

MEGGER® Fiber Optic Light Sources & Power Meters

Models MLS635, MLS1000, MLS2000, MPM1000, MPM2000

MEGGER® MLS635 VISIBLE LIGHT SOURCE

- 635 nm high intensity laser source
- 9 times brighter than conventional 670 nm units
- Visual location of faults in patch panels, trays, etc.
- Simple identification of fiber breaks
- Suitable for Single- or Multi-mode fiber
- Exceptional battery life
- Ruggedized waterproof housing to IP54
- 3-year warranty
- Dry cell or rechargeable operation
- Rechargeable cells charged within product

Description

The MLS635 is a hand-held, stable, visible light source that can be used to visually test optical fiber cables, splices and connectors on both multi- and single- mode systems. Any sharp bends and breaks in jacketed or bare fibers, or poorly mated connectors, will allow the generated visible light to escape making the MLS635 ideal for identifying faults in fiber optic jumper cables, distribution frames, patch panels and splice trays.

The MLS635 can also be used for end-to-end continuity tests, connector identification in patch panels, fiber tracing, and fiber identification during splicing operations.

The instrument uses a high intensity 635 nm laser, which is approximately nine times brighter than other units operating at 660 or 670 nm, providing 0.85 mW into 9/125 fiber. This means that any break or other loss in a fiber optic system is much easier to see, even through jacketed kevlar cables.



MEGGER® MLS1000 MULTI-MODE LIGHT SOURCE

- 850 and 1300 nm LED source
- High stability output
- Temperature compensated
- Continuous and modulated outputs
- Exceptional battery life
- Ruggedized waterproof housing to IP54
- 3 Year warranty
- Dry Cell or Rechargeable operation
- Rechargeable cells charged within product

Description

The MLS1000 is a stable optical dual LED source that can be used in conjunction with an optical power meter for optical loss testing of fiber optic cables. It has been precalibrated to output 850 nm or 1300 nm respectively for an output level of -20 dBm into a 62.5/125 multi-mode fiber. It is particularly suitable for the testing of LAN's, FDDI, and other multi-mode links whether inside or outside a building.

Although the main use of the MLS1000 is in fiber optic cable attenuation testing, other applications include fiber continuity testing, connector testing, and patch lead testing.



MEGGER® MLS2000 SINGLE MODE STABILIZED LASER SOURCE

- 1310 nm & 1550 nm Dual Laser Source
- Ultra fast laser stabilization
- High stability output
- High output power
- Temperature compensated
- Continuous and modulated outputs
- Ruggedized waterproof housing to IP54
- 3 Year warranty
- Dry Cell or Rechargeable operation
- Rechargeable cells charged within product

Description

The MLS2000 is a stable optical dual laser source that can be used in conjunction with an optical power meter for optical loss testing of fiber optic cables. It has been precalibrated to output 1310 nm or 1550 nm respectively for an output level of -6 dBm into a 9/125 single-mode fiber. It is particularly suitable for the testing of SDH, CATV, telecom and other single mode links.

Although the main use of the MLS2000 is in fiber optic cable attenuation testing, other applications include optical loss testing, optical continuity testing, acceptance testing of fiber transmitters and received power testing of optical receivers.



MEGGER® MPM1000 MULTI-MODE POWER METER

- 850, 1300 & 1550 nm germanium detector
- Wide dynamic range
- dBm and dBrel (relative) measurement modes
- Automatic power down
- Power down override during dBrel measurements
- Exceptional battery life
- Ruggedized waterproof housing to IP54
- 3-year warranty

Description

The MPM1000 is an accurate optical power meter that can be used for optical loss testing of fiber optic cables. It has been precalibrated for absolute power levels with reference to 1 mW (dBm) for 850 nm, 1300 nm and 1550 nm laser frequencies using multi-mode cables. However, it can also be used in relative power mode and, therefore, can also be used on single-mode cables. The MPM1000 is accurate to $\pm 5\%$ at -23 dBm (± 0.22 dBs) and has a wide dynamic range of +5 dBm to -60 dBm with a resolution of 0.1 dBm. It is particularly suitable for the testing of LANs, FDDI, and other multi-mode links whether inside or outside a building.

Although the main use of the MPM1000 is in fiber optic cable attenuation testing, other applications include fiber continuity testing, connector testing, and patch lead testing.

**MEGGER® MPM2000 & MPM2000H SINGLE MODE POWER METERS**

- 850, 1300, 1310 & 1550 nm germanium detector
- Wide dynamic range
- High-power CATV version (MPM2000H)
- dBm and dBrel (relative) measurement modes
- Automatic power down
- dBrel setting retained during power down
- Power down override during dBrel measurements
- Exceptional battery life
- Ruggedized waterproof housing to IP54
- 3-year warranty
- Dry cell or rechargeable operation
- Rechargeable cells charged within product

Description

The MPM2000 and MPM2000H are advanced optical power meters that can be used for optical loss testing of fiber optic cables. These have been precalibrated for absolute power levels with reference to 1 mW (dBm) for 1310 nm and 1550 nm laser frequencies using single mode cables. However, they can also be used in relative power mode and can therefore also be used on multi-mode cables.

Custom instruments can be produced with a further 12 laser frequencies programmed in at the factory.

The MPM2000 is accurate to $\pm 5\%$ (0.22 dBs) and has a wide dynamic range of +10 dBs to -70 dB's making it particularly suitable for the testing of SDH, Telecom and other Single Mode links. The MPM2000H is a high powered version with the same level of accuracy but a dynamic range of +20 dBs to -60 dBs making it ideal for CATV and other long distance transmission applications.

**GENERAL SPECIFICATIONS (ALL UNITS)****Power Input**

Can operate and charge internal batteries using optional charger

Optical Connector

Supplied with either FC, SC or ST patch cord and uniter

Case Dimensions

6.3 x 3.3 x 1.2 in. (160 x 83 x 30 mm)

Operating Temperature

5° to 122°F (-15° to +50°C)

Operating Humidity

95% at 104°F (40°C)

Storage Temperature

-4° to 158°F (-20° to 70°C)

MLS LIGHT SOURCE SPECIFICATIONS**Source Type****MLS635**

Class II Laser

MLS1000

Two LEDs

MLS2000

Dual Laser

Wavelength**MLS635**

635 nm typical

MLS1000

850 nm and 1300 nm typical

MLS2000

1310 nm and 1550 nm typical

Fiber Type (MLS635 only)

Single or Multi-mode

Output**MLS635**

Continuous or 2 Hz modulated

MLS1000, MLS2000

Continuous or 1 Hz modulated

Output Stability**MLS1000**

Typically <0.1 dB over 1 hour at 23° C

MLS2000

Typically <0.05 dB over 1 hour at 23°C

Stabilization Time (MLS2000 only)

Typically 30 seconds from power up at 23°C

Wavelength Accuracy (MLS1000, MLS2000 only)

±30 nm

Output Level**MLS635**

Max. 0.85 mW into 9/125 Fiber

MLS1000

Typically >-20 dBm into 62.5/125 multi-mode fiber

MLS2000

Typically >-6 dBm into 9/125 Single Mode fiber

Batteries

2 x AA Alkaline Cells (NiMh or NiCad can be used)

Battery Life**MLS635, MLS1000**

50 hours continuous, 80 hours modulated

Battery Consumption (MLS2000 only)

40 mA nominal

Safety**MLS635**

Laser Class 2

MLS1000, MLS2000

Laser Class 1

Instrument Weight**MLS635**

8.1 oz (230 g)

MLS1000, MLS2000

7.8 oz. (220 g)

MPM POWER METER SPECIFICATIONS**Detector Type**

Germanium

Wavelength**MPM1000**

850 nm, 1300 & 1550 nm typical

MPM2000 and MPM2000H

1310 nm and 1550 nm standard; 12 other wavelengths can be factory programmed

Measurement Range**MPM1000**

+5 to -60 dBm

MPM2000

+10 to -70 dBm

MPM2000H

+20 to -60 dBm

Measurement Accuracy

± 5% at -23 dBm

Measurement Resolution

0.1 dBm

dBm and dBrel

Yes

Batteries**MPM1000**

2 x AA Alkaline Cells (NiMh or NiCad can be used)

MPM2000 and MPM2000H

1 6LR61 Alkaline cell (NiMh or NiCad can be used)

Battery Life (MPM1000 only)

50 hours continuous 80 hours modulated

Battery Consumption (MPM2000, MPM2000H only)

20 mA nominal

Safety

Laser Class 1

Instrument Weight**MPM1000**

7.8 oz. (220 g)

MPM2000, MPM2000H

8.8 oz (250 g)

ORDERING INFORMATION

Item	Cat. No.	Optional Accessories	Cat. No.
Visible Light Source		Single Mode Patch Cord with	
with FC Connector	MLS635FC	FC/SC Connectors (3.25 ft [1 m])	EV22440-007
with ST Connector	MLS635ST	Single Mode Patch Cord with	
with SC Connector	MLS635SC	FC/FC Connectors (3.25 ft [1 m])	EV22440-008
Multi-mode Light Source		Single Mode Patch Cord with	
with FC Connector	MLS1000FC	FC/ST Connectors (3.25 ft [1 m])	EV22440-009
with ST Connector	MLS1000ST	Single Mode Patch Cord with	
with SC Connector	MLS1000SC	ST/ST Connectors (3.25 ft [1 m])	EV22440-015
Single-mode Stabilized Laser Source		Single Mode Patch Cord with	
with FC Connector	MLS2000FC	SC/SC Connectors (3.25 ft [1 m])	EV22440-016
with ST Connector	MLS2000ST	Multi-mode Patch Cord with	
with SC Connector	MLS2000SC	FC/FC Connectors (3.25 ft [1 m])	EV22440-010
Multi-mode Power Meter		Multi-mode Patch Cord with	
with FC Connector	MPM1000FC	FC/ST Connectors (3.25 ft [1 m])	EV22440-011
with ST Connector	MPM1000ST	Multi-mode Patch Cord with	
with SC Connector	MPM1000SC	FC/SC Connectors (3.25 ft [1 m])	EV22440-012
Single-mode Power Meter (+10 dB to -70 dB)		Multi-mode Patch Cord with	
with FC Connector	MPM2000FC	ST/ST Connectors (3.25 ft [1 m])	EV22440-013
with ST Connector	MPM2000ST	Multi-mode Patch Cord with	
with SC Connector	MPM2000SC	ST/SC Connectors (3.25 ft [1 m])	EV22440-014
Single-mode Power Meter (+20 dB to -60 dB)		Multi-mode Patch Cord with	
with FC Connector	MPM2000HFC	SC/SC Connectors (3.25 ft [1 m])	EV22440-017
with ST Connector	MPM2000HST	Multi-mode Patch Cord with	
with SC Connector	MPM2000HSC	ST/SMA 9 mm Connectors (3.25 ft [1 m])	EV22440-018
		Multi-mode Patch Cord with	
		FC/SMA 9 mm Connectors (3.25 ft [1 m])	EV22440-023
		Multi-mode Patch Cord with	
		SC/SMA 9 mm Connectors (3.25 ft [1 m])	EV22440-024
		MPM Power Meter Adapter with FC connector ...	EV6220-715
		MPM Power Meter Adapter with ST connector ...	EV6220-716
		MPM Power Meter Adapter with SC connector ...	EV6220-717
		Gender changing adapter with	
		Multi-mode ST connectors	EV22440-019
		Gender changing adapter with	
		Single mode SC connectors	EV22440-020
		Gender changing adapter with	
		Multi-mode SC connectors	EV22440-021
		Gender changing adapter with	
		Single mode ST connectors	EV22440-022
		Gender changing adapter with	
		Single mode FC connectors	EV22440-023
		Bare fiber adapter SC connector	EV25970-034
		Bare fiber adapter FC connector	EV25970-035
		Bare fiber adapter ST connector	EV25970-036
		*Bare fiber adapter Single-/Multi-mode body	EV25970-037
		* SC, FC, or ST Connector required with body	
		DC Power Supply	EV27900-051
		Rechargeable Battery	EV25985-023
Included Accessories			
User Guides			
MLS635	EV6172-625		
MLS1000	EV6172-626		
MLS2000	EV6172-627		
MPM1000	EV6172-628		
MPM2000 and MPM2000H	EV6172-629		
Test & Carry Pouch	EV6220-714		
NOTE: Patch cord with appropriate connector is included with each unit as indicated above.			



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