OPM 1 Optical Power Meter

This portable optical power meter may be used to measure optical power in premises, telco, or broadband fiber optic networks. When used with an LED or laser light source, the OPM 1 can also measure the attenuation (insertion loss) of multimode or single-mode cables. With only two controls – ON/OFF and wavelength – the OPM 1 is our simplest to use optical power meter. Optical power in dBm and the calibration wavelength setting are displayed on an easy-to-read LCD display. The optical input port accepts Noyes thread-on style connector adapter caps. Adapter caps are required and must be ordered separately. The OPM 1 is fully N.I.S.T. traceable and runs on a standard 9-volt alkaline battery.

features

- 850, 1300, 1310, 1550 nm
- Premises (Ge) and broadband (InGaAs) models
- Displays optical power (dBm)
- Our simplest to use optical power meter
- N.I.S.T. traceable

applications

- The OPM 1-2C is calibrated at 850, 1300, 1310, and 1550 nm for testing LAN, Ethernet, FDDI, Token Ring, and single-mode fiber systems such as Telco, WAN, and CATV.
- The OPM 1-3C also operates at 850, 1300, 1310, and 1550 nm but offers greater temperature stability needed for outside plant 1550 nm testing as with WAN, CATV, and Telco systems.

specifications

Optical Specifications	OPM 1-2C	OPM 1-3C
Calibration wavelengths	850, 1300, 1310, 1550 nm	850, 1300, 1310, 1550, 1625 nm
Detector type	Germanium (Ge)	InGaAs
Measurement range	+6 to -60 dBm	+6 to -70 dBm
Accuracy (@25° C, -10.0 dBm)	±0.25 dB	
Measurement units	dBm	

General Specifications

Power	Typical 60 hours with 9V battery
Adapter caps	order separately (ST, SC, FC, and others available)
Operating temperature	-10 to 50°C
Relative humidity	0 to 95% (non-condensing)
Storage temperature	-30 to 60°C
Size (H x W x D)	5.5 x 3.2 x 1.5 in (14.0 x 8.1 x 3.8 cm)
Weight	0.58 lb (0.26 kg)

All specifications at 25°C

NOYES
AFL Telecommunications

OPM1-00-2001 Rev. M 03.31.03

www.AFLtele.com or 1.800.321.5298 / 1.603.528.7780

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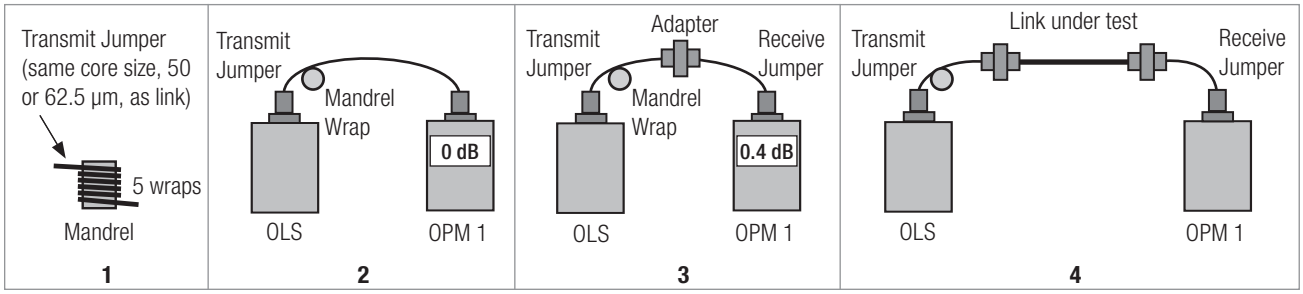
loss testing with the OPM 1



1 Attach Mandrel (multimode links only)

When testing multimode fiber links using an overfilled LED source, always wrap the transmit jumper 5 times around the proper diameter mandrel. This is specified by TIA/EIA-568-B and will improve insertion loss measurement repeatability and accuracy.

Do NOT use mandrels on multimode receive jumpers or single-mode jumpers.

Note: The transmit and receive jumpers must use same fiber type (50 or 62.5 µm) as link under test.

2 Set Reference (One Jumper Method)

Connect the output of the OLS directly to the input of the OPM1. Record the displayed power level. This is the reference power level at the current wavelength.

3 Check Jumpers

Disconnect the transmit jumper from the OPM1 (be sure NOT to remove the end of the jumper connected to the OLS). Attach the receive jumper to the OPM1. Mate the free ends of the transmit and receive jumpers. Record the displayed power level. The difference between the reference power level and the displayed power level will be the test jumper loss in dB. Verify that the insertion loss of this mated connector pair is well under 0.75 dB, the maximum allowed by the TIA. Noyes recommends that the loss of your mated test jumpers be ± 0.4 dB. If not, clean both jumpers and repeat steps 2 and 3.

4 Test Links

Connect the OLS 1 and OPM1 to opposite ends of the first link to be tested. Record the displayed power level. The difference between the reference power level and the displayed power level will be the link insertion loss in dB.

ordering information

All OPM models come with a soft carry case, protective rubber boot, instruction card, and a 9 volt battery. Optical Light Sources and Optical Power Meters from Noyes Fiber Systems can be packaged together as a kit.

Available Adapter caps:

1.25 mm Universal	8800-00-0224
2.5 mm Universal	8800-00-0214
FC	8800-00-0200
SC	8800-00-0209
ST	8800-00-0202
E-2000 (Diamond)	8800-00-0221
Biconic	8800-00-0204
SMA	8800-00-0203
LC Simplex/Duplex	8800-00-0225
Backplane SC	8800-00-0219

Radiall PFO/VFO	8800-00-0212
ESCON	8800-00-0210
DIN 47256	8800-00-0211
FDDI KIT	8800-00-0215
FDDI	8800-00-0205
D4	8800-00-0201
1000 Micron	8800-00-0223
MU Simplex	8800-00-0226
MT-RJ, A and B side	8800-00-0231