

PL-1000D

Diagnostic and Monitoring Solution



Diagnostic device using OTDR to detect fiber quality and cut, and OSA for spectrum and OSNR analysis

Features Overview

- Operates as an optical time domain reflectometer (OTDR), optical spectrum analyzer (OSA), or both
- Monitoring up to 16 fibers simultaneously, 8 by the OTDR and 8 by the OSA
- Controlled with PacketLight web application or PacketLight's Lightwatch™ NMS
- Main OTDR features:
 - Integrates 1:8 optical switch and OTDR
 - 30dB fiber loss
 - Embedded 1610nm OADMs
 - Accuracy 15m
 - Dead zone of 5m from transmitter
- Main OSA features:
 - Integrates 1:8 optical switch and OSA
 - Embedded splitters
 - Supports full C-band
 - Supports 50GHz or 100GHz ITG grid
 - Measures the power, frequency and OSNR of the optical channels in the fiber
- 1U footprint 19"
- Dual redundant AC/DC power suppliers
- Hot swappable fan unit
- Low power consumption

How the PL-1000D Works

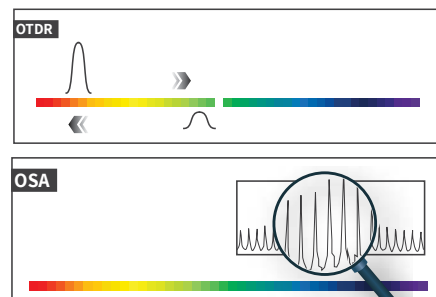
The PL-1000D consists of two technologies for non-intrusive monitoring live fiber optic networks. The OTDR locates fiber cut by sending high-powered diagnostic optical pulses into the fiber and creating Rayleigh back-reflections. The returning signals are measured and calculated, indicating the accurate location and intensity of the fault. The OSA presents for each fiber the optical spectrum and the OSNR of each wavelength, providing the operator with a full, accurate and detailed picture of the fiber.

Main Benefits

- Simultaneous OTDR diagnostics of up to 8 fibers
- OSA monitoring of up to 8 fibers
- In-service fiber monitoring
- Can operate over dark fiber or over third party network
- Integrates with other PacketLight solutions
- Detection of fiber tapping attempts

Full Fiber Diagnostic Device

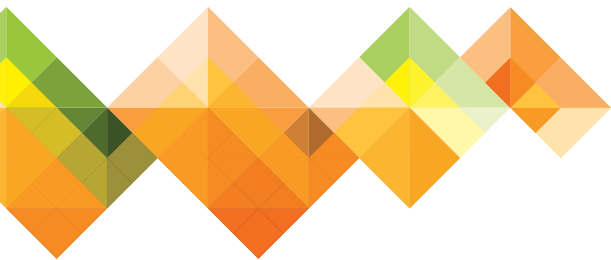
The PL-1000D conducts full non-disruptive monitoring and analysis of the network's fiber. The OTDR monitors up to 8 fibers simultaneously, identifying a break or degradation in each fiber and where the break is. The embedded OSA provides the full optical DWDM spectrum and OSNR of up to 8 fibers simultaneously. The solution provides high-level visibility of the fiber characterization and operating wavelengths and saves network managers time and OPEX expenses associated with identifying and repairing faults.



OTDR and OSA Solution

Recommended for the following applications:

- Monitoring dark fibers service/infrastructure
- Monitoring lighted DWDM fibers
- In service OTDR measurements for DWDM networks
- In service OSA measurements for DWDM networks
- Detection of fiber tapping



Low power
consumption



1U rack mount



Multi operation
modes

Technical Specifications

Product Configurations

OTDR, OSA, or both

OTDR

Wavelength: 1610nm

Distance Range: 125Km

Dynamic Range: 30dB

Event Dead Zone: 5m

Loss Measurement Accuracy: ± 0.1 dB

Max Optical Output Power: 17dBm

OSA

Channel Spacing:

50GHz or 100GHz ITG grid

Frequency Window: C-band

Frequency Accuracy: ± 0.1 GHz

Slice Width: 0.3125GHz

Min Channel Width: 312.5MHz

Max Channel Width: 4.875THz

Input Channel Power (Pch):

-35dBm – 0dBm

Channel Power Accuracy: ± 0.5 dBm

Network Management

Management Management:

Web browser over HTTP/HTTPS,
PacketLight LightWatch™ NMS/EMS, CLI
over RS-232 or CLI over Telnet/SSH

Visual Indicators:

LED status indicators for Management
and LAN ports, system Critical/Major/
Minor indicators, and Power Supply
alarms

Software Upgrade:

Hitless traffic - dual image

Power Supply

AC/DC:

90 to 246 VAC, 50/60 Hz,

-36 to -60 VDC, 60W max

PSU Redundancy:

Single/dual feeding, hot swappable

Cooling Unit:

Hot swappable fan unit

Environmental

Operating Temperature:

-5°C to 50°C (+23°F to +122°F) operational

Humidity:

5% to 85% RH

Physical Dimensions

1U:

■ 1.77" (H) x 17.32" (W) x 8.66" (D)

■ 45mm (H) x 440mm (W) x 220mm (D)

Weight: 5.5kg / 12.1lb (max)

Mounting: 19", ETSI and 23"

Approvals & Standards

■ CE, FCC, RoHS, REACH

■ NEBS ready