

# Optical Loss Test Set

FOT-300



Highly optimized OLTS integrating a power meter port and up to three singlemode sources or two multimode sources on a single port

Power autonomy of 260 hours

Three-year warranty and recommended calibration interval, for dramatically reduced cost of ownership

Ergonomic, eye-catching handheld package

Part of EXFO's new line of handheld units, the FOT-300 Optical Loss Test Set is the only tool of its kind to solely offer basic OLTS features and functions, providing it unparalleled cost-effectiveness.

## Auto-Wavelength Recognition

The FOT-300's built-in source can transmit with a wavelength-identification digital encrypted protocol, so that any compatible unit—the FPM-300 Power Meter and the FOT-300's receiver—can automatically use the proper calibration parameters. This feature reduces the need for communication between the two technicians and decreases the potential for error.

## Distant Referencing

Signal encrypting can also give the receiving end information on the power to be used as reference, helping ensure efficient referencing, even when the two units are far apart.

## No Offset Nulling

Thanks to its unique design, the FOT-300 Optical Loss Test Set reduces measurement time in typical measurement situations, as the need for an offset nulling is eliminated.

## FTTx Ready

EXFO's FLS-300 allows for the testing of passive optical networks (PONs) at 1310 nm, 1490 nm and 1550 nm, the three ITU-T G.983.3 recommended wavelengths for PONs.



Fiber-optic T&M,  
monitoring, manufacturing  
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# Specifications<sup>1</sup>

Model	FOT-302	FOT-302X
Power meter port <sup>2</sup>	Ge	GeX
Power range (dBm) <sup>3</sup>	10 to -60	26 to -50
Range displayed (dBm)	Down to -65	Down to -50
Number of calibrated wavelengths <sup>4</sup>	10	10
Power uncertainty <sup>5</sup>	± 5 % ± 1 nW	± 5 % ± 10 nW
Resolution (dB)	0.01 <sup>6</sup>	0.01 <sup>7</sup>
Automatic offset nulling <sup>8</sup>	Yes	Yes
Warmup time (s) <sup>9</sup>	0	0
Display units	dB/dBm/W	dB/dBm/W
Automatic wavelength recognition <sup>10</sup>	Yes	Yes
Screen refresh rate (Hz)	3	3
Tone detection (Hz)	270, 1 k, 2 k	270, 1 k, 2 k
Battery life (hours) (typical)	260	260
Warranty and recommended calibration interval (years)	3	3

Model <sup>11</sup>	23BL	234BL	235BL	12D	01-VCL
Central wavelength (nm)	1310 ± 20 1550 ± 20	1310 ± 20 1550 ± 20 1625 ± 15	1310 ± 20 1490 ± 10 1550 ± 20	850 ± 25 1300 +50/-10	850 ± 20
Spectral width (nm) <sup>12</sup>	≤ 5	≤ 5	≤ 5	50/135	≤ 1
Output power (dBm)	≥ 1/≥ 1	≥ 1/≥ -3/≥ -5	≥ 1/≥ -4.5/≥ -3	≥ -18/≥ -18 (62.5/125 μm)	≥ -3 (50/125 μm)
Power stability (dB) <sup>13</sup>					
8 hours	± 0.10	± 0.10	± 0.10	± 0.10	± 0.25
Battery life (hours) <sup>14</sup>	120	100	120	120	250
Automatic wavelength recognition	Yes	Yes	Yes	Yes	Yes
Tone generation (Hz)	270, 1 k, 2 k	270, 1 k, 2 k	270, 1 k, 2 k	270, 1 k, 2 k	270, 1 k, 2 k
Warranty and recommended calibration interval (years)	3	3	3	3	3

## Notes

- Guaranteed unless otherwise specified.
- All specifications valid at 1550 nm and 23 °C ± 1 °C, with an FC connector.
- In CW mode; sensitivity defined as 6 x rms noise level.
- Wavelengths: 830 nm, 850 nm, 980 nm, 1300 nm, 1310 nm, 1450 nm, 1490 nm, 1550 nm, 1590 nm and 1625 nm.
- Traceable to NIST; FOT-302X: up to 20 dBm.
- From 10 dBm to -50 dBm.
- From 26 dBm to -35 dBm.
- Power of > -40 dBm for FOT-302, and of > -25 dBm for FOT-302X.

- For ± 0.05 dB, for temperatures > 18 °C.
- At 850 nm, 1300 nm, 1310 nm, 1490 nm, 1550 nm and 1625 nm; power > -50 dBm for FOT-302, and > -40 dBm (typical) for FOT-302X.
- All specifications valid at 23 °C ± 1 °C, with an FC connector.
- rms for lasers and -3 dB width for LEDs; typical values for LEDs.
- After 15 minutes warmup; expressed as ± half the difference between the maximum and minimum values measured during the period, with an APC connector on the power meter.
- Typical autonomy in Auto mode.

## General Specifications

Size (H x W x D)	18.5 cm x 10.0 cm x 5.5 cm	(7 <sup>1</sup> / <sub>8</sub> in x 4 in x 2 <sup>1</sup> / <sub>8</sub> in)
Weight	0.4 kg	(0.9 lb)
Temperature operating	-10 °C to 50 °C	(14 °F to 122 °F)
storage	-40 °C to 70 °C	(-40 °F to 158 °F)
Relative humidity	0 % to 95 % non-condensing	

## Standard Accessories

User guide, Certificate of Calibration, instrument stickers in six languages, AC adapter, connector adapter (FOA-XX), three AA batteries, wrist strap, alcohol cleaning pads.

## Safety

21 CFR 1040.10 and IEC 60825-1:1993+A1:1997+A2:2001:  
CLASS 1M LASER PRODUCT

## Ordering Information

### FOT-30X-XX-XX

#### Model

FOT-302-01-VCL = Ge detector, 850 nm VCSEL 50/125 μm  
 FOT-302-12D = Ge detector, 850/1300 nm LED source 62.5/125 μm  
 FOT-302-23BL = Ge detector, 1310/1550 nm laser source 9/125 μm  
 FOT-302-234BL = Ge detector, 1310/1550/1625 nm laser source 9/125 μm  
 FOT-302-235BL = Ge detector, 1310/1490/1550 nm laser source 9/125 μm  
 FOT-302X-23BL = High-power Ge detector, 1310/1550 nm laser source 9/125 μm  
 FOT-302X-234BL = High-power Ge detector, 1310/1550/1625 nm laser source 9/125 μm  
 FOT-302X-235BL = High-power Ge detector, 1310/1490/1550 nm laser source 9/125 μm

Example: FOT-302X-235BL-FOA-22-EI-EUI-89

#### Connector Adapter

FOA-12 = Biconic  
 FOA-14 = D4: D4, D4/PC  
 FOA-16 = SMA/905, SMA/906  
 FOA-22 = FC: FC (PC/SPC/UPC/APC), NEC-D3  
 FOA-24 = Radial VFO/DF (straight/slant)  
 FOA-28 = DIN 47256 (LSA): DIN 47256 (PC/APC)  
 FOA-32 = ST: ST (PC/SPC/UPC)  
 FOA-34 = Mini-BNC  
 FOA-40 = Diamond HMS-OHFS-3 (3.5 mm)  
 FOA-42 = Radial PFO  
 FOA-44 = Radial MFO  
 FOA-48 = HP HFBR-4501-HFBR-4503  
 FOA-52 = Biconic Bayonet  
 FOA-54 = SC: SC (PC/SPC/UPC/APC)  
 FOA-68 = AT&T Rotary Splice  
 FOA-76 = FSMA HMS-10/AG, HFS-10/AG  
 FOA-78 = Radial EC  
 FOA-84 = Diamond HMS-10, HFS-13  
 FOA-96B = E-2000  
 FOA-98 = LC  
 FOA-99 = MU

#### Connector

50 = FC/PC<sup>1</sup>  
 54 = SC/PC<sup>1</sup>  
 74 = ST/PC<sup>1</sup>  
 89 = FC/UPC<sup>2</sup>  
 90 = ST/UPC<sup>2</sup>  
 91 = SC/UPC<sup>2</sup>  
 EI-EUI-28 = UPC/DIN 47256  
 EI-EUI-76 = UPC/HMS-10/AG  
 EI-EUI-89 = UPC/FC narrow key  
 EI-EUI-90 = UPC/ST  
 EI-EUI-91 = UPC/SC  
 EI-EUI-95 = UPC/E-2000  
 EA-EUI-28 = APC/DIN 47256<sup>2</sup>  
 EA-EUI-89 = APC/FC narrow key<sup>2</sup>  
 EA-EUI-91 = APC/SC<sup>2</sup>  
 EA-EUI-95 = APC/E-2000<sup>2</sup>

#### Notes

- Multimode only
- Singlemode only

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