

# Polarization Dependent Loss Meter

## PL2100

In fiber optic communication systems, Polarization Dependent Losses of components can increase signal distortion and result in performance degradation. Therefore, for the fiber optic component manufacturers, accurate and efficient PDL measurement is very important.

**FIBERPRO's** Polarization Dependent Loss Meter, PL2100, measures Polarization Dependent Loss (PDL) and Insertion Loss (IL) of 1x1 & 1x2 optical components simultaneously as a function of wavelength (wavelength-swept measurement). In addition, optical power measurement function is provided.

**FIBERPRO's** powerful PDL measurement method - fast "Polarization scanning" (TIA/EIA-455-157) - enables PL2100 to achieve very high accuracy with the world's fastest measurement speed. The PL2100 is an ideal solution for measuring PDL and IL of DWDM components efficiently and accurately.



## Features

- Acquires PDL and IL measurements simultaneously
- The fastest measurement speed (0.01 sec./point Max.)
- Polarization scanning method (All-states method)
  - : No calibration needed
  - Not sensitive to fiber lead movement
- Two output channels
- Optical power meter function
- External trigger function
- GPIB, RS232 and TCP/IP

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## Specifications

Optical Specifications		
Wavelength Range	PDL : 1270 nm to 1640 nm	
	IL : 1270 nm, 1310 nm, 1490 nm, 1510 nm to 1640 nm	
PDL Range	0 dB to 5 dB	
PDL Absolute Accuracy <sup>1)</sup>	±(0.03 + 5% of PDL) dB Max. @ 1520 nm to 1620 nm	
Additional PDL Uncertainty <sup>2)</sup>	±(0.05+10% of PDL) dB@-30 dBm	
	±(0.1+10% of PDL) dB@-35 dBm	
	±(0.3+10% of PDL) dB@-40 dBm	
PDL Repeatability	±0.01 dB	
IL Range	55 dB	
IL Absolute Accuracy <sup>3)</sup>	(0.1+2% of IL) dB Max. over whole wavelength & power range	
IL Repeatability	±0.02 dB	
Averaging Time (Min. <sup>4)</sup> )	1 msec. for IL measurement	
	10 msec. for PDL/IL measurement	
Internal Trigger Interval	0.1 sec, 0.2 sec, 0.5 sec, 1.0 sec	
External Trigger Interval (Min.)	20 msec.	
Max. Input Power at Source In	+2 dBm	
Input Power Range after DUT	-57 dBm to -2 dBm	
Number of Output Channel	2	
Connector Type	Source In.	FC/APC
	DUT In.	FC/PC
	Ch 1 / Ch 2	
Electrical / Physical / Environmental Specifications		
AC Power Input	90 V to 240 V (50/60 Hz)	
Power Consumption	< 50 VA Max.	
Interfaces	GPIB, RS232, TCP/IP	
External Trigger In	TTL level	
Analog Output	Output Range	0 V to 2.5 V
	Bandwidth	5 kHz
Operating Temperature	+10°C to +40°C	
Storage Temperature	0°C to +60°C	
Dimensions (W x D x H)	234 mm x 450 mm x 108 mm (with rubber cushions)	
Weight	5 kg	

- 1) The average optical power after DUT must be greater than -22 dBm.
- 2) When the optical power after DUT is less than -22 dBm.
- 3) Does not include the influence of connectors.
- 4) When measurement mode is single wavelength mode.