

WARNING: LIGHT SOURCE LASER DOES NOT OPERATE AT VISIBLE WAVELENGTH. LIGHT IS NOT VISIBLE WHEN LASER IS ACTIVE. TO AVOID THE RISK OF EYE DAMAGE, DO NOT LOOK AT LASER WHEN LIGHT SOURCE IS OPERATIONAL.

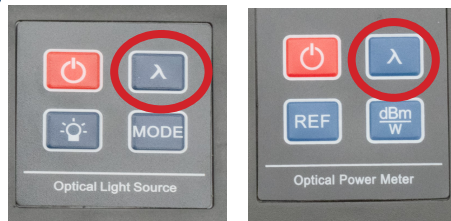
Your power meter and light source units measure loss in decibels (dB) by comparing the power transmitted into the cable by the light source to the power measured on the receiver end by the power meter. Compare the link's measured loss to its estimated loss in order to determine the "loss budget."

Match wavelength settings to the fiber type in use: **Multimode fibers:** 850 nm (optionally 1300 nm).
Single mode fibers: 1310 nm (optionally 1550 nm).

This testing kit combined with the included reference cables allows for single-ended loss testing of fiber optic cables. Double ending requires additional reference cables (part number SSF-REFCBL-MM = multimode or SSF-REFCBL-SM = single mode).

Refer to the Fiber Optic Association (FOA) **Guide to Fiber Optics and Premises Cabling** booklet included with this kit for information on testing guidelines, allowable loss, and link budget calculations. Further information on single-ended and double-ended testing can be found via the FOA at www.thefoa.org.

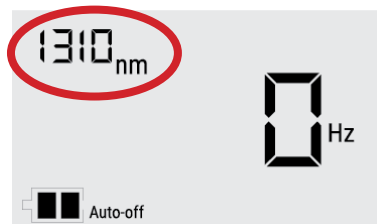
****AAA (1.5 V) BATTERIES REQUIRED. BATTERIES NOT INCLUDED. INSERT 3 PER UNIT TO OPERATE.****



1. Select correct light source for fiber type being tested (SM = single mode or MM = multimode; labeled above screen on left). Turn on both light source (OLS) and power meter (OPM).

Press wavelength buttons on OPM & OLS units to set desired wavelength.

850nm: Typical multimode testing
1310nm: Typical single mode testing



1A. The OLS displays wavelength in the upper left corner of the screen. Press wavelength key to set.



1B. Set OPM to same to same wavelength as the OLS unit. Press the wavelength button until desired value appears.

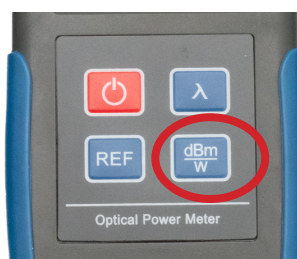
850nm: Typical multimode testing
1310nm: Typical single mode testing

*Use appropriate cables. Aqua = multimode (MM). Yellow = single mode (SM).



2. On the OLS press MODE button until 0 Hz displays in lower right of the screen (see step 1A image).

This is the typical testing configuration for most cables.



3. On the OPM, press the "dBm/W" button until dBm is the unit listed to the right of the main screen read-out (see step 1B image).

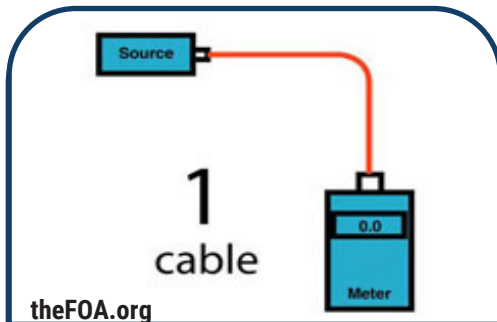


4. Plug REFERENCE cable into OLS. **Note: Do not look into laser while unit is on.**

SC testing: plug appropriate MM or SM cable into OLS.

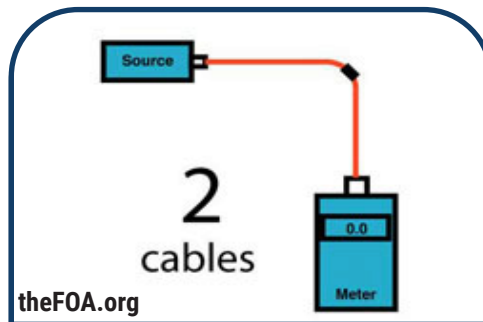
LC testing: Attach appropriate SC to LC adapter, then plug MM or SM reference cable into adapter.

Adapter: Beige = MM. Blue = SM



5. For single-ended testing, plug in appropriate SC cable or LC cable with SC to LC adapters (single mode or multimode according to the cable being tested) between OLS and OPM.

Cable: Aqua = MM. Yellow = SM
Adapter: Beige = MM. Blue = SM



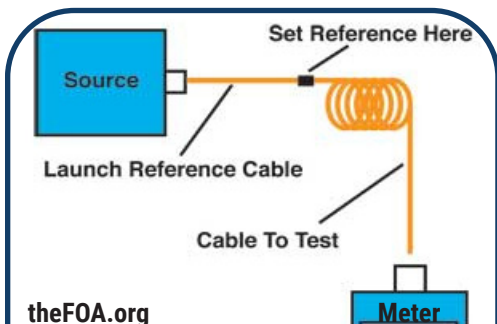
6. For double-ended testing, plug in two appropriate SC cables or two LC cables with adapters, one into OLS and one into OPM, with SC connectors or LC to SC adapters into OPM and OLS ports.¹

Link SC or LC ends together with feedthrough adapter.



7. Reference OPM.²

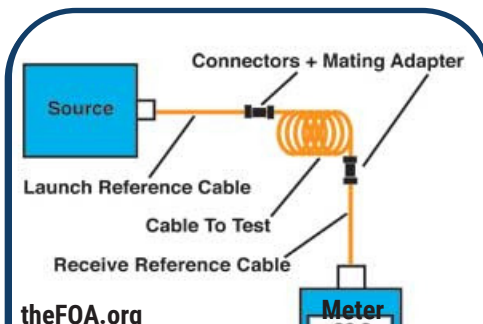
Once cable(s) are connected between OLS and OPM units, press and hold "REF" button for two seconds. OPM should now read 0dB.



7A. Single-ended Testing:

Unplug connector from power meter side ONLY. Place feedthrough SC or LC adapter, depending on cable being tested, on connector. Connect cable to be tested to reference cable and to power meter.

The dB value that appears center of screen (see step 7) is the loss value.



7B. Double-ended Testing:

Unplug connector from SC or LC feedthrough adapter. Place additional SC or LC feedthrough adapter on connector. Connect cable to be tested to reference cables.

The dB value that appears center of screen (see step 7) is the loss value.

¹ Double-ended testing is optional and requires additional reference cables. Part Number:

SSF-REFCBL-MM = Multimode
SSF-REFCBL-SM = Single Mode

² Performing Step 7 removes the power loss measurement of the "reference" cables so that it will not be included in the dB loss reading of the installed cables.

View Instructional Videos demonstrating testing at:

www.cleerline.com/resources

Refer to the included FOA instructions "Guide to Fiber Optics & Premises Cabling" to perform A>B and B<A testing to properly diagnose high loss connector terminations.

For accurate testing, frequent cleaning of all connector faces being placed under test, maintaining minimal bends and movement of reference cables, and resetting of power meter reference throughout the course of testing are recommended.