VIAVI Solutions

Quick Card

SmartClass Fiber OLP-87 PON Power Meter

Measuring FTTx/PON Power Levels

This quick card describes how to connect to a fiber under test, configure FTTx settings, and read power measurements with the VIAVI OLP-87 selective power meter.

Equipment Requirements:

- SmartClass Fiber PON Power Meter:
  - OLP-87
  - OLP-87P (includes Patch Cord Microscope)
- P5000i Fiber Microscope
- Fiber optic cleaning tool
- Two (2) SC APC Patch Cords

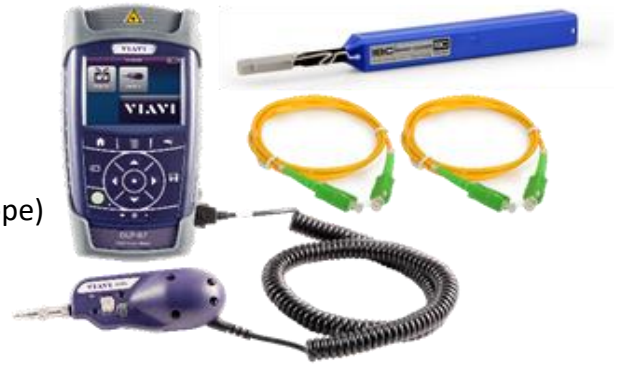

Figure 1: Equipment Requirements

Fiber Inspection Guidelines:

Inspect & clean (if necessary) both sides of every connection being used (bulkhead connectors, patch cords, **and OLP-87 ports**) prior to reconnection for each test, using the P5000i or optional Patch Cord Microscope. OLP-87 SC APC ports must be clean, or results will be inaccurate and ports possibly damaged:

1. Connect the **P5000i** into the USB device port on the **OLP-87**.
2. Press the **Power button** to turn on the **OLP-87**.
3. Tap the **Inspect** icon on the **Home** screen.
4. Focus the live fiber image on the screen using the **P5000i**'s **Focus Control** knob.
5. If dirty, clean the connector.
6. If it appears clean, run the inspection test.
7. If it fails, clean fiber and re-run inspection test. Repeat until it passes.

Figure 2: P5000i Microscope

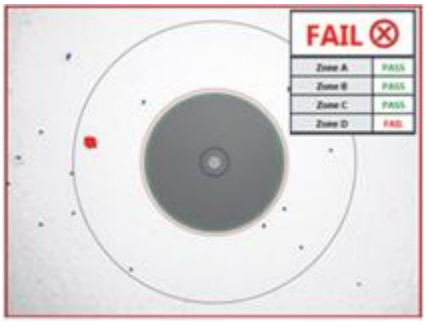

Figure 3: Image of Dirty Fiber

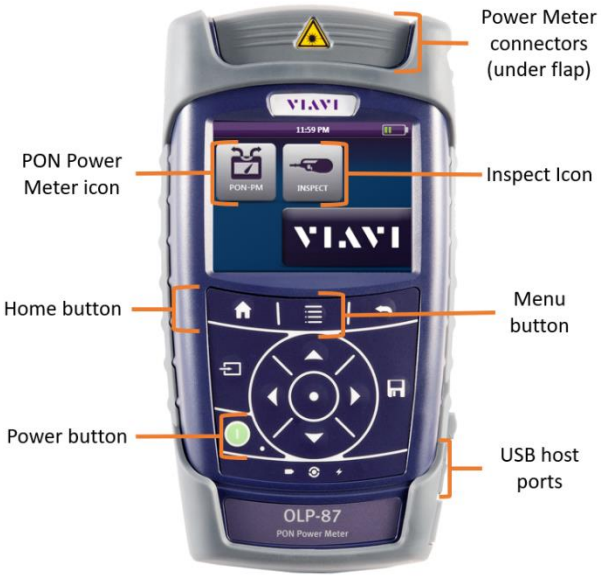

Figure 4: OLP-87, Front View

Figure 5: OLP-87, Top View

Connect to Fiber Under Test (FUT) and measure power levels:
All fibers and connectors should be cleaned and inspected prior to connection, as described on page 1. The OLP-87 should be connected between the OLT and ONT at the ONT as follows:

1. Connect an APC patch cord between the OLP-87 OLT connector and the OLT.
2. Connect an APC patch cord between the OLP-87 ONT connector and the ONT.
3.  Tap the **Home button** to display the **Home Screen**.
4.  Tap the **PON Meter** icon.
5.  Tap the **Menu** button and set **Location** to **Anywhere**
6. Read the Power Measurements:
   - 1310nm is the Upstream power from the ONT
   - 1490nm is the Downstream power from the OLT
   - 1550nm is the Video RF power from the OLT.

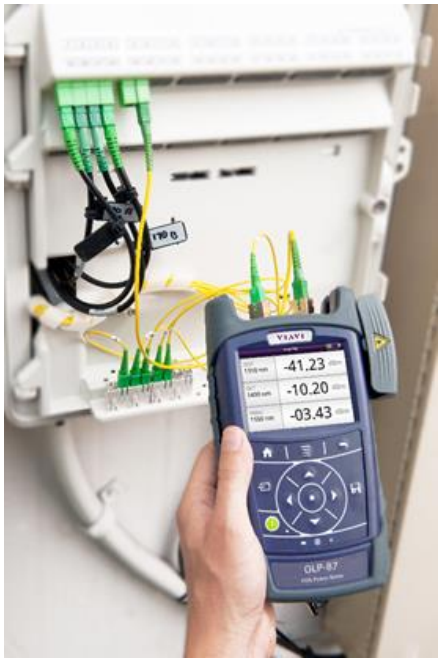

Figure 6: Through Mode testing