

Quick Card

T-BERD[®]/MTS-5800 Modular Test Set

Measuring Optical Power Levels with a 4100-series OTDR Module

This procedure describes how to use an E4100-series OTDR module as an Optical Power Meter (OPM). If optional, the OTDR module can operate as an OPM or Optical Light Source, but not at the same time. Light Source is a standard feature on most new OTDR modules, while Power Meter is an option.

Equipment Requirements:

- T-BERD/MTS-5800 equipped with the following:
 - Fiber Optics Software Release V21.0 or greater
 - E4100 Series OTDR Module
 - E41OTDRPM Power Meter option
- Fiber optic cleaning and inspection tools
- Reference Cable (patch cord) with connectors matching the OTDR port and Fiber Under Test
- Optical Coupler to connect Reference Cable to Fiber Under Test



Figure 1: Equipment Requirements

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(s) to be tested (850nm, 1300nm, 1310nm, 1550nm, etc.)

Fiber Inspection Guidelines:

- Use the VIAVI P5000i or FiberChek Probe microscope to inspect both sides of every connection being used (OTDR Port, Reference Cable, bulkhead connectors, patch cords, etc.)
- Focus the fiber on the screen. If dirty, clean the end-face.
- If it appears clean, run inspection test.
- If it fails, clean the fiber and re-run inspection test. Repeat until it passes.

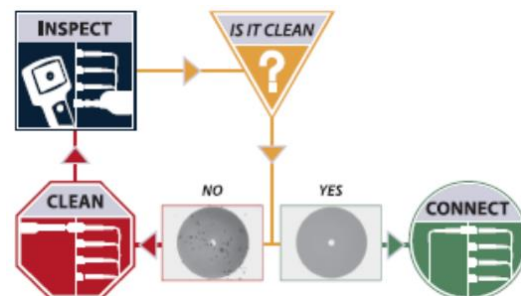


Figure 2: Inspect Before You Connect (IBYC)

Connect Reference Cable to OTDR port:

1. Inspect the OTDR port on top of the test set.
2. Inspect the fiber end face of Reference Cable.
3. Connect Reference Cable to the OTDR port.



Figure 3: OTDR Port Inspection

Connect to Fiber Under Test (FUT):

The Reference Cable may be connected to the FUT via an optical patch panel (OPP) or an optical coupler:

1. If the interface to the FUT is a patch cord, connect the patch cord to an optical coupler with the same connector type.
2. Inspect the FUT connected to the coupler or OPP.
3. Inspect the other fiber end face of the Reference Cable.
4. Connect the Reference Cable to the coupler or OPP.

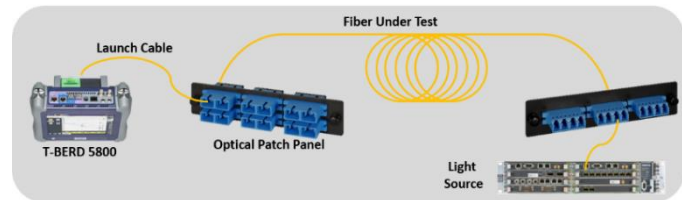


Figure 4: Connecting Reference Cable to OPP

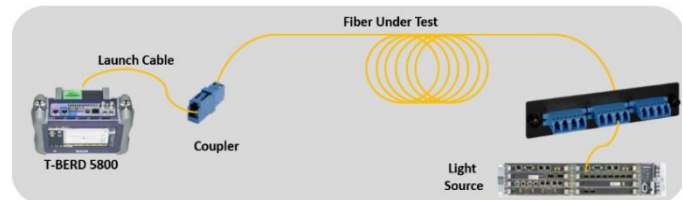

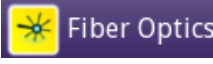





Figure 5: Connecting Reference Cable to FUT with a coupler

Launch the Power Meter:

1. Press the Power button  to turn on the T-BERD/MTS-5800.
2. Tap the **Fiber Optics** icon  in the Status Bar at the top of the T-BERD/MTS-5800.
3. Tap the purple > on the left screen side  to display the Fiber Optics Home screen.
4. Tap the **POWERMETER** icon until it is yellow and highlighted:

-  for Single Mode fiber
-  for Multimode fiber

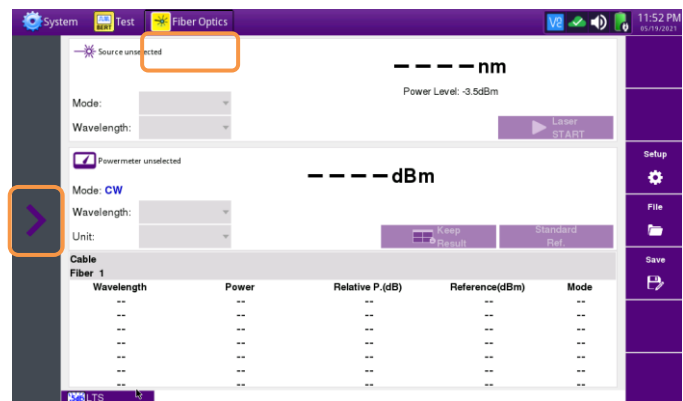


Figure 6: Fiber Optics Screen

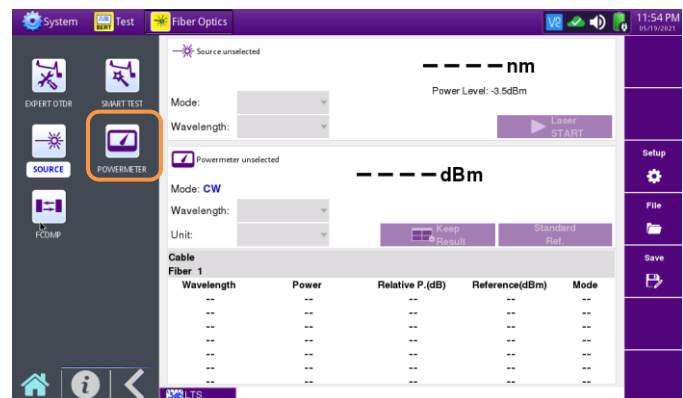


Figure 7: Fiber Optics Home screen

Measure Optical Power:

Note: The same user interface is used to operate the OTDR module as an Optical Light Source or a Power Meter. The top part of the display is used to control the light source, while the bottom portion is for the Power Meter option.

1. Tap the **Wavelength** drop down in the **Powermeter on Module** section and select the wavelength you wish to measure.
2. Tap the **Unit** drop down and select **dBm**.
3. View the power level in the **Powermeter on Module** section.

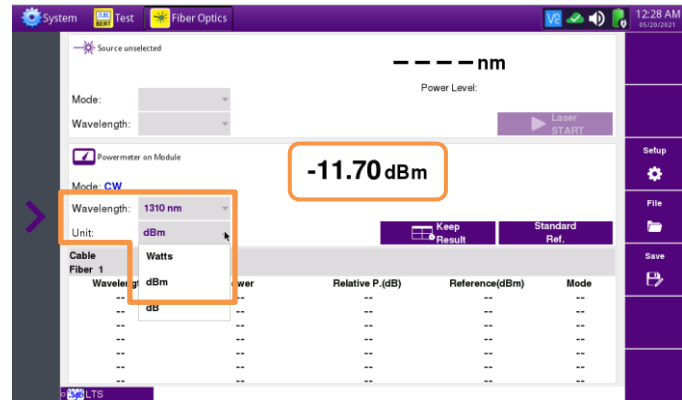


Figure 8: Source and Powermeter Screen