Technical Specifications Optical Power Meter +5 To –40 dBm with SCAPC Connector and Universal Adapter

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OPTICAL POWER METER +5 TO –40 dBm WITH SC/APC CONNECTOR AND UNIVERSAL ADAPTER – Technical Specifications

1 – Introduction

The Portable Optical Power Meter is designed for precise measurement of optical signals in single-mode and multimode fibers, with a measurement range of +5 to –40 dBm.
It allows verification of transmission power and attenuation in fiber optic networks, ensuring reliable and repeatable readings both in the field and in the laboratory.

2 – Description

The device is compatible with wavelengths of 850, 980, 1300, 1310, 1490, 1550, and 1625 nm, calibrated for the most commonly used standards in optical communication systems.
It features a 4-digit LCD display with 0.01 dB resolution, ensuring precise and easy-to-read measurements.
It includes configurable reading modes in dB, dBm, and mW, selectable from its front panel.

It also incorporates a universal optical interface compatible with 2.5 mm and 1.25 mm ferrules, as well as an SC/APC adapter, allowing use with a wide range of optical connectors.
The meter operates with either alkaline or rechargeable batteries, providing a minimum autonomy of 30 hours, with automatic shutdown after 5 minutes of inactivity to optimize energy consumption.

3 – Materials and Construction

Component	Material	Characteristics
Main body	Technical ABS plastic	High impact resistance and lightweight.
Optical connector	Stainless steel	Compatible with 2.5 mm and 1.25 mm ferrules.
Receiving lens	Optical glass with anti-reflective coating	Ensures precision in light beam detection.
Display	High-visibility LCD	Ensures precision in light beam detection.
Keypad and housing	Thermoplastic elastomer	Protection against moisture and dust.

4 – Technical Properties

Property	Value
Measurement range	+5 to -40 dBm
Resolution	0,01 dB
Calibrated wavelengths	850 / 980 / 1300 / 1310 / 1490 / 1550 / 1625 nm
Fiber type	Single-mode and Multimode
Measurement units	dB / dBm / mW
Detector type	InGaAs (Indium Gallium Arsenide photodiode)
Accuracy	±0,25 dB ±10 nW

Connector type	Universal optical interface for 2.5 mm and 1.25 mm ferrules + SC/APC adapter
Power supply	Alkaline or rechargeable batteries
Battery life	≥ 30 horas
Auto power-off	After 5 minutes of inactivity
Operating temperature	–20 °C to +50 °C
Storage temperature	–40 °C to +70 °C
Relative humidity	0–95 % (non-condensing)
Weight	Lightweight, pocket size
Mechanical protection	Shockproof, moisture- and dust-resistant

5 – General Characteristics

- Stable and high-precision measurement.
- Large, high-visibility LCD display.
- Portable, ergonomic, and rugged design.
- Compatible with multiple optical connectors.
- Auto power-off for energy saving.
- Ideal for verification, calibration, and maintenance of optical networks.
- Complies with international electrical and optical safety standards.

6 – Packaging and Presentation

- Each unit is supplied in a protective carrying case, including a user manual in Spanish, calibration certificate, and batteries (uninstalled).
- The individual packaging ensures product integrity during transport, handling, and storage.