

Quick Card

MP-60 and MP-80 USB Optical Power Meter Measuring Optical Insertion Loss with FiberChekPRO

The following procedure outlines how to use an MP-60 or MP-80 Optical Power Meter (OPM) and VIAVI FiberChek PRO software to measure Optical Insertion Loss (OIL). Prior to measuring OIL, the Power Meter must be referenced to an Optical Light Source (OLS). This procedure explains how to reference the Power Meter to a Light Source and how to measure OIL with the MP-60 or MP-80. Refer to your OLS documentation for instructions to operate the Light Source.

Equipment Requirements:

- FiberChek PRO software with 2.0 version or greater (download at <http://fcpro.updatemyunit.net/>)
- MP-60 or MP-80 USB Optical Power Meter
- Laptop Personal Computer (PC)
- Fiber optic cleaning and inspection tools
- Patch Cord (Reference Cable) with connectors matching the Power Meter and Fiber Under Test (FUT)
- Optical Coupler to connect Jumper Cable to the FUT



The following information is required to complete the test:

- Type of Fiber (Multimode or Single Mode)
- Type of Connectors (SC UPC, SC APC, LC UPC, etc.)
- Wavelength of signal(s) to measure

Referencing the Power Meter to the Light Source:

The OPM must be referenced to the light source prior to OIL measurement. All fibers and connectors must pass a fiber inspection test prior to connection.

1. Insert the MP-60/MP-80 OPM into a USB port on the PC or laptop.
2. Inspect and, if necessary, clean the fiber end face of the Reference Cable.
3. Connect the Reference Cable to the Patch Cord Input on the OPM.
4. Inspect and, if necessary, clean the other fiber end face of the Reference Cable.
5. Inspect and, if necessary, clean the fiber end face of the OLS Reference Cable.
6. Connect the OPM Reference Cable to the OLS Reference Cable via the coupler.

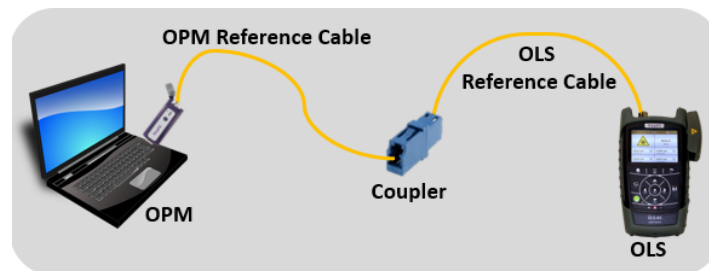


Figure 1: Connecting the OPM to OLS for Reference

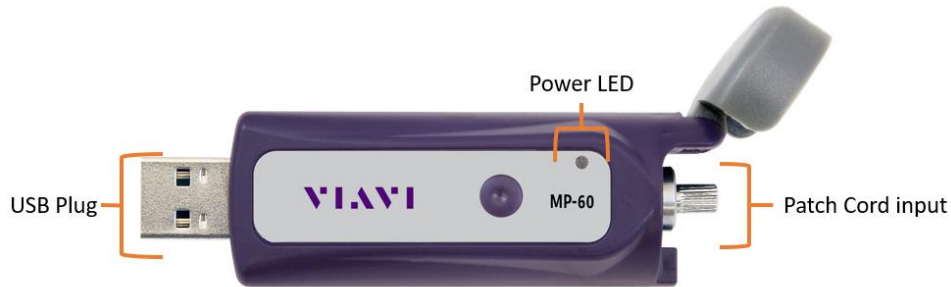


Figure 2: MP-60 USB Power Meter

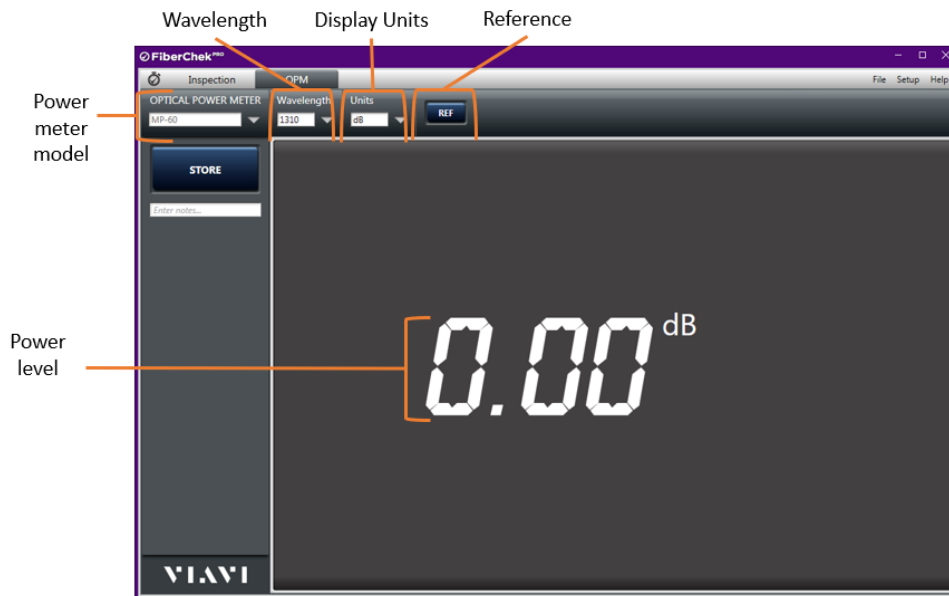


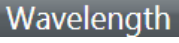



Figure 3: FiberChek PRO Optical Power Meter View

7.  Launch FiberCheck PRO from the Windows Start menu on your PC or laptop.
8.  Tap the **Units** drop-down menu and set units to **dB**.
9.  Tap the **Wavelength** drop-down menu to select the wavelength.
10.  Confirm that the OLS laser is **on** and tap the **REF** button to reference the relative power level to 0.00dB.
11. Repeat steps 9 and 10 for all wavelengths to be tested.
12. Disconnect the OPM Reference Cable from the coupler. Do not disconnect the Reference Cable from the Patch Cord Input port or disconnect the OPM from the Laptop until all OIL testing is complete. If the OLP is powered off or the Fiber is disconnected from the OLP, you must reference the OLP and OLS again.

Measuring Insertion Loss:

If you are performing an Optical Insertion Loss test and the Power Meter has been referenced to an OLS, the Reference Cable should already be connected to the MP-60 or MP-80 and the Laptop PC should be powered on and in the FiberChek PRO Power Meter Results view.

1. If the interface to the Fiber under Test (FUT) is a patch cord, connect the patch cord to an optical coupler with the same connector type.
2. Inspect and, if necessary, clean the FUT connected to the coupler or OPP.
3. Inspect and, if necessary, clean the fiber end face of the Launch Cable.
4. Connect the Reference Cable to the coupler or OPP leading to the light source.

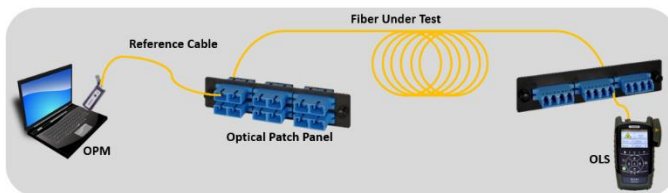


Figure 4: Connecting the OPM to an OPP

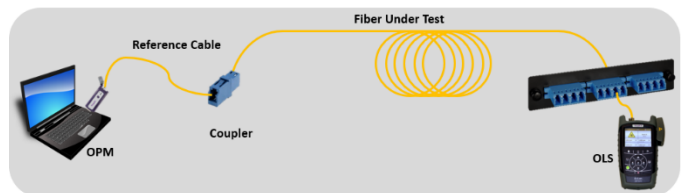


Figure 5: Connecting the OPM to FUT with a coupler

5. **Wavelength** Tap the **Wavelength** drop-down menu to select the wavelength.
6. View the Relative Power Level (dB) in the **Results Display** in the center of the screen.

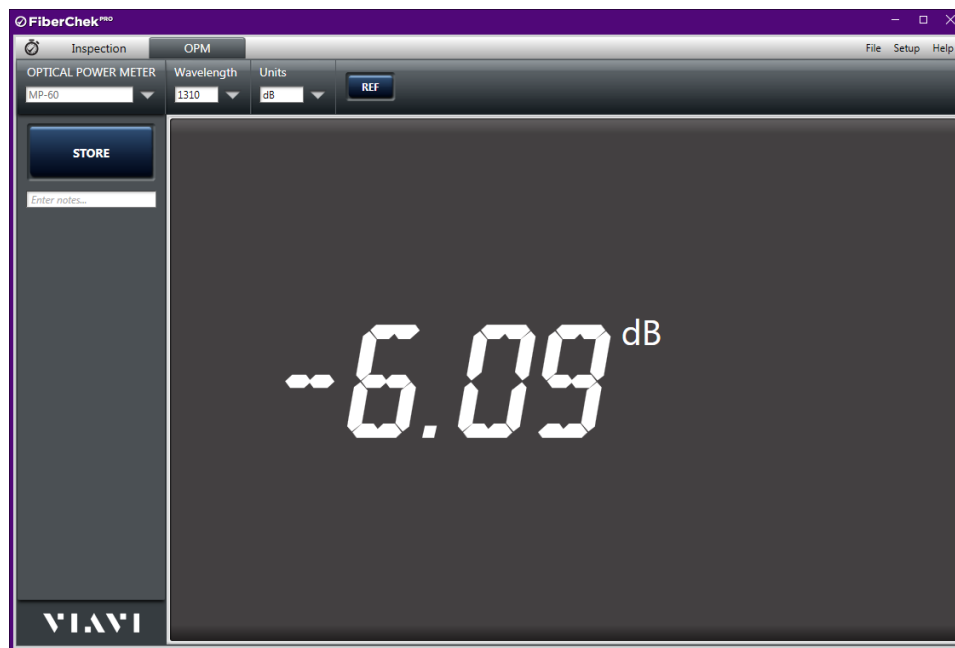


Figure 6: Optical Insertion Loss Results

7. Repeat steps 5 and 6 for all wavelengths to be tested.
8. Disconnect the Reference Cable from the FUT. Do not disconnect the Reference Cable from the OLP or power off the OLP until all testing is complete. If the fiber is disconnected, you must reference the Power Meter again.
9. Repeat steps 1 through 8 for all fibers to be tested.