

PDL Multimeter - PolaCHEX™

Using a patented maximum and minimum search method (compliant with TIA/EIA-455-198), General Photonics' PDL multimeter simultaneously measures the Polarization Dependent Loss (PDL), Insertion Loss (IL), and optical power of a device under test (DUT) in just 30 ms. Unlike PDL meters that use the polarization scrambling method, which has large measurement uncertainty, PolaCHEX™ systematically searches for the maximum and minimum transmissions to assure measurement accuracy at all times for devices with both low and high PDL values. It is therefore the most accurate PDL meter available. Even more impressively, PolaCHEX covers a wide wavelength range from 1260 to 1620 nm without wavelength calibration, a clear advantage over PDL meters based on the Mueller Matrix method. PolaCHEX comes with USB, Ethernet, GPIB and RS-232 interfaces for PC control and is ideal for fast, accurate characterization of the wavelength dependence of passive devices, especially DWDM and fiber sensor components, in manufacturing environments as well as in laboratories. The PDL-201 replaces the PDL-101, with higher measurement speed, larger measurement dynamic range, a better and brighter display, and the addition of an analog output port for easy integration in automated measurement stations.

PDL-201



Preliminary Specifications

Wavelength Range	1260 to 1620 nm
Resolution	0.01 dB
PDL Accuracy ^{1,2,3}	± (0.01 + 5% of PDL) (dB)
PDL Repeatability ¹	± (0.005 + 2% of PDL) (dB)
PDL Dynamic Range ⁴	0 to 45 dB
IL Accuracy ^{1,5}	± (0.01 + 5% of IL) (dB)
IL Repeatability ¹	± (0.005 dB + 2% of IL) (dB)
IL Dynamic Range ⁴	0 to 45 dB
Optical Power Range (at DUT output port)	-40 to +6 dBm
Optical Power Accuracy	±0.25 dB
Wavelength Calibration for Power Measurement	1260 to 1360 nm and 1440 to 1620 nm
Measurement Speed	30 ms/measurement for input > -30 dBm
Operating Temperature	0 to 50 °C
Storage Temperature	-20 to 70 °C
Front Panel Display	OLED graphic display
Optical Connector Type	Light Source and DUT Input: APC DUT Output: Free space adapter
Analog Output	0 to 4V PDL monitor voltage (0 to 3.5V linear with PDL, 4V indicates power low) User-configurable PDL range
Power supply	100-240 VAC, 50-60 Hz
Communication interfaces	USB, GPIB, Ethernet, RS-232
Dimensions	2U, 19" half rack width 3.5" (H) × 8.5" (W) × 14" (L)

Notes:

1. For 10 sample average.
2. At 23 ± 5°C.
3. Accurate PDL measurement also depends on test setup. See General Photonics' PDL measurement application note for suggestions.
4. For input power ≥ 0 dBm
5. In power meter measurement mode with user-defined reference.

Applications:

- PDL vs. wavelength measurement
- DWDM device characterization
- Fiber sensor component characterization

Unique Features

- 30 ms measurement speed
- Wide wavelength range
- High PDL accuracy
- Analog PDL output
- Bright OLED display

Ordering Information:

PDL - 201 - XX

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Connector Type:
FC
SC