

## Quick Card

# T-BERD<sup>®</sup>/MTS-5800 Modular Test Set Measuring Absolute Power with the E4100 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 both at the same time.

### Equipment Requirements:

- T-BERD/MTS-5800 equipped with the following:
  - Fiber Optics Software Release V16.22 or greater
  - E4100 Series OTDR Module
  - E41OTDRPM Power Meter option
- Fiber optic cleaning and inspection tools
- 20-meter Fiber optic patch cord (Launch Cable)
- Optical coupler to connect Launch Cable to Fiber Under Test



### 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

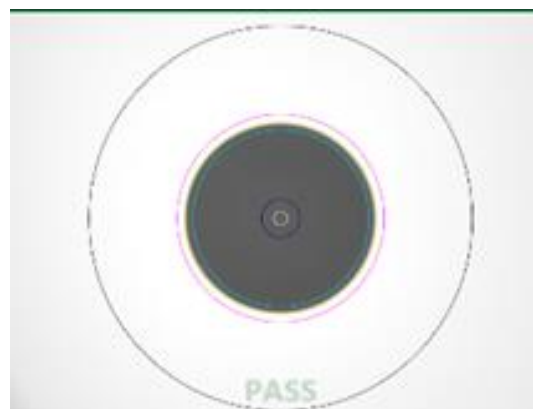
### Fiber Inspection Guidelines:

Inspect and clean (if necessary) both sides of every connection being used (bulkhead connectors, patch cords, and OTDR port) prior to reconnection for each test. Using the P5000i or FiberChek Probe:

- Focus fiber on the screen. If dirty, clean the connector.
- If it appears clean, run inspection test.
- If it fails, clean fiber and re-run inspection test. Repeat until it passes.



*Figure 1: FiberChek Probe*



*Figure 2: Image of Clean Fiber*

### Connect to Fiber Under Test (FUT):

All fibers and connectors should pass a fiber inspection test prior to connection, as described on page 1. The OTDR may be connected to the FUT via an optical patch panel (OPP) bulkhead or an optical coupler as follows:

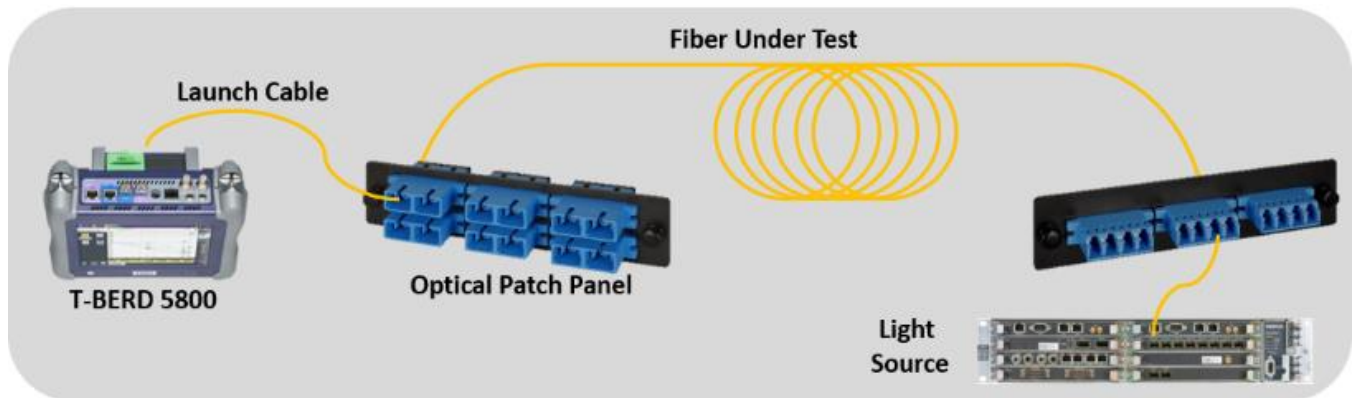


Figure 3: Connecting T-BERD/MTS-5800 to OPP

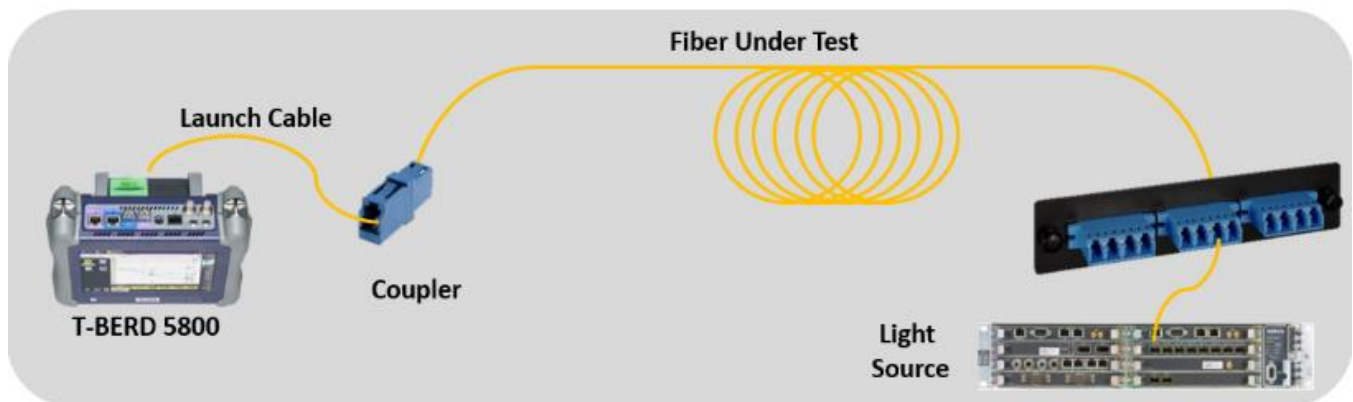





Figure 4: Connecting T-BERD/MTS-5800 to FUT with a coupler

1. Inspect the OTDR port on the top of the test set.
2. If the interface to the FUT is a patch cord, connect the patch cord to an optical coupler with the same connector type.
3. Inspect the FUT connected to the coupler or OPP.
4. Inspect the fiber end face of the Launch Cable.
5. Connect the Launch Cable to the OTDR port.
6. Inspect the other fiber end face of the Launch Cable.
7. Connect the Launch Cable to the coupler or OPP leading to the light source.

### Measure Absolute Power:

1.  Press the Power button to turn on the test set.
2.  Tap the **Fiber Optics** icon in the **Status Bar** at the top of the display.
3.  Tap the **Home** icon to display the Home view, showing **POWERMETER** icons.

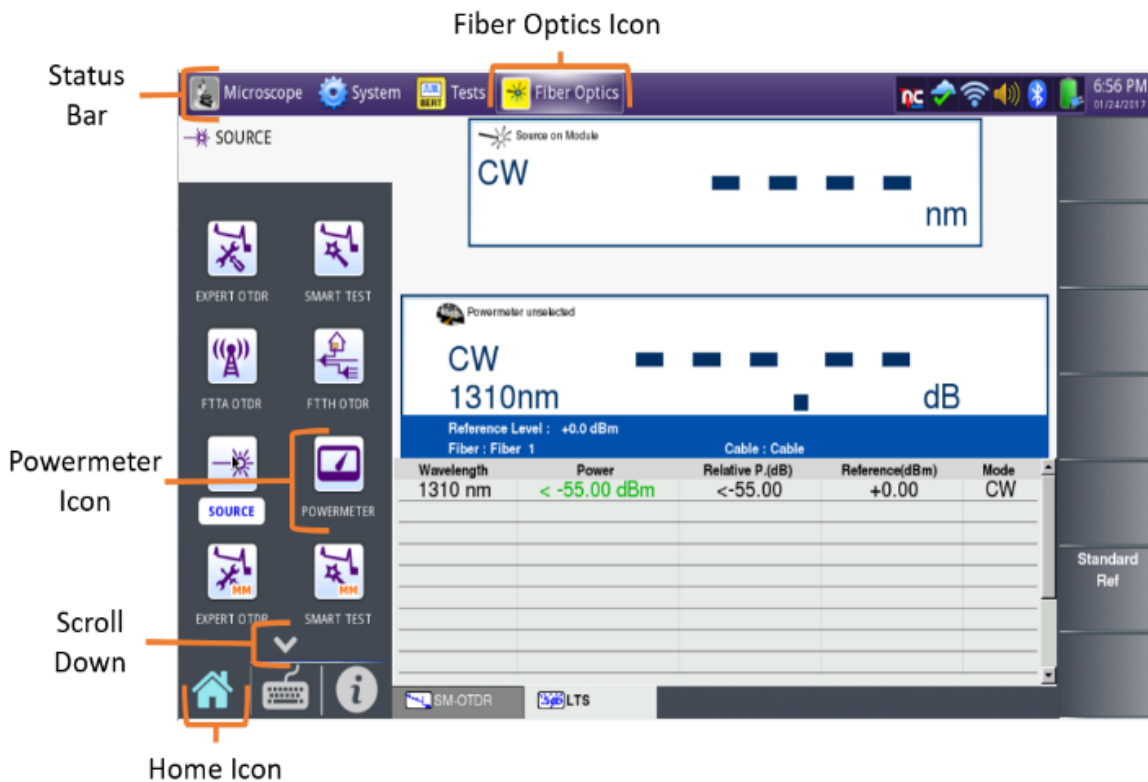





Figure 5: Home View

4.   Tap the desired **POWERMETER** icon until it is yellow and highlighted . The **Results view** will be shown with Power Meter settings and results in the box labeled **Powermeter on Module**.

Note: If YOU ARE running a Multimode test using the QUAD OTDR Module, you may need to Scroll Down or swipe up to display the **Multimode POWERMETER** icon.

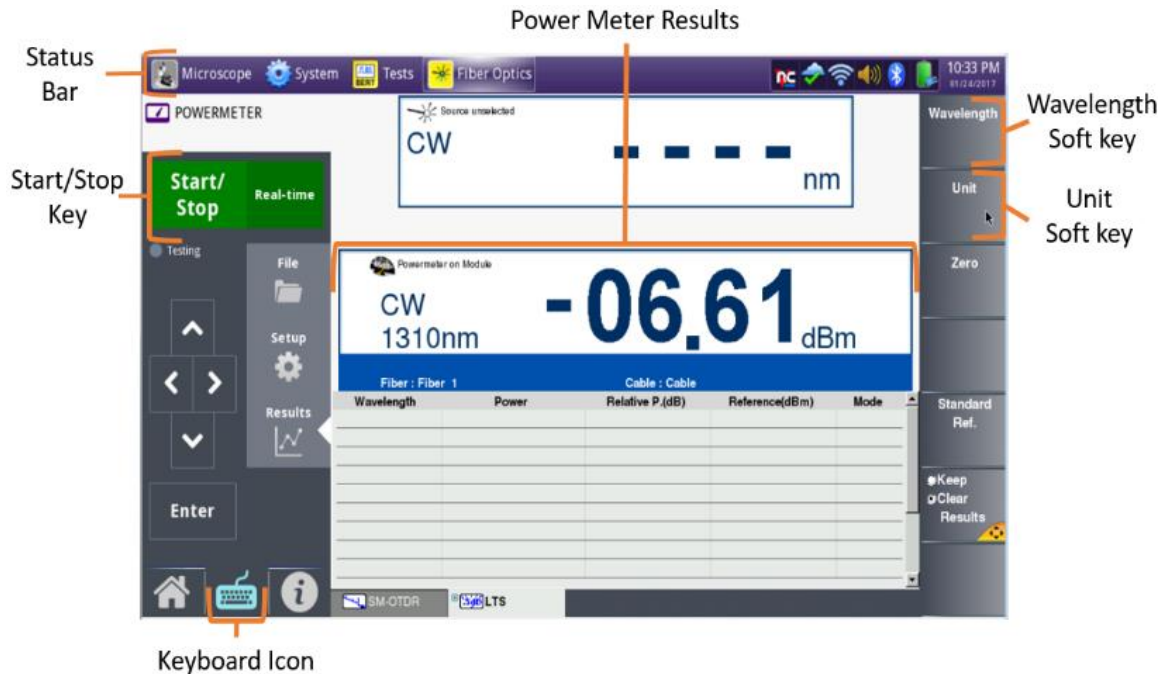




Figure 6: Results View

5.  Tap the **Wavelength** soft key to select the desired Wavelength (850nm, 1300nm, 1310nm, 1550nm, etc.)
6.  Tap the **Unit** soft key and set units to **dBm**.
7. View the **Power Level** in the **Powermeter on Module** Results display in the center of the screen.
8. Disconnect the Launch Cable from the T-BERD/MTS and the coupler or OPP.