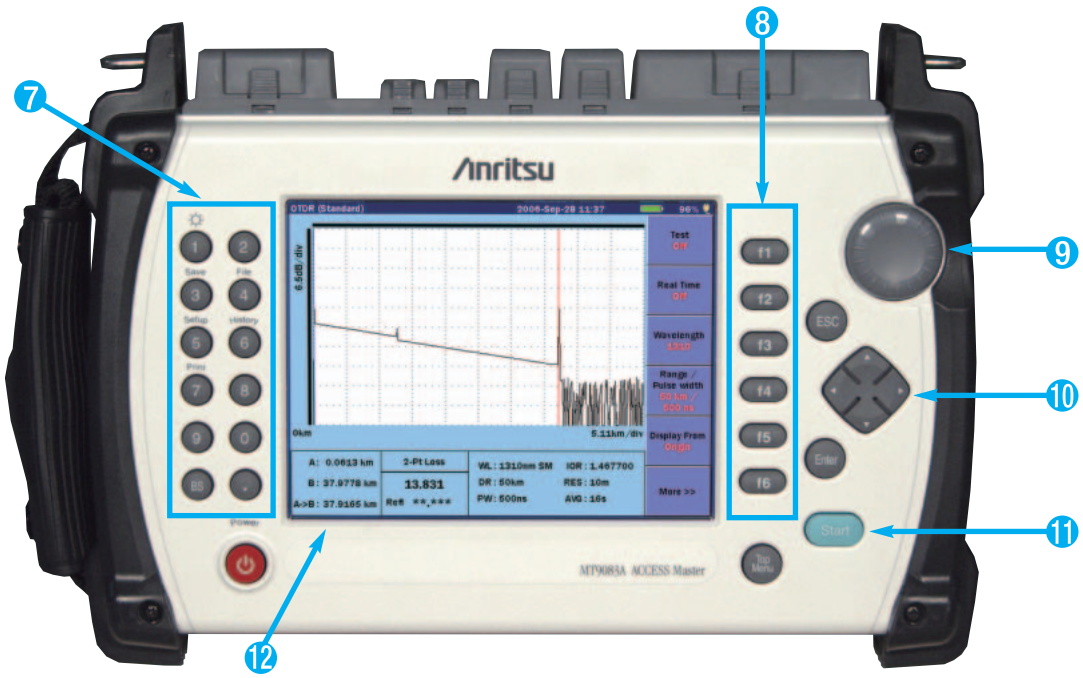
Compact, Light Weight and All-in-one

With its versatile built-in functions, the MT9083A offers the ideal solution for efficient optical fiber construction and maintenance.

All-in-one Test Set

The MT9083A delivers full featured OTDR performance plus loss test set and quality of service measurement in a surprisingly small and lightweight package. At only 28.4 cm wide x20 cm tall x7.7 cm deep and 2.2 kg (4.8 lbs.), it is field portable, yet rugged enough to withstand the outside plant environment.When equipped with power meter, visual light source and IP test options, it replaces several, larger pieces of test equipment.





1. Up to 8 hour battery life plus quick recharge
2. Optical Power meter options with up to +30 dBm measurement range
3. Visible laser source for easy fiber identification and bend/break location
4. Up to four wavelengths from a single port for any application
5. Dual USB ports for quick and easy data transfer
6. IP options for verifying QoS of 10/100/1000 MB links
7. Numeric keypad with dedicated keys for easy operation
8. Dedicated function keys for selecting parameters
9. Rotary dial for precision cursor movement
10. Arrow keys for quick zooming and navigation through menus
11. START key for simple one-button testing
12. 6.4 inch color, TFT-LCD display with simple menus

Exceptional OTDR Performance··· from the World's First OTDR Manufacturer

Evaluation of access networks ranging from a few kilometers to metro networks reaching up to 100 km in length is becoming commonplace, requiring OTDRs to have the performance and functions for evaluating both short and long fibers. Designed with this in mind, the ACCESS Master delivers on both fronts.

Improved Short Fiber Analysis

An event dead zone of less than 1m (80 cm typical) and a sampling resolution of 5 centimeters allow the MT9083A to evaluate connections and troubleshoot central office, FTTx and intra-building faults with ease – providing a level of detail never before seen.

Extended Range Testing of 100+ km Fibers

In addition to its superb high-resolution performance, the MT9083A also features up to 38.5dB of dynamic range allowing it to easily test 100+ km spans making it a very useful tool for any network type.

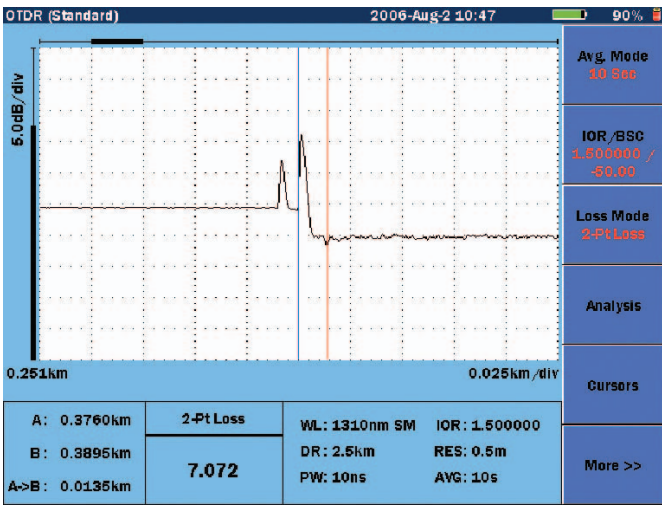


Fig. 1: With its high resolution optics, the MT9083A provides exceptional detail allowing users to quickly determine where the problem is-even when events are closely spaced.

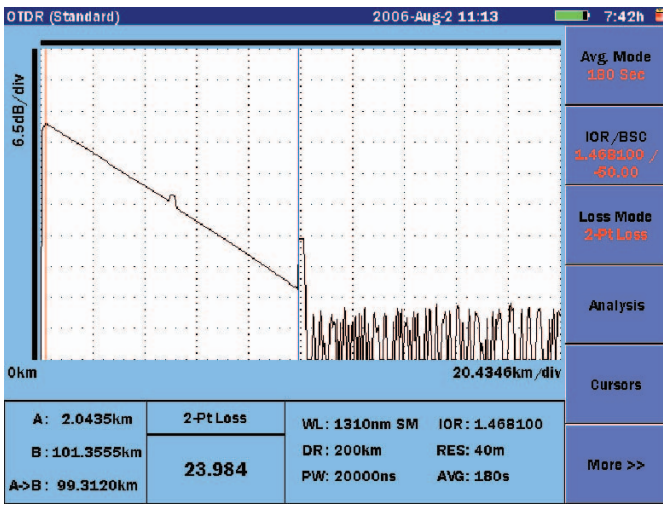


Fig 2: Spans of over 100 km are also easily tested making the MT9083A the only tool you will need - for any network type.

Convenient Features

Active fiber check

Not only can OTDR measurements be effected when the optical fiber is in-service but there is a potential risk of damage to the transmitter and OTDR receiver. To prevent these problems, the MT9083A verifies if light is present before starting measurement and will not transmit if it is. An on-screen warning and internal OTDR protection are also part of this useful feature.

Waveform Comparison Function

Compare current and stored trace data to easily assess changes over time and to locate problems before they effect service or compare traces at different wavelengths to identify installation issues such as macrobending.

Integrated Macrobend Detection

With many technicians making the switch from copper installations to optical fiber, installation issues such as macrobends are bound to occur. To help prevent this, Anritsu has developed a macrobend detection feature for the MT9083A that will alert technicians when a possible macrobend is present. This provides a higher quality of service for the customer and eliminates costly troubleshooting for you.

Event Table with User Defined Thresholds

PASS/FAIL thresholds for key acceptance criteria such as splice loss, connector loss and reflectance can be set in the MT9083A allowing technicians to easily assess a fiber's condition. Failing values are clearly highlighted in the event table alerting technicians of potential problems.

Multiple Wavelengths and Models

With nine available wavelengths spanning both single mode and multimode, the ACCESS Master MT9083A is sure to meet your individual needs. Up to four of these wavelengths can be combined into a single optical output providing full spectrum characterization.

Wavelengths for Today's Networks

Sometimes you just need more than the traditional 1310 and 1550 nm wavelengths to certify your next generation networks. The MT9083A offers a host of specialized wavelengths including1383 nm for water peak verification of CWDM carrying fibers, 1650 nm (with integrated filter) for live fiber troubleshooting, 1490 nm for verification of voice, data and IP based video services and 780 nm for in-service troubleshooting of FTTx networks - without the need for any additional filters.

Solutions for Various Measurement Needs

Products that offer many features are often complicated to use. The MT9083A however, simplifies operation by offering task-specific testing modes that automate testing and guide novice users. Dedicated testing modes are available for fault location, cable installation, loss budget testing, visual fault location and IP testing.

Simple Operation

To simplify testing, the MT9083A features dedicated measurement modes via the top menu to automate and simplify the task at hand.

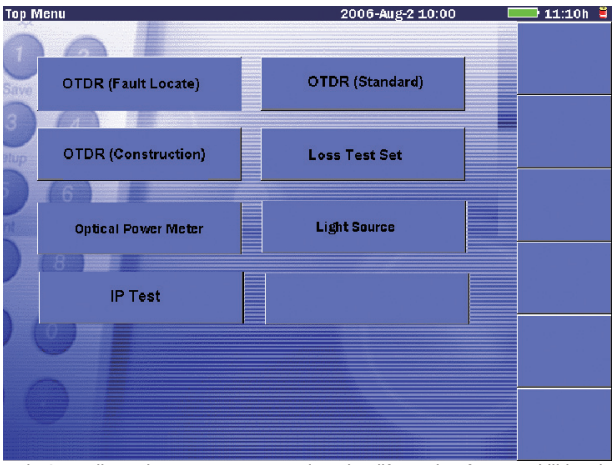


Fig.3: Dedicated measurement modes simplify testing for any skill level.

Fault Location

FAULT LOCATE mode is designed for the novice or someone who only uses an OTDR occasionally. Simply connect the fiber and press START. The unit will verify the fiber is connected correctly, select testing parameters and provide a text response indicating fault/break location - easy to read results for any skill level.

General OTDR Testing

For those who have more experience or would like to perform more advanced testing, STANDARD OTDR mode allows the user to set all parameters and compare traces manually, automatically or somewhere in between.

Optical Fiber Construction and Certification (Planned)

When final cable acceptance is the task at hand, CONSTRUCTION mode greatly simplifies operation through its innovative wizard. Select the required testing wavelengths, number of fibers and file naming scheme and construction mode acts as the project manager guiding the user through the testing, while ensuring consistency with testing parameters and filenames - virtually eliminating user induced errors and missing files.

Value

Whatever your construction or maintenance needs, the new ACCESS Master MT9083A is designed to reduce the time to install, commission and maintain your optical networks – without breaking your budget.

NETWORKS PC Software for Analysis and Reporting

Once the data is collected, NetWorks PC emulation software makes analysis and report generation a breeze. Professional reports including splice loss, fiber acceptance and exceptions as well as various printing options are possible with only a few mouse clicks.

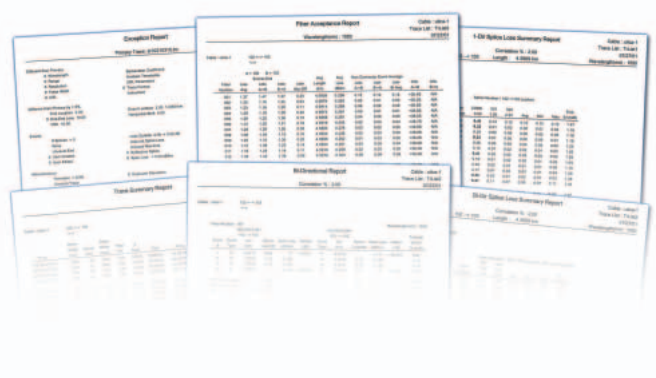


Fig.4: Comprehensive, professional reports are easily generated

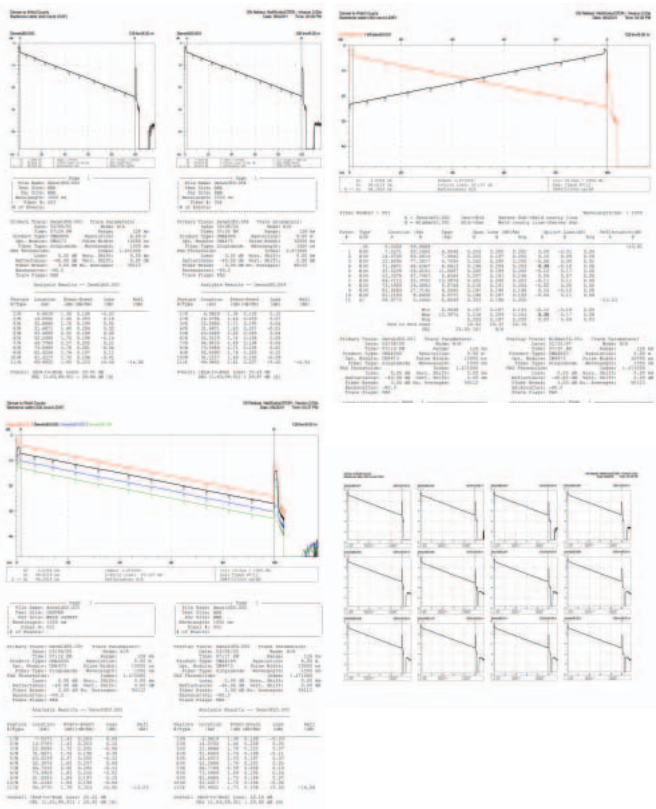


Fig.5: Various printing options ensure you have the results you need

A True all-in-one Tester

An OTDR, Optical Power Meter, Visible Light Source, and IP tester are built into Anritsu's compact, light-weight MT9083A supporting tasks ranging from searching for faults in optical fibers to QoS evaluation to FTTx troubleshooting with just one unit.

Complete Loss Test Set Features

Standard Stabilized Light Source

The OTDR port also functions as a stabilized light source providing continuous wave, 270Hz, 1kHz and 2kHz modulations for easy fiber identification. This is standard equipment on all models - a chargeable option on most other OTDRs.

Standard Integrated Power Meter

In the base unit, the OTDR port also functions as an integrated power meter for verification of optical power levels. Additional power meter options are available for higher power transmissions and loop-back testing.

Visual Laser Source for easy fault location and fiber identification

A Visible Light Source is useful for tracking down bad connections, splices and fiber management issues such as macrobends. The optional Visible Light Source is factory installed in the MT9083A and features up to 5 km (3 miles) of operation.

Optical Power Meter Options - up to +30 dBm

In place of the standard power meter, the MT9083A offers three optional optical power meters; one supports both SM and MM fibers (MT9083A-003) while the others feature higher measurement range for SM only applications (-004, -005). When measurement of high optical powers, typically more than +20 dBm (like those used by CATV companies) is required, power meter (Option 005) using an optical integrator sphere can be used to make long-term measurements with high stability at levels above +30 dBm.

Data Table for Saved Results

Loss test set measurements for multiple wavelengths can be saved into a results table for easy comparison and archiving. The table can also be saved as a text file and exported to a PC spreadsheet program for further manipulation or integration into a standard company template.

Optical Access Network QoS Evaluation Using IP Testing (Planned) (to be released in 2007)

Faults that cause drops in FTTx service speed are handled differently according to whether the cause is outside or inside the building. In addition, business users are starting to think about guaranteed bandwidth services and higher-speed gigabit services. The MT9083A has a built-in IP Network Connection Check function that can be used for both optical fibers and optical access QoS evaluation.

Connection and Ping Tests

The first step in testing a service is to verify continuity. The built-in IP Connection Test Function supports both PPPOE and DHCP services.

FTTx Download Speed Evaluation

FTTx service performance is easily evaluated from the download throughput. Previous evaluation systems were always limited by the PC performance (CPU speed, memory size, OS, load) and never provided accurate measurements. Using the MT9083A Download Throughput Measurement function frees the results from the impact of PC performance and provides accurate results. This allows the causes of drops in FTTx service speeds to be pinpointed to the network side or the user's PC side.

Throughput Measurement and Frame Counter

The MT9083A has a two-way throughput measurement function for efficient evaluation of guaranteed bandwidth services. When an MT9083A is connected to each end of the service, both the upload and download speeds can be evaluated. And since the built-in frame counter functions can be used to measure received frame types and to count error frames, network usage efficiency can be measured easily too.

Gigabit Ethernet Support

The MT9083A has an optional built-in 1000Base-T electrical interface for evaluating Gigabit Ethernet throughput (up to full line rate) for verifying performance on increasing common Gigabit Ethernet service

Faults Identified

When issues are present, possible causes are displayed on-screen to help isolate the source of the problem.

Specification

MT9083A ACCESS Master

Item	General Specifications	
Dimensions and Mass	Without protector (option 010)	Size: 270 (W) x 165 (H) x 61 (D) mm
		Weight: 2.2 kg (4.8 lbs) including battery
	With protector (option 010)	Size: 284 (W) x 200 (H) x 77(D) mm
		Weight: 2.9 kg (6.4 lbs) including battery
Display	6.5 inch TFT-LCD (640x480, with backlight, transparent type)	
Interface	USB 1.1, TypeA x1 (memory), Type Bx1 (USB mass storage).	
Data Storage	Internal memory: 20 MB (~1000 traces), External memory (USB): ~30,000 traces with 512 MB	
Power Supply	12 VDC, 100 to 240 VAC, Allowable input voltage range: 90 to 264 V, 50/60 Hz	
Battery	Type: Lithium ion Operating Time*1: 8 hours Recharge Time: <5 hours (power off)	
Power Saving Functions	Backlight off: disable/1–99 minutes Auto shutdown: disable/1–99 minutes	
Vertical Scale	0.05, 0.125, 0.25, 0.5, 1.25, 2.5, 5, 6.5 dB/div	
IOR Setting	1.000000 - 1.999999 (0.000001steps)	
Units	km, m, kft, ft, mi	
Languages	user selectable (English, French, German and Simplified Chinese - contact Anritsu for availability of others)	
Sampling Points*2	Normal: 5001, High density: 20001 or 25001	
Sampling Resolution*3	5 cm (min)	
Reflectance Accuracy	Single mode: ±2 dB, multimode: ±4 dB	
Distance Accuracy	±1 m ±3 x measurement distance x 10^{-5} ± marker resolution (excluding IOR uncertainty)	
Distance Range	Single mode: 0.5, 1, 2.5, 5, 10, 25, 50, 100, 200 km (except 780 nm: 0.5, 1, 2.5 km) Multimode: 0.5, 1, 2.5, 5, 10, 25, 50, 100 km	
Testing Modes	Fault locate: provides end/break location, end to end loss, fiber length Standard OTDR: user selectable automatic or manual set-up Construction OTDR: automated, multi-wavelength testing*4 Light source: stabilized light source (CW, 270 Hz, 1 kHz, 2 kHz output) Loss test set (optional): power meter and light source Power Meter Visual fault locator (optional): visible red light for fiber identification and troubleshooting	
Fiber Event Analysis	Auto or manual operation, displayed in table format User defined PASS/FAIL thresholds: - reflective and non-reflective events: 0.01 to 9.99 dB (0.01 dB steps) - reflectance: 20.0 to 60.0 dB (0.1 dB steps) - fiber end/break: 1 to 99 dB (1 dB steps) Number of detected events: up to 99 Macrobend detection	
OTDR Trace Format	Telcordia universal. SOR, issue 2 (SR-4731)	
Other Functions	Real time sweep*5: 0.15 second Loss modes: 2 point loss, dB/km, 2 point LSA, splice loss, ORL Averaging modes: timed (1– 3600 seconds) Live Fiber detect : verifies presence of communication light in optical fiber Connection check: Automatic check of OTDR to FUT connection quality Trace overlay and comparison	
Environmental Conditions	Operating temperature and humidity: 0 to +40C,<80% (non-condensing) Storage temperature and humidity: –20 to +60C, <80% (non-condensing) Vibration: Conforming to MIL-T-28800E Class 3 Dust proof: MIL-T-28800E Class 2 Drip proof: IP51 (IEC 60529), JIS C 0920 TYPE I	
EMC	EN61326:1997+A1:1998+A2 : 2001+A3:2003 (Class A, Annex A), EN61000-3-2:2000(Class A)	
LVD	EN61010-1:2001 (Pollution Degree 2)	

Notes
1: Typical, backlight off, sweeping halted at 25˚C, 6 hours typical continuous testing
2 : Either high density value is selected depending on distance range
3 : Except 780 nm
4 : To be planned
5 : Sampling mode normal. Except models 062, 068 -1 second or less

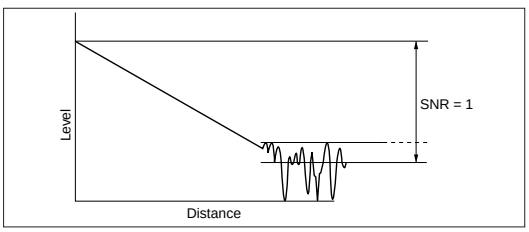
OTDR Specifications						
Model	**Wavelength**[*6]	**Fiber Type**	**Pulsewidth**	**Dynamic Range**[*7,8]	**Deadzone (Fresnel)**[*9]	**Deadzone (Backscatter)**[*10]
050	1310 ±30 nm	Single Mode (SMF) 10/125 µm ITU-T G.652	3, 10, 20, 50, 100, 200, 500, 1000, 2000, 4000, 10000, 20000ns	38.5dB	≤1 m (80 cm typical)	≤5 m
051	1550 ±30 nm			37dB		≤5.5 m
052	1650 ±5 nm			33.5dB		≤6.5 m
053	1310/1550 ±30 nm			38/36.5dB		≤5/5.5 m
054	1550 ±30/1650 ±5 nm			36/33.5dB		≤5.5/6.5 m
055	1310/1550 ±30 nm, 1650 ±5 nm			37.5/36/33.5dB		≤5/5.5/6 m
056	1310/1490/1550 ±30 nm			36/34.5/34.5dB		≤6/6.5/6.5 m
057	1310/1550/1625 ±30 nm			36/34.5/31.5dB		≤6/6.5/7.5 m
058	1310/1490/1550/1625 ±30 nm			34/32.5/32.5/29.5dB		≤7/7.5/7.5/8.5 m
059	1310/1550/1625 ±30 nm, 1383 ±2 nm			34/32.5/29.5/33 dB		≤7/7.5/8.5/7.5 m
060	1490 ±30 nm			36.5 dB		≤5.5 m
061	1625 ±30 nm			33.5 dB		≤6.5 m
062	780 ±20 nm		1550 nm above 780 nm: 5, 10 ns	8 dB (10 ns)	≤1 m	≤7 m
068	780 ±20/1550 ±30 nm			8/36.5 dB	≤1 m 1550 nm: (80 cm typical)	≤7/5.5 m
063	1310/1550 ±30 nm, 850/1300 ±30 nm	HYBRID (SMF/MMF)	Same as SMF & MMF	38/36.5 dB, 28/27 dB	≤1 m (80 cm typical)	≤5/5.5 m, ≤4/5 m (3/4 m typical)
064	850/1300 ±30 nm	Multimode (MMF) 62.5/125 µm	3, 10, 20, 50, 100, 200, 500,1000, 2000, 4000 ns 850 nm: Not Support 1000, 2000, 4000ns	28/27 dB		≤4/5 m (3/4 m typical)
065	850 ±30 nm			28 dB		≤4 m (3 m typical)
Laser[*11] Safety	IEC Pub 60825-1:2001 Class1: option 051,052,060,062 IEC Pub 60825-1:2001 Class1 M: option 050, 053, 055, 056, 057, 058, 059, 063, 064, 065 21 CFR1040.10 Excludes deviations caused by contormance to Laser Notice N.50 (issued 27 May 2001)					

Notes

*6: 25°C, Pulse width: 1 µs (all except 850, 1300, 780 nm), 850/ 1300 nm: 100ns, 780 nm: 10ns

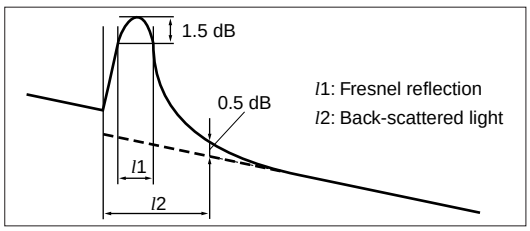
*7: Pulse widths: 20 µs (Options 050 to 061, 063, 068 1310/ 1550 nm) at Distance range: 100 km
Pulse width: 4 µs (Options 063, 064 1300 nm) at Distance range: 25 km
Pulse width: 100 ns (Options 063, 065 850 nm) at Distance range: 25 km
Pulse width: 10 ns (Options 062, 068 780 nm) at Distance range: 2.5 km
Averaging: 180 seconds, SNR=1, 25°C

*8: Dynamic range (one-way back-scattered light), SNR = 1: The level difference between the RMS noise level and the level where near end back-scattering occurs.

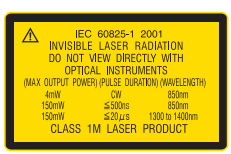


*9: Pulse width: 3 ns (Options 050 to 061, 063, 064, 065, 068 1550 nm)
Pulse width: 5 ns (Options 062, 068, 780 nm)
Return loss: 40 dB, 25˚C (Refer to the figure below)

*10: Pulse width 10 ns, return loss 55 dB, Deviation ±0.5 dB, 25°C (all except 850/1300/780 nm)
Pulse width 10 ns, return loss 40 dB, Deviation ±0.5 dB, 25°C (850/1300/780 nm)



*11: Safety measures for laser products
This option complies with optical safety standards in Class 1, 1M of 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 JULY 26 2001

Light Source and Power Meter Specifications – Standard on all models *12			
Stabilized Light Source (through OTDR port)		Standard Integrated Power Meter *13 (through OTDR port)	
Item	Specification	Item	Specification
Wavelength*14	Same as OTDR	Maximum Input	+10 dBm
Spectral Width*15	5 nm (1310 nm) ≤10 nm (1490/1550/1625 nm), ≤3 mn (1650 nm),≤1 nm (1383 nm)	Measurement Range	–50 to –5 dBm
Fiber Type	Same as OTDR	Fiber Type	Same as OTDR
Optical Connector	Same as OTDR	Optical Connector	Same as OTDR
Output Power*15	–5 ±1.5 dBm	Accuracy*18	±6.5%
Output Stability*16	±0.1 dB	Supported Wavelengths	1310, 1550, 1625 nm plus * 1490 nm (056, 058, 060) * 1383 nm (059) * 1650 nm (050, 051, 053, 054, 055, 057, 061)
Modes of Operation*17	CW, 270 Hz, 1 kHz, 2 kHz		
Laser Safety	Same as OTDR	Features	Store reference, loss table

Loss Test Set Specifications – Optional on all Models*13 Power meters (003, 004, and 005)			
Optical Power Meter (Option 003, 004, 005)*12			
Option Number	MT9083A-003	MT9083A-004	MT9083A-005
Fiber Type	Single Mode: 10/125 µm (G.652), Multimode: 62.5/125 um	Single Mode:10/125 um (G.652) *PC only for UPC connector, angled only for APC connector*	Single Mode: 10/125 µm (G.652)
Measurement Range*19	+3 to –70 dBm	+23 to –50 dBm	+30 to –43 dBm
Wavelength Range	750 to 1700 nm	1200 to 1700 nm	
Calibrated Wavelengths	850, 1300, 1310, 1383, 1490, 1550, 1625, 1650 nm	1310, 1383, 1490, 1550, 1625, 1650 nm	
Optical Connector	Universal – uses MA9005A adapters	Universal – uses JXXXX adapters (same as OTDR)	Universal – uses MA9005B adapters
Accuracy*20	±5%		
Modulation	CW, 270 Hz, 1 kHz, 2 kHz		
Features	Store reference, loss table		

Visible Light Source (Option 002)	
Central Wavelength	650 nm ±15 nm (at 25˚C)
Optical Output	0 ±3 dBm (CW)
Output Optical Fiber	10/125 µm, SMF (ITU-T G.652)
Optical Connector	2.5 mm universal
Laser Safety*21	IEC Pub 60825-1Class 3R, 21 CFR1040.10 Excludes deviations caused by conformance to Laser Notice N.50 (issued 27 May 2001)
Environmental	Same as OTDR

Notes
*12: Some models do not support built-in light source and power meter
(See next page)
*13: If option 003, 004 or 005 is ordered, the standard integrated power meter is not available
*14: Option 059:1383 ±20 m
*15: CW, 25˚C
*16: CW, 0° to 40˚C (±1˚C) difference between max/min. values over 1 minute, SM fiber 2 m
*17: Modulation +1.5% with 10 minute warm up
*18: CW input, –20 dBm At 1550 nm, 23˚C ±2 Using Master FC connector
*19: Peak power, subtract 3 dB for modulated tones
*20: CW, model 003: At–10 dBm 1310/ 1550 nm,
At–10 dBm 850 nm 25˚C
model 004/005: At 0dBm 1310 and 1550 nm
Using Master FC connector

*21: Safety measures for laser products
This option complies with optical safety standards in Class 3R of 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 JULY 26 2001

Standard Light Source and Power Meter Built-in

LS: MT9083A standard built-in stabilized light source, OPM: MT9083A standard built-in optical power meter

Model	Optical Port	LS	OPM
MT9083A-050	1310 nm SM	√	√
MT9083A-051	1550 nm SM	√	√
MT9083A-052	1650 nm SM	√	
MT9083A-053	1310/1550 nm SM	√	√
MT9083A-054	1550 nm SM	√	√
	1650 nm SM	√	√
MT9083A-055	1310/1550 nm SM	√	√
	1650 nm SM	√	√
MT9083A-056	1310/1490/1550 nm SM	√	√
MT9083A-057	1310/1550/1625 nm SM	√	√
MT9083A-058	1310/1490/1550/1625 nm SM	√	√
MT9083A-059	1310/1550/1625/1383 nm SM	√	√

Model	Optical Port	LS	OPM
MT9083A-060	1490nm SM	√	√
MT9083A-061	1625nm SM	√	√
MT9083A-062	780nm SM	—	—
MT9083A-063	850/1300nm MMF	√	√
	1310/1550nm SM	√	√
MT9083A-064	850/1300nm MMF	√	—
MT9083A-065	850nm GI	√	—
MT9083A-068	780nm SM	—	—
	1550nm SM	√	√

Battery pack

Battery	Lithium Ion secondary battery
Voltage, capacity	11.1 V, 4200 mAh
Dimensions and mass	53 (W) x 19 (H) x 215 (D) mm, 360 g typ.
Operating temperature	Charging: +5 to +30˚C
	Discharging: –20 to +60˚C
	Storage: –20 to +50˚C, ≤90%RH

AC adapter: Z0933A

Rated AC input	100 to 240 Vac, 50/ 60 Hz
Rated DC output	12 Vdc, 3 A
Dimensions and mass	60 (W) x 34 (H) x 122 (D) mm, 305 g typ
Environmental conditions	Operating temperature:
	0 to +40˚C, 20 to 80% R.H.
	Storage temperature:
	–20 to +80˚C, 10 to 95% R.H.

Ordering Information

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

1) Specify Mainframe

Includes ACCESS Master OTDR, AC charger/adapter, battery pack (1) , line cord and user's manual. Also included are choice of one OTDR connector adapter (two for model 063) select these below.

Model/ Order No.	Description
MT9083A	ACCESS Master (Mainframe)

2) Select Model

Model/ Order No.	Wavelength	Application
MT9083A-050	1310 nm, single mode	General-purpose model for construction, maintenance and fault location
MT9083A-051	1550 nm, single mode	General-purpose model for construction, maintenance and fault location
MT9083A-052	1650 nm, single mode	In-service measurement – integrated filter to block transmissions (1650 nm)
MT9083A-053	1310/1550 nm, single mode	General-purpose model for construction, maintenance and fault location
MT9083A-054	1550 nm & 1650 nm, SM	General-purpose models for construction, maintenance and fault location plus In-service measurement – integrated filter to block transmissions (1650 nm)
MT9083A-055	1310/1550 nm & 1650 nm, SM	
MT9083A-056	1310/1490/1550 nm, SM	General-purpose plus 1490 nm for FTTx/PON applications
MT9083A-057	1310/1550/1625 nm, SM	General-purpose plus enhanced macrobend detection at 1625 nm
MT9083A-058	1310/1490/1550/1625 nm, SM	General purpose for any application or full spectrum characterization
MT9083A-059	1310/1383/1550/1625 nm, SM	General-purpose plus supports Water Peak Testing at 1383 nm
MT9083A-060	1490 nm, single mode	FTTx/PON Testing
MT9083A-061	1625 nm, SMsingle mode	Enhanced macrobend detection
MT9083A-062	780 nm, single mode	For troubleshooting live FTTx/PON networks
MT9083A-068	780 &1550 nm, single mode	For troubleshooting live FTTx/PON networks plus verification and macrobend detection on dark fibers
MT9083A-063	850/1300 nm (multimode) 1310/1550 nm (single mode)	Best unit for contractors or anyone who installs or maintains hybrid networks
MT9083A-064	850/1300 nm, multimode	Multimode fiber model
MT9083A-065	850 nm, multimode	Multimode fiber model

3) Select OTDR Connector Type

Optical Connector One adapter included at no charge (two with models 054, 055, 063) - must be added as a separate line item.			
Model/Order No.	Description	Model/Order No.	Description
MT9083A-025	FC-APC connector - single mode only (additional charge applies)	MT9083A-038	ST connector
MT9083A-026	SC-APC connector - single mode only (additional charge applies)	MT9083A-039	DIN connector
MT9083A-033	LC connector	MT9083A-040	SC connector
MT9083A-037	FC connector	MT9083A-043	HMS-10/A connector

4) Select Loss Test Set Options

Optical Power Meter Must be added as separate, chargeable line items.	
Model/Order No.	Description
MT9083A-003	SMF/MMF Optical Power Meter
MT9083A-004	SMF Optical Power Meter
MT9083A-005	SMF High Power Optical Power Meter
Visible Light Source	
Model/Order No.	Description
MT9083A-002	Visible Laser Diode

5) Select Network Test Options

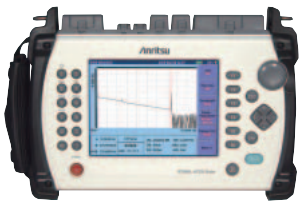
Network Test Function Must be added as separate, chargeable line items.	
Model/Order	Description
MT9083A-001	IP Network Connection Check Function
MT9083A-011	Gigabit Ethernet Upgrade (requires option MT9083A-001)

5a) Select Power Meter Connector Type (if option -003, -004 or -005 are ordered)

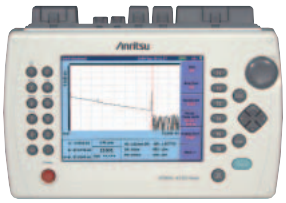
Optical Power Meter (OPM) Connectors One adapter included at no charge - must be added as a separate line item. Customer must specify adapter is desired for OPM port. NOTE: FC-APC and SC-APC are not available for OPM. If nothing is specified, we will assume that the connector adapter is the same as the OTDR port.			
Model/Order No.	Description	Model/Order No.	Description
MT9083A-033	LC connector	MT9083A-039	DIN connector
MT9083A-037	FC connector	MT9083A-040	SC connector
MT9083A-038	ST connector	MT9083A-043	HMS-10/A connector

6) Select Factory Installed Options

Hardware Options Must be added as separate, chargeable line items.	
Model/Order	Description
MT9083A-010	Protector (includes rubber bumpers, display cover and shoulder strap)



With Protector



Without Protector

7) Select Accessories & Replacement Items

Accessories Must be added as separate, chargeable line items.	
Model/Order	Description
W2839AE	Hardcopy MT9083A operation manual
B0582A	Soft carrying case
B0583A	Hard carrying case for MT9083A - attaché style
B0549	Hard carrying case for MT9083A with handle and wheels
Z0921A	Replacement battery pack for MT9083A
J1295	Car plug cord
Z0933A	Replacement AC Adaptor
Z0942A	External Battery Charger for MT9083A
NETWORKS	PC emulation software for data analysis and reporting
MT9083A-ES210	12 month extended warranty (Total 2 years warranty)
MT9083A-ES310	24 month extended warranty (Total 3 years warranty)
Peripherals	
BL-80R2	Thermal printer kit (must also order BL-100W AC adapter, J1314 printer cable and BL-80-30 paper rolls)
BL-100W	AC adapter for BL-80R2 printer
J1314	Printer cable for BL-80R2 printer
BL-80-30	Printer paper for BL-80R2 Thermal Printer (10 rolls/set)
Retrofit Options for existing units – unit must be returned to authorized service center	
MT9083A-110	Protector (retrofit)
MT9083A-103	SMF/MMF Optical Power Meter (Retrofit)
MT9083A-104	SMF Optical Power Meter (Retrofit)
MT9083A-105	SMF High Power Optical Power Meter (Retrofit)
MT9083A-102	Visible Laser Diode (Retrofit)
MT9083A-101	IP Network Connection Check Function (retrofit)
MT9083A-111	Gigabit Ethernet Upgrade (retrofit - requires option MT9083A-001 or MT9083A-101)

Replacement Adapters

Type	OTDR/source port/Power meter (MT9083A-004)	Power meter (MT9083A-003)	Power meter (MT9083A-005)
LC	J1270	MA9005A-33	MA9005B-33
FC	J0617B	MA9005A-37	MA9005B-37
Angled FC (AFC)	J0739A	N/A	N/A
ST	J0618D	MA9005A-38	MA9005B-38
DIN	J0618E	MA9005A-39	MA9005B-39
HMS-10A	J0618F	MA9005A-43	MA9005B-43
SC	J0619B	MA9005A-40	MA9005B-40

Soft carrying case (B0582A)


Hard carrying case (B0583A)-Attache style


Hard carrying case (B0549)

Related Anritsu Products

CMA50 Power Meters, Light Sources and Loss Test Sets

Fast, accurate and easy-to-use, Anritsu's CMA50 line of Light Sources, Power Meters and Loss Test Sets are designed for attenuation and throughput measurements of fiber optic links. With up to four stable lasers in the same unit and power meter calibrated to 26 different wavelengths, CMA50 meets any testing requirement from FTTx PON networks, to CWDM to long haul telephony links to multimode LAN, and CATV. CMA 50 makes your measuring experience comprehensive yet simple and error free with tone detection, auto wavelength switching mode, fully automatic bi-directional testing option, Optical Return Loss (ORL) option, Pass/Fail threshold analysis, large capacity for test results storage, & RJ45 interface Network Testing option

CMA 5000 Multilayer Testing Platform

The CMA5000 is the industry's premier test and measurement solution featuring Gigabit Ethernet, DWDM, SONET/SDH, OTDR, ORL, PMD and CD applications. Through its open-architecture design, the CMA5000 offers the highest performance measurement applications in one powerful, modular platform.

CMA5 Optical Power Meter and Light Source

The CMA5 Series Power Meters are ideal for attenuation and power throughput measurements on point-to-point fiber optic links. The CMA5 Series Light Sources provide an economical and stable laser source for use in point-to-point attenuation measurement. They feature a rugged design, built to withstand the difficult testing environment of fiber optic cable installation and maintenance.

CMA3000 Mobile and Fixed Access Network Tester

CMA 3000 is designed specifically for field technicians who install and maintain mobile-access and fixed-access networks. The CMA 3000 is a powerful tool for a wide range of applications, including fast first-aid troubleshooting to comprehensive, in-depth and all-layer analysis of transmission problems. The basic CMA 3000 configuration, with its two 2 Mbps receivers and transmitters, supports framed and unframed testing and monitoring of 2 Mbps systems.

Anritsu

Specifications are subject to change without notice.

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061121

Printed with environment-friendly vegetable soybean oil ink.

Printed on 100% Recycled Paper

Catalog No. MT9083A-E-A-1-(1.00) Printed in Japan 2007-01 10MBP/M