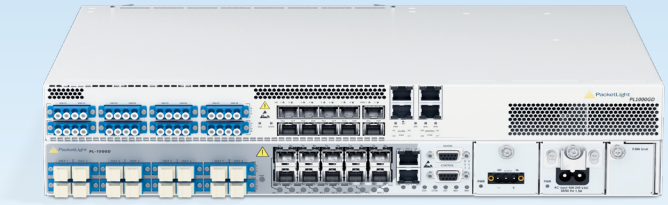


PL-1000D/GD Diagnostics and Monitoring

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

Features Overview

- Monitoring up to 16 fibers simultaneously - 8 by the OTDR and 8 by the OSA
- Management via PacketLight web application or PacketLight Lightwatch™ NMS
- **Main Metro OTDR features:**
  - Integrates 1:8 optical switch, OTDR, OADMs
  - 24dB fiber loss
- **Main Regional OTDR features:**
  - Integrates 1:8 optical switch, OTDR, OADMs
  - 32dB fiber loss

Main OSA features:

- Integrates 1:8 optical switch, OSA, splitters
- Supports full C-band 50GHz/100GHz ITG grid
- Measures the power, frequency and OSNR of the optical channels in the fiber

- Dual redundant AC/DC power supplies
- Hot swappable fan unit
- Low power consumption

Non-intrusive Diagnostics and Monitoring

The PL-1000D/GD combine two technologies for non-intrusive monitoring of live fiber optic networks. The OTDR detects and accurately locates fiber faults by sending diagnostic optical pulses and analyzing the resulting Rayleigh backscatter reflections. The OSA provides the optical spectrum and OSNR for each wavelength on every fiber, giving operators a clear and comprehensive view of network performance and fiber health.

Main Benefits

- Simultaneous OTDR diagnostics of up to 8 fibers
- Simultaneous OSA monitoring of up to 8 fibers
- In-service fiber monitoring
- Operates over dark fiber or over third party network
- Detection of fiber degradation
- Raises alarm when trace events are changed
- Graphical display of the OTDR and OSA in any browser
- Available in front-to-back or side-to-side airflow platforms

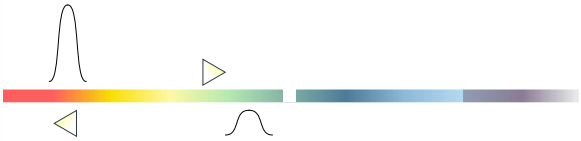
Full Fiber Diagnostic Device

The PL-1000D/GD provide high-level visibility into fiber characteristics and active wavelengths, helping network operators reduce the time and OPEX associated with fault detection and repair.

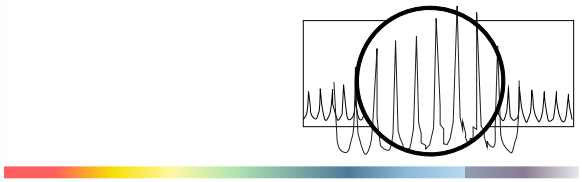
Recommended Applications

- 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 degradation

PL-1000GD OTDR Solution



PL-1000GD OSA Solution



Technical Specifications

Product Configurations

- Metro OTDR
- Regional OTDR
- OSA

Metro OTDR

Wavelength: 1610nm
Distance Range: 120 km
Dynamic Range: 24dB
Loss Measurement Accuracy: ±0.1dB
Max Optical Output Power: 17dBm

Regional OTDR

Wavelength: 1610nm
Distance Range: 140 km
Dynamic Range: 32dB
Loss Measurement Accuracy: ±0.1dB
Max Optical Output Power: 20dBm

OSA

Channel Spacing:
50GHz or 100GHz ITG grid
Frequency Window: C-band
Frequency Accuracy: ±0.1GHz
Slice Width: 0.3125GHz
Input Channel Power (Pch):
-35dBm – 0dBm
Channel Power Accuracy: ±0.5dBm

Network Management

Management Ports, PL-1000D:

- 2xRJ-45 LAN port 10/100MBase-T
- 2xOSC SFP MNG ports 1000MBase-X
- 8xSFP MNG ports 100MBase-X
- RJ45 serial port
- RJ45 external alarm port

Management Ports, PL-1000GD:

- 2xRJ-45 LAN port 10/100/1000MBase-T
- 2xOSC SFP MNG ports 100/1000MBase-X
- 8xSFP MNG ports 1000MBase-X
- RJ45 serial port
- RJ45 external alarm port

Management Protocols:
SNMP, HTTP, HTTPS, CLI over RS-232 or CLI over Telnet/SSH, Syslog, RADIUS, TACACS+, SNTP, TFTP & FTP, SNMPv2/SNMPv3

NMS:
PacketLight LightWatchTM NMS, or third party NMS over SNMP

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:

- **PL-1000D:** 90 to 246 VAC or -36 to -60 VDC, 50/60 Hz, 60W max
- **PL-1000GD:** 100 to 240 VAC or -44 to -60 VDC, 50/60 Hz, 120W max

PSU Redundancy:
Single/dual feeding, hot swappable

Cooling Unit:
Hot swappable fan unit

Dimensions

PL-1000D Size:

- 1.77” (H) x 17.32” (W) x 9.05” (D)
- 45mm (H) x 440mm (W) x 230mm (D)

PL-1000GD Size:

- 1.77” (H) x 17.32” (W) x 13.78” (D)
- 45mm (H) x 440mm (W) x 350mm (D)

Weight:

- **PL-1000D:** 5.5kg / 12.13lb (max)
- **PL-1000GD:** 8.5kg / 18.74lb (max)

Mounting: 19”, 21”, 23”

Environmental

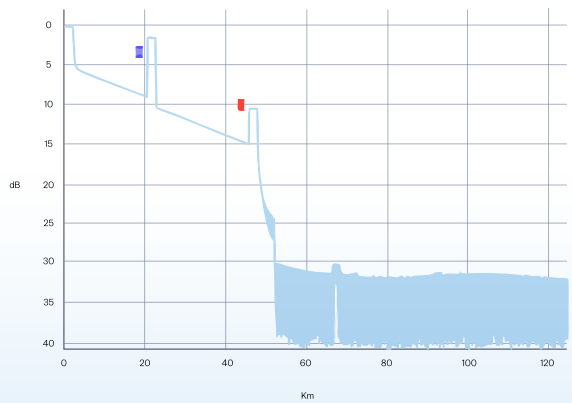
Operating Temperature:

- **PL-1000D:**
  -5ºC to 50ºC (+23ºF to +122ºF)
- **PL-1000GD**:
  0ºC to 45ºC (32ºF to 113ºF).

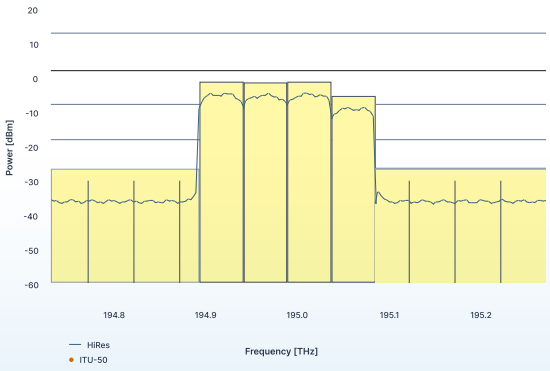
Approvals & Standards

- CE, FCC, RoHS, REACH
- NEBS ready

Graphical Display of the OTDR



Graphical Display of the OSA



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