

Optical Power Meter Specification

1. General

An optical power meter is a device used to measure the power in an optical signal and used as a device for testing average power in fiber optic systems. The Optical power meter shall offer high accuracy and stability for testing the optical power and spectral sensitivity of passive optical networks/PON and active components. It is used to identify the signal transmission performance of a fiber optic network passive & active components, receiver sensitivity and it shall offer the flexibility and accuracy to test, install and maintain multimode and single mode fiber optic networks.

2. Features

2.1. With auto-wavelength and twin test mode detection. **/Mandatory/**

3. Technical Specification

3.1. Working Wavelength range (nm): 850nm to 1650nm **/Mandatory/**

3.2. Pre-Calibrated Wavelength (nm): (850, 1300, 1310, 1490, 1550 and 1625)

/Mandatory/

3.3. Detection range/Measuring range: -60dBm to 10dBm **/Mandatory/**

3.4. Uncertainty: $\pm 5\%$ **/Mandatory/**

3.5. Display resolution: 0.01dB **/Mandatory/**

3.6. Display units: dB, dBm and W **/Mandatory/**

3.7. Tone detection(Hz): 270,1000,2000 **/Mandatory/**

3.8. Optical connection port with adapter: SC, FC and ST interchangeable and supports all 2.5mm and 1.25mm connectors. **/Mandatory/**

3.9. Data storage: ≥ 100 measurement results. **/Mandatory/**

3.10. External interface: USB **/Mandatory/**

4. General Specification

4.1. **Storage and Operation conditions**

4.1.1. Operating temperature: -10 °C to 40 °C **/Mandatory/**

4.1.2. Storage temperature: -10 °C to 60 °C **/Mandatory/**

4.1.3. Relative humidity: It must withstand relative humidity %5 to 75 % non-condensing **/Mandatory/**

4.2. Size (H x W x D): The Size of Optical power meter (H x W x D): ≤190mm*90mm*50mm **/Mandatory/**

4.3. Weight: Weight ≤0.60 kg **/Mandatory/**

5. Accessories

5.1. Packing case including accessories: Standard-portable handy bag **/Mandatory/**

5.2. Two powering systems: Internal rechargeable batteries Operation duration ≥8Hrs or USB cable/ AC/DC charger/adaptor input: 100 – 240 V; 50/60 Hz; < 3 hours charging time **/Mandatory/**

5.3. User guide/ reference guide **/Mandatory/**

5.4. Software and user guide CD. **/Mandatory/**

5.5. Certificate of Compliance **/Mandatory/**

6. Sample: Bidders shall provide a sample for the item. **/Mandatory/**

7. Warranty: Bidders shall give a minimum of two/2 years warranty for the item. **/Mandatory/**

Laser Source Specification

1. General

The Laser Source shall offer high accuracy and stability for testing the power and spectral sensitivity of active components, passive components and WDM building blocks, it must feature insertion loss measurement of WDM network components, and it shall offer the flexibility and accuracy to test, install and maintain multimode and single mode fiber optic networks.

2. Features

- 2.1. Twin Test transmission modes **/Mandatory/**

3. Technical Specification

- 3.1. Output Wavelength: 1310nm & 1550nm, 850nm & 1300nm **/Mandatory/**

- 3.2. Central Wavelength: 1310±20nm & 1550±20nm 850±10nm & 1300±20nm

/Mandatory/

- 3.3. Wavelength accuracy (nm): ±20nm **/Mandatory/**

- 3.4. Output power: ≥-5dBm **/Mandatory/**

- 3.5. Modulation Frequency (Hz): 270,1K,2K **/Mandatory/**

- 3.6. Spectral width (nm): <5 **/Mandatory/**

- 3.7. Output Power stability (dB) 15 min 8hr:

Short Term (15min) :< ±0.05dB@1310, 1550nm: ±0.1dB@850&1300

Long Term (8 Hours) :< ±0.1dB@1310, 1550nm): ±0.2dB@850&1300

/Mandatory/

4. General Specification

- 4.1. **Storage and Operation conditions**

- 4.2. Operating temperature: -10 °C to 40 °C **/Mandatory/**

- 4.3. Storage temperature: -10 °C to 60 °C **/Mandatory/**

- 4.4. Relative humidity: It must withstand relative humidity 5% to 75 % non-condensing **/Mandatory/**

4.5. Size (H x W x D): The Size of Laser Source (H x W x D): ≤200 mm x 90 mm x 50 mm **/Mandatory/**

4.6. Weight: Weight ≤0.60 kg **/Mandatory/**

5. Accessories

5.1. Packing case including accessories: Standard-portable handy bag **/Mandatory/**

5.2. Certificate of Compliance **/Mandatory/**

5.3. Two powering systems: Internal rechargeable batteries Operation duration ≥8Hrs or USB cable/ AC/DC charger/adapter input: 100 – 240 V; 50/60 Hz; < 3 hours charging time **/Mandatory/**

5.4. User guide/ reference guide **/Mandatory/**

6. Sample: Bidders shall provide a sample for the item. **/Mandatory/**

7. Warranty: Bidders shall give a minimum of two/2 years warranty for the item. **/Mandatory/**

Fiber cleaning Cassette Technical specification

1. Scope

Ethio telecom seeks for a supplier to procure Fiber Cleaning Cassette. Fiber cleaning Cassette provides a consistently quality fiber cleaning at low cost without alcohol or other solvents for various fiber optic terminations such as SC,FC,LC,ST and other types of terminations.

2. Features

- 2.1. Compact and light weight design. **/Mandatory/**
- 2.2. Simple push button shutter operation: makes cleaning connectors quick and easy **/Mandatory/**
- 2.3. Replaceable tape reels: cleaning tape is replaceable **/Mandatory/**
- 2.4. Over 400 swipes each tape. **/Mandatory/**
- 2.5. Excellent anti-static properties minimize reattachment of dust to the connector after cleaning. **/Mandatory/**
- 2.6. Consistent cleaning without alcohol. **/Mandatory/**

3. Requirement Specifications

- 3.1. Slot: with one slot for 1.25 mm and 2.5 mm ferrule connectors including SC, FC, LC, ST and other types of terminations. **/Mandatory/**
 - 3.2. Housing material: ABS plastic/ or other appropriate material. **/Mandatory/**
 - 3.3. Cleaning time ≥ 400 times per cleaning reel/tape. **/Mandatory/**
 - 3.4. Cleaning fabric: Dry special anti-static micro fiber fabric/Special non-alcohol superfine fiber **/Mandatory/**
 - 3.5. Size: easy to handle and antistatic less than or equal to $\leq 90\text{mm} \times 125\text{mm} \times 35\text{mm}$ **/Mandatory/**
 - 3.6. Wight: ≤ 220 gram **/Mandatory/**
 - 3.7. Replacement reels/tape for each Fiber Cleaning Cassette: 6 pics. **/Mandatory/**
4. **Sample:** Bidders shall provide at least one (1) Fiber cleaning Cassette and one (1) its' cleaning reel/tape as a sample. **/Mandatory/**
5. **Warranty:** a minimum of 1-year warranty. **/Mandatory/**