



## 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
- Full 5-year warranty
- Wave ID for error free testing of multiple wavelengths simultaneously
- Test cords included

### Designed for outside plant environments

- Splash resistant controls
- Withstands one-meter drop test
- Controls designed for easy operation with gloves
- Field swappable connector adapters provide flexibility and access for cleaning optical ports at time of test

### Wave ID – Increase test speed with less errors

- Simultaneous multi-wavelength testing cuts loss measurement time in half or more
- Automatic wavelength identification eliminates setup errors and simplifies coordination between users at opposite ends of fibre

### Applications

- Multimode 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

**5 YEAR  
WARRANTY**

## Encircled Flux (EF) Compliant Light Sources and Test Kits

### Specifications <sup>a</sup>

OPTICAL SPECIFICATIONS - POWER METERS						
MODEL	OPM5-2D AND OPM4-2D MODELS					
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)		OLS1-DUAL EF (MM OPTICAL PORT)	
Wavelength	850 ±30 nm	1300 +30/-20 nm	1310 ±20 nm	1550 ±20 nm	850 ±30 nm	1300 +30/-20 nm
Spectral Width	45 nm (typ)	120 nm (typ)	5 nm (max)	5 nm (max)	45 nm (typ)	120 nm (typ)
Emitter Type	LED		Laser		LED	
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		≥ -24 dBm, 50 µm multimode	
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)		±0.1 dB over 8 hours (after 5 minutes warm-up)	
Tone Output	N/A		2 kHz		N/A	
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.

## Encircled Flux (EF) Compliant Light Sources and Test Kits

### 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 multimode light sources with designed in Encircled Flux (EF) optics supplied with EF qualified RGTC.

- OLS1-DUAL EF is supplied with one multimode 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	OLS1-DUAL-EF
MM 850/1300 nm SM 1310/1550 nm	(1) RGTC, 50 µm, MM, 2-meter (1) 9/125 µm, SM, 2-meter	OLS4-EF

#### Encircled Flux (EF) Compliant Test Kits

AFL EF compliant loss test kits include:

Multimode Test Ports: (SMLP and MLP kits)

- 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 (SMLP kits)

- 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 ( M)	RECEIVE ( M)	
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
OPM4-2D	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	SMLP4-4-EF
OPM5-2D	OLS1-DL-EF	MM	850, 1300	36 @ 850/1300 nm	FC, SC	FC, SC, ST, LC	MM: RGTC, 50/125	MM 50/125	MLP5-2-EF
OPM4-2D	OLS1-DL-EF	MM	850, 1300	36 @ 850/1300 nm	FC, SC	FC, SC, ST, LC	MM: RGTC, 50/125	MM 50/125	MLP4-2-EF

## Encircled Flux (EF) Compliant Light Sources and Test Kits

### Accessories

PART NUMBER	DESCRIPTION
<b>LIGHT SOURCE CONNECTOR ADAPTERS</b>	
2900-50-0002MR	FC connector adapter
2900-50-0003MR	SC connector adapter
2900-50-0004MR	ST connector adapter
2900-50-0006MR	LC connector adapter
<b>POWER METER CONNECTOR ADAPTERS</b>	
8800-00-0200	FC connector adapter
8800-00-0209	SC connector adapter
8800-00-0202	ST connector adapter
8800-00-0225	LC connector adapter

### Encircled Flux (EF) Reference Grade Test Cords

Encircled Flux (EF) requirements (IEC 61280-1-4 and TIA-568-14-B) specify multimode launch conditions at the end of an EF qualified Reference Grade Test Cord (RGTC). Thus, compliance to EF standards requires both a light source with EF compliant optics and a RGTC.

AFL offers RGTCs with a range of connector options. Note: RGTCs are qualified in one direction and marked accordingly (input/output). Order RGTCs with all output connectors encountered in network testing.

PART NUMBER	CONNECTORS
TLC-S3FCFC2M	FC to FC, 2 m
TLC-S3FCSC2M	FC to SC, 2 m
TLC-S3FCLC2M	FC to LC, 2 m
TLC-S3FCST2M	FC to ST, 2 m
TLC-S3SCFC2M	SC to FC, 2 m
TLC-S3SCSC2M	SC to SC, 2 m
TLC-S3SCLC2M	SC to LC, 2 m
TLC-S3SCST2M	SC to ST, 2 m

