



features

- 660, 780, 850, 980, 1300, 1310, 1480, 1550, 1625 nm
- Short wavelength (Si), premises (Ge), and broadband (InGaAs) models
- High-power (+26 dBm) model
- Displays power (dBm or μ W) or insertion loss (dB)
- N.I.S.T. Traceable

OPM 4 Optical Power Meter

OPM 4 series optical power meters 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 4 can also measure the attenuation (insertion loss) of multimode or single-mode cables. Simple to use, the OPM 4 stores reference settings for each calibration wavelength. An easy to read LCD display shows optical power (dBm or μ W) or insertion loss (dB) and the calibration wavelength (nm). The optical input port accepts Noyes thread-on style connector adapter caps. Adapter caps are required and must be ordered separately. The OPM 4 is fully N.I.S.T. traceable and runs on a standard 9-volt alkaline battery.

applications

- The OPM 4-1C measures light at 660, 780, and 850 nm for testing plastic clad silica fibers, LAN, ethernet, and token ring.
- The OPM 4-2C is calibrated at 850, 1300, 1310 and 1550 nm for testing LAN, FDDI, ethernet, token ring and single-mode fiber systems such as telco, WAN, and CATV.
- The OPM 4-3C 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.
- The OPM 4-4C is calibrated at 850, 980, 1310, 1480, 1550, 1625 nm and designed for the higher power level requirements of long range, amplified optical spans used in CATV and DWDM networks.

specifications

Optical Specifications	OPM 4-1C	OPM 4-2C	OPM 4-3C	OPM 4-4C
Calibrated wavelengths (nm)	660, 780, 850	850, 1300, 1310, 1550	850, 1300, 1310, 1550, 1625	850, 980, 1310, 1480, 1550, 1625
Detector type	Silicon (Si)	Germanium (Ge)	InGaAs	Filtered InGaAs
Measurement range (dBm)	+6 to -70	+6 to -60	+6 to -70	+26 to -50
Accuracy (dB)*	± 0.25	± 0.25	± 0.25	± 0.25
Measurement units	dB, dBm, μ W	dB, dBm, μ W	dB, dBm, μ W	dB, dBm, μ W

General Specifications

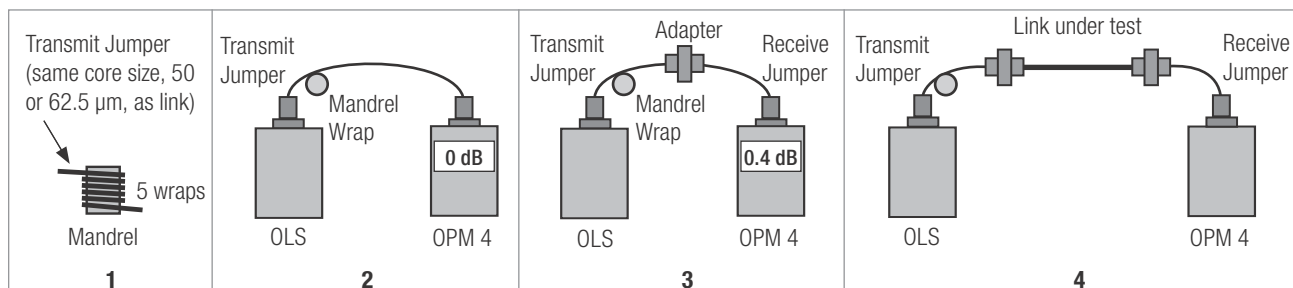
Power	typical 60 hours with 9V battery
Adapter caps	order separately (ST, SC, FC, and others available)
Operating temperature	-10 to 50°C
Relative humidity	0 to 95% (non-condensing)
Storage temperature	-30 to 60°C
Size (H x W x D)	5.5 x 3.2 x 1.5 in (14.0 x 8.1 x 3.8 cm)
Weight	0.58 lb (0.26 kg)

*Accuracy measured at 25°C and -10 dBm per N.I.S.T. standards.

All specifications at 25°C

OPM 4 Optical Power Meter

loss testing with the OPM 4



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 OPM4. Then press and hold the Ref (reference) key until the word "HELD" appears. When you release the Ref key the OPM4 should display "0 dB" (± 0.05 dB) indicating that the power measured at output of the transmit jumper has been recorded as the reference level for your insertion loss measurements.

3 Check Jumpers

Disconnect the transmit jumper from the OPM4 (be sure NOT to remove the end of the jumper

connected to the OLS). Attach the receive jumper to the OPM4. Mate the free ends of the transmit and receive jumpers. 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 and OPM4 to opposite ends of the link to be tested. The insertion loss of the fiber link will be displayed on the OPM4.

ordering information

All OPM 4 models come with a carry case, manual, 9 volt battery, and protective rubber boot. Optical light sources and optical power meters can be packaged together as a kit.

accessories

adapter caps

8800-00-0224	1.25mm Universal
8800-00-0214	2.5mm Universal
8800-00-0200	FC
8800-00-0209	SC
8800-00-0202	ST
8800-00-0221	E-2000
8800-00-0204	Biconic
8800-00-0203	SMA
8800-00-0225	LC Simplex/Duplex
8800-00-0219	Backplane SC
8800-00-0212	Radiall PFO/VFO

8800-00-0210	ESCON
8800-00-0211	DIN 47256
8800-00-0205	FDDI
8800-00-0201	D4
8800-00-0223	1000 μm
8800-00-0226	MU Simplex
8800-00-0230	MT-RJ (A side only)
8800-00-0231	MT-RJ (A side or B side)
8800-00-0232	Nickle Silver 2.5mm
8800-00-0236	Backplane 1.25
8800-00-0240	Hughes 1.6mm