

INSTRUMENTS

Polarization Dependent Loss Multimeter – PolaCHEX™



Using a patented deterministic power search method (compliant with TIA/EIA-455-198), General Photonics' PDL multimeter measures the Polarization Dependent Loss (PDL), Insertion Loss (IL), and optical power, of a device under test (DUT) in sub-seconds. Unlike PDL meters that use a polarization-scrambled input to the DUT and look for the PDL via output power fluctuations, PolaCHEX™ systematically searches for the maximum & minimum transmission, assuring measurement accuracy at all times. Consequently, this instrument is the most accurate PDL meter available on the market, able to accurately characterize devices with both low and high PDL values. Even more impressively,

PolaCHEX™ can cover a wide wavelength range from 1260 to 1650 nm without wavelength calibration – a clear advantage over meters based on the Mueller Matrix method. PolaCHEX™ comes with RS-232, USB, Ethernet, and GPIB interfaces for PC control, and is ideal for rapid, accurate characterization of the performance of passive devices, especially DWDM components, in manufacturing environments as well as in laboratories.

Specifications:

Wavelength Range	1260 to 1650 nm
Resolution	0.001 dB
PDL Accuracy	± 0.01 + 5% of PDL (in dB)
PDL Repeatability	± 0.005 + 2% of PDL (in dB)
PDL Dynamic Range	0 to 35 dB
IL Accuracy	± 0.01 + 5% of PDL (in dB)
IL Repeatability	± 0.005 + 2% of PDL (in dB)
IL Dynamic Range	> 35 dB
Optical Power Accuracy	± 0.25 dB at 1550 nm
Measurement Speed	0.2 second per wavelength
Input Optical Power	-15 dBm to +6 dBm for specified accuracy
Operating Temperature	0 ~ 50 °C
Storage Temperature	-20 ~ 70 °C
Power Supply	100 - 120 VAC, 50 - 60Hz or 200 - 240 VAC, 50 - 60 Hz
Communication Interfaces	RS-232, USB, Ethernet, GPIB
Dimensions	2U, 19" half rack width 3.5" (H) × 8.5" (W) × 14" (L)

Features:

- Deterministic Polarization Scanning
- Rapid Measurement
- No Calibration Needed
- High Accuracy and Reliability
- RS-232, USB, Ethernet, GPIB interfaces

Applications:

- PDL Measurement
- Insertion Loss Measurement
- DOP Measurement
- PDL/DOP Monitoring

Tech Info: p. 112
App Note: p. 132



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Typical Performance Data

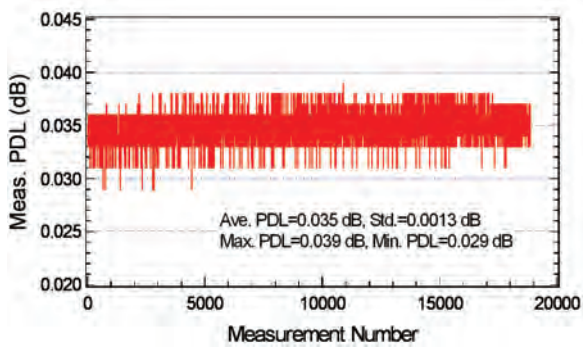


Figure 1. Measurement of a low PDL sample: APC Connector

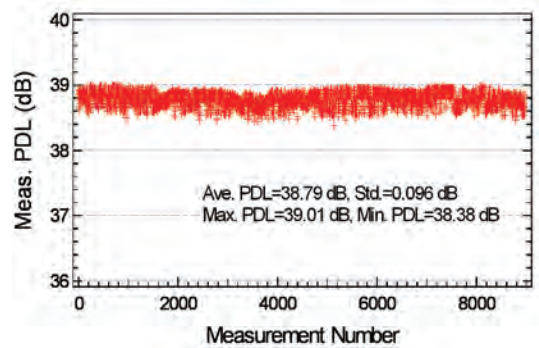


Figure 2. Measurement of high PDL sample: Polarizer

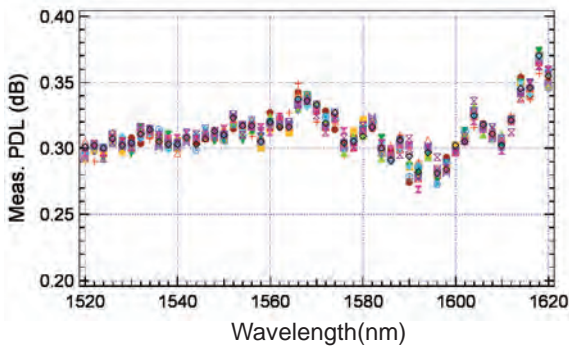
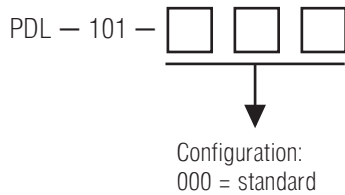


Figure 3. Wavelength scan and multiple (12) scan repeatability

Ordering Information:



Accessories:

- Bare fiber adapter PEZ p. 89
- NoTail™ Isolator p. 79
- NoTail™ Polarizer p. 78

Note: Please specify power supply when ordering.
A NoTail isolator is recommended at the light input port to minimize back reflections.

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