

Encircled Flux (EF) Compliant Light Sources and Test Kits



Features

- EF Compliant light sources and test kits per TIA 526-14-B and IEC 61280-4-1 Ed. 2.0
- EF Compliant by design – no additional equipment required
- Industry-leading 5-year warranty
- Wave ID for error free testing of multiple wavelengths simultaneously
- Test cords included

Applications

- MMF and SMF testing requiring EF Compliant equipment
- Passive Optical Network (PON) testing
- Certify multimode and single-mode links to TIA/EIA standards
- Certification report generation with TRM® 2.0 software

Designed for use in outside plant environments: AFL OLS4 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.

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Specifications ^a

OPTICAL SPECIFICATIONS - POWER METERS	
MODEL	OPM5-2D
Calibrated Wavelengths	850, 1300, 1310, 1490, 1550 nm
Detector Type	Germanium (Ge)
Measurement Range	+6 to -60 dBm
Tone Detect Range	+6 to -50 dBm +6 to -45 dBm for 850 nm
Wavelength ID Range	+6 to -50 dBm +6 to -45 dBm for 850 nm
Accuracy	±0.25 dB
Resolution	0.01 dB
Measurement Units	dB, dBm, µW

OPTICAL SPECIFICATIONS: OLS4 AND OLS1-DUAL MODELS				
MODEL	OLS4 EF (MM OPTICAL PORT)		OLS4 EF (SM OPTICAL PORT)	
Wavelength	850 ±30 nm	1300 +30/-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	≥ -24 dBm, 50 µm multimode		0 dBm, 9 µm single-mode	
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	

GENERAL SPECIFICATIONS: ALL OPM AND 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:

a. All specifications valid at 25°C unless otherwise specified.

Ordering Information

Encircled Flux (EF) Compliant Light Sources

Since adoption by the IEC, Encircled Flux (EF) multimode launch requirements are increasingly specified into fibre loss testing job requirements. Meeting EF specification requires technicians use EF qualified test sets. It is important to note IEC 61280-1-4 and TIA-568-14-B, specify EF multimode launch conditions at the end of an EF qualified Reference Grade Test Cord (RGTC) – not directly out source test port. Thus, EF compliance requires an EF Light Source and RGTC used together. AFL offers OLS4 MM/SM light source with designed in Encircled Flux (EF) optics supplied with EF qualified RGTC. OLS4 EF is supplied with one multimode RGTC and one standard 9/125 single-mode test cord.

WAVELENGTHS	TEST CORDS INCLUDED	AFL NO.
MM 850/1300 nm	(1) RGTC, 50 µm, MM, 2-meter	OLS4-EF
SM 1310/1550 nm	(1) 9/125 µm, SM, 2-meter	

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Ordering Information

Encircled Flux (EF) Compliant Test Kits

AFL EF compliant loss test kits include:

Multimode Test Ports:

- Light Source with designed in Encircled Flux (EF) optics paired with one EF qualified RGTC.
- 50/125 µm receive test cord

Single-mode Test Ports

- Light Source with two 9/125 µm test cords (launch / receive)

POWER METER	LIGHT SOURCE	FIBRE TYPE	WAVELENGTH (nm)	DYNAMIC RANGE (dB)	AVAILABLE CONNECTORS		INCLUDED 2-METER TEST CORDS		AFL NO.
					SOURCE PORT	TEST CORD	LAUNCH (µm)	RECEIVE (µm)	
OPM5-2D	OLS4-EF	MM SM	850, 1300 1310, 1550	36 @ 850/1300 nm 60 @ 1310/1550 nm	FC, SC	FC, SC, ST, LC	MM: RGTC, 50/125 SM: 9/125	MM: 50/125 SM: 9/125	SMLP5-5-EF

Accessories

DESCRIPTION	AFL. NO.
LIGHT SOURCE CONNECTOR ADAPTERS	
FC connector adapter	2900-50-0002MR
SC connector adapter	2900-50-0003MR
ST connector adapter	2900-50-0004MR
LC connector adapter	2900-50-0006MR
POWER METER CONNECTOR ADAPTERS	
FC connector adapter	8800-00-0200
SC connector adapter	8800-00-0209
ST connector adapter	8800-00-0202
LC connector adapter	8800-00-0225

EF MODAL CONTROLLER LAUNCH TEST CORDS (50/125 µm – 2 METRES)	
Required with all Non-EF Compliant Light Sources and with non-AFL Light Sources	
FC/FC	TLL-S3FCFC2M-EF
FC/ST	TLL-S3FCST2M-EF
SC/FC	TLL-S3SCFC2M-EF
SC/SC	TLL-S3SCSC2M-EF
SC/LC	TLL-S3SCLC2M-EF

MULTIMODE TEST CORDS (9/125 µm - 2 METERS)	
FC/FC	TLL-S3FCFC2M
FC/ST	TLL-S3FCST2M
SC/FC	TLL-S3SCFC2M
SC/SC	TLL-S3SCSC2M
SC/LC	TLL-S3SCLC2M
LC/LC	TLL-S3LCLC2M

DESCRIPTION	AFL. NO.
SINGLE-MODE TEST CORDS (9/125 µm - 2 METERS)	
FC/FC, 2m	TLL-S1FCFC2M
FC/ST, 2m	TLL-S1FCST2M
FC/SC, 2m	TLL-S1FCSC2M
SC/ST, 2m	TLL-S1SCST2M
LC/SC, 2m	TLL-S1LCSC2M
SC/SC, 2m	TLL-S1SCSC2M
MATING ADAPTERS (Bulkheads)	
FC/FC	ADPT-FC-DDH-MYL
ST/ST	ADPT-ST-DDH-MYL
SC/FC	ADPT-SCFC-STF-MBK
SC/SC	ADPT-SC-RDF-BU
SC/ST	ADPT-SCST-RDF-BU
CLEANING SUPPLIES	
One-Click Cleaner SC/ST/FC	8500-05-0001MZ
One-Click Cleaner LC	8500-05-0002MZ
Cletop –SB Cassette Cleaner	8500-10-0016MZ
Cletop –SB Refill Cartridge	8500-10-00017MZ

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Test Management and Reporting Software

DESCRIPTION	AFL NO.
TRM® 2.0 with Basic License (OTDR Trace/OLTS Viewer, Batch Editor and Reports), USB delivery	TRM-00-0900PR

Recommended Products



Fujikura Optical Fibre Identifier

- World class signal sensitivity
- Trigger lock, positive stop for optimum detection
- Integrated optical power meter option



One-Click® Cleaners

- Patented single-action
- Variety of sizes and types
- Low cost per clean

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
RoHS	IEC	Compliant to IEC 60825-1 for safety of laser products
	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

Contact AUSSales@AFLglobal.com to schedule a demonstration or learn how to buy.
 Visit www.AFLglobal.com/Test to learn more about Encircled Flux (EF) Compliant Light Sources and Test Kits.
 International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts