

OPTICAL LOSS TEST KITS

SMLP5-5 TEST KIT

Optical Loss Test Sets (OLTS) provide the most accurate method for determining the total loss of a link.

AFL's OLTS have been an industry favourite for over 30 years with more than 100,000 units shipped. Leading service providers and enterprise customers rely on AFL's OLTS for their ruggedness, reliability, and best-in-the-industry 5-year warranty.

An OLTS test is performed with a light source on one end of the fibre sending a continuous wave at specific wavelength(s) and a power meter on the opposite end measuring the light received. The loss measured is compared to the loss budget, which is usually calculated prior to installation, and reflects the industry standards used to ensure that the link can meet its application requirements.

OLTS are mainly used to certify multimode and single-mode links, test Passive Optical Networks (PONs), identify fibres before splicing, and to ensure network continuity.

Designed for use in outside plant environments: AFL OLTS are extremely rugged and withstand one-meter drops, have splash resistant controls that are easy to use with gloves on, and the field-swappable connector adapters provide flexibility and access for cleaning optical ports at time of test.

Test faster with fewer errors: AFL's Wave ID increases test speed by performing simultaneous multi-wavelength testing that cuts loss measurement time in half or more. AFL's automatic wavelength identification eliminates setup errors and simplifies coordination between users at opposite ends of fibre.

PRODUCT OVERVIEW



Features

- Rugged, dependable, and backed by industry-best 5-year warranty
- Wave ID tests up to three wavelengths simultaneously - slashing test time
- Field-swappable connector adapters for maximum flexibility
- Long battery life from globally available AA batteries

Applications

- Certify multimode and single-mode links per TIA/EIA standards
- Passive Optical Networks (PON) testing
- Certification report generation with TRM® 2.0 software
- Fibre identification for splicing and continuity checking

Specifications ^a

Optical Specifications - Power Meters			
Model	OPM5-4D	OPM5-3D, OPM4-3D	OPM5-2D
Calibrated Wavelengths	850, 980, 1300, 1310, 1490, 1550, 1625 nm	850, 1300, 1310, 1490, 1550, 1625 nm	850, 1300, 1310, 1490, 1550 nm
Detector Type	Filtered InGaAs	InGaAs	Germanium (Ge)
Measurement Range	+26 to -50 dBm	+10 to -75 dBm	+6 to -60 dBm
Tone Detect Range	+6 to -30 dBm +6 to -25 dBm for 850 nm	+10 to -50 dBm +10 to -45 dBm for 850 nm	+6 to -50 dBm +6 to -45 dBm for 850 nm
Wavelength ID Range	+6 to -30 dBm +6 to -25 dBm for 850 nm	+10 to -50 dBm +10 to -45 dBm for 850 nm	+6 to -50 dBm +6 to -45 dBm for 850 nm
Accuracy	±0.1 dB (typical); ±0.25 dB		
Resolution	0.01 dB		
Measurement Units	dB, dBm, µW		

Optical Specifications: OLS7 Models			
Model	OLS7-FTTH (Single Port)		
Wavelength (±20 nm)	1310 nm	1490 nm	1550 nm
Spectral Width	5 nm	3 nm	5 nm
Emitter Type	Laser		
Safety Class	Class I FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2007-03		
Output Power	5 dBm (typical), 9/125 fibre		
Output Stability	±0.05 dB over 1 hour (after 15 minutes warm-up) ±0.1 dB over 8 hours (after 15 minutes warm-up)		
Tone Output	270 Hz, 330 Hz, 1 kHz, 2 kHz		

Optical Specifications: OLS4, OLS2-DUAL & OLS1-DUAL Models						
Model	OLS4 (MM Optical Port)		OLS4 (SM Optical Port)		OLS2-DUAL (Single Port)	
Wavelength (±20 nm)	850 ±30 nm	1300 +30/-20 nm	1310 ±20 nm	1550 ±20 nm	1310 ±20 nm	1550 ±20 nm
Spectral Width	45 nm (typ)	120 nm (typ)	5 nm (max)		5 nm (max)	
Emitter Type	LED		Laser			
Safety Class	Class I FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2007-03					
Output Power	>-20 dBm, 62.5 µm multimode ^b		0 dBm, 9 µm single-mode		0 dBm, 9 µm single-mode ^c	
Output Stability	±0.1 dB over 8 hours (after 5 minutes warm-up)		±0.05 dB over 1 hour (after 15 minutes warm-up) ±0.1 dB over 8 hours (after 15 minutes warm-up)			
Tone Output	N/A		2 kHz		270 Hz, 330 Hz, 1 kHz, 2 kHz	

General Specification: All OPM & OLS Models	
Available Adapters	SC FC, ST, LC
Power	2 AA batteries
Operating Temperature	-10 °C to 50 °C, 90 % RH (non-condensing)
Storage Temperature	-30 °C to 60 °C, 90 % RH (non-condensing)
Size (H x W x D)	14.0 x 8.1 x 3.8 cm (5.5 x 3.2 x 1.5 in)
Weight	0.29 kg (0.65 lb)

Notes:

- All specifications valid at 25°C unless otherwise specified.
- May be used to test 50 or 62.5 µm fibre with supplied mandrels.
- Output power will be approximately 3 dB less if a 50 µm mandrel-wrapped jumper is used instead of a 62.5 µm mandrel-wrapped jumper.
- Adjustable 2 dB.

Ordering Information

AFL Number	Power Meter	Light Source	Fibre Type	Loss Measurements (nm)					Dynamic Range (dB)	TRM [®] 2.0 PC Reporting
				850	1300	1310	1490	1550		
SLP5-6	OPM5-3D	OLS2-DUAL	SM			◆		◆	70 ^b	◆
SLP5-FTTH	OPM5-4D	OLS7-FTTH	SM			◆	◆	◆	45 ^b	◆
SMLP5-5	OPM5-2D	OLS4	MM SM	◆	◆	◆		◆	40 @ 850/1300 nm ^a 60 @ 1310/1550 nm ^b	◆

Notes:

a. On 62.5/125 µm multimode fiber.

b. On 9/125 µm single-mode fiber.

Part Number – Connector Specification

Model Number (M)

M - CC

Connector Type (CC)

M = Model Number (AFL NO.) above

CC = FC, SC, ST, LC

Example: SMLP5-5-SC = SMLP5-5 Test Kit with SC adapters

Accessories

Part Number	Description
Light Source Connector Adapters	
2900-50-0002MR	FC connector adapter
2900-50-0003MR	SC connector adapter
2900-50-0004MR	ST connector adapter
2900-50-0006MR	LC connector adapter
Power Meter Connector Adapters	
8800-00-0200	FC connector adapter
8800-00-0209	SC connector adapter
8800-00-0202	ST connector adapter
8800-00-0225	LC connector adapter
Multimode Test Cords (50/125 µm – 2 meters)	
8700-00-0093	FC/FC
8700-00-0064	SC/ST
8700-00-0065	SC/SC
8700-00-0082	LC/LC
Single-Mode Test Cords (9/125 µm – 2 meters)	
8700-00-0005	FC/FC
8700-00-0016	FC/ST
8700-00-0017	ST/ST
8700-00-0018	SC/SC
8700-00-0021	FC/SC
8700-00-0022	SC/ST
8700-00-0046	SC/LC
8700-00-0071	FC/LC
8700-00-0097	LC/LC

Part Number	Description
Mating Adapters (Bulkheads)	
8400-00-0004MR	FC/FC
8400-00-0045MR	SC/SC
8400-00-0020	ST/ST
8400-00-0075	LC/LC
Power Meter Connector Adapters	
8800-00-0200	FC connector adapter
8800-00-0209	SC connector adapter
8800-00-0202	ST connector adapter
8800-00-0225	LC connector adapter
Cleaning Supplies	
8500-05-0001MZ	One-Click Cleaner SC/ST/FC
8500-05-0002MZ	One-Click Cleaner LC
8500-10-0016MZ	Cletop –SB Cassette Cleaner
8500-10-00017MZ	Cletop –SB Refill Cartridge

Test Management & Reporting Software

Part Number	Description
TRM-00-0900PR	TRM® 2.0 with Basic License (OTDR Trace/OLTS Viewer, Batch Editor and Reports), USB delivery

Qualifications

Category	Regulation / Standard	Qualification
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety/EMC/EMI	IEC	Compliant to IEC 61010-1 for safety requirements for electrical equipment
	EN	Compliant to EN 61010-1 for safety requirements for electrical equipment
	IEC	Compliant to IEC 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
	FDA	Compliant to code of federal regulations FDA 21 CFR 1040.10 and 1040.11 on laser products
	IEC	Compliant to IEC 60825-1 for safety of laser products
RoHS	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)
Test Method	TIA	Compliant to TIA-568.3-D for test and measurement requirements for premises optical fibre cabling and components*
	IEC	Compliant to IEC 11801 for test and measurement requirements for optical fibre cabling for use within premises*
	EN	Compliant to EN 50173 for test and measurement requirements for optical fibre cabling for use within premises*
	AS/NZS	Compliant to AS/NZS 3080 for test and measurement requirements for optical fibre cabling for use within premises*
	TIA	Compliant to TIA-526-7 for test procedures for installed optical fibre cable plant
	TIA	Compliant to TIA-526-14 for test procedures for installed optical fibre cable plant*
	IEC	Compliant to IEC 14763-3 for systems and methods for the inspection and testing of installed optical fibre cabling*
	AS/NZS	Compliant to AS/NZS 14763.3 for systems and methods for the inspection and testing of installed optical fibre cabling*
	IEC	Compliant to IEC 61280-4-1 for test procedures for installed optical fibre cable plant*
	IEC	Compliant to IEC 61280-4-2 for test procedures for installed optical fibre cable plant
Generic Requirement	IEC	Compliant to IEC 61315 for requirements on calibration of fibre-optic power meters

* A complementary encircled flux mode conditioner may be needed to comply with encircled flux launch conditions for testing multimode optical fibre cabling and components.