INSTRUMENTS

POLARIZATION MANAGEMENT MODULES

TIMING/DELAY MANAGEMENT MODULES

SPECIAL POLARIZATION COMPONENTS

ACCESSORIES
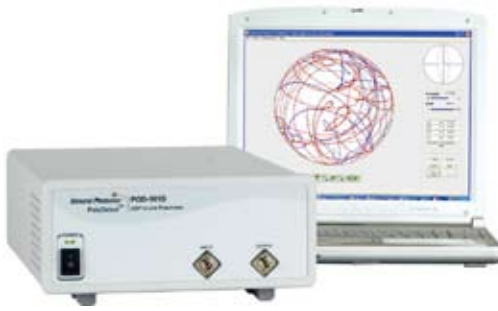
APPLICATION GUIDE

FAQS

DSP In-line Polarimeter – PolaDetect™

The POD-101D is a DSP (digital signal processor) powered in-line polarimeter specially designed for high-speed polarization analysis and monitoring. The instrument uses four channels to simultaneously obtain the four Stokes parameters and measure the instantaneous state of polarization (SOP) and degree of polarization (DOP) of an input light beam. A simple USB interface enables data to be transferred directly to a computer without the need for any additional hardware. Thanks to the high speed DSP electronics, this polarimeter easily monitors and analyzes fast polarization changes with a sampling rate of up to 625 kS/s. The POD-101D comes with PolaView™ software for real-time graphic display of polarization state either on a Poincaré Sphere window for viewing SOP traces or on an oscilloscope window for tracking polarization changes over time. The oscilloscope window has three operation modes: continuous scan mode, for instantaneous display of various polarization parameters; external trigger mode, for capturing transient events; and long term monitoring mode, for recording only the polarization changes above a predetermined threshold, in order to save hard drive space. The POD-101D is ideal for PMD compensation, polarization stabilization, system polarization monitoring, polarization analysis, and sensor analysis.

Preliminary Specifications:

Operating Wavelength Range[1]	1480 - 1620 nm
Analog Bandwidth	100 kHz for -40 dBm power sensitivity or 1 MHz for -20 dBm power sensitivity
Sampling Rate	625 kS/s max., user selectable
SOP Accuracy[2]	1% max.
DOP Accuracy[2]	± 2%
PER Measurement Range	0-40dB
PER Resolution	0.1dB
Insertion Loss	1.2 dB max. at 1550 nm
Return Loss	55 dB
PDL	< 0.25 dB
PMD	< 0.1 ps
Power Sensitivity	-40 dBm or -20 dBm
Maximum Input Power	+10 dBm
Optical Power Accuracy	± 0.25 dB
Optical Power Damage Threshold	500 mW
Operating Temperature	0 °C to 40 °C
Storage Temperature	-20 °C to 60 °C
Computer Interface	USB 2.0
Electrical Power Supply	100-120 VAC, 50-60 Hz or 200–240 VAC, 50-60 Hz
Software	PolaView™ (included)
Dimensions	2U 19" half rack width 3.5" (H) × 8.5" (W) × 14" (L)

Notes: Loss specifications are referenced without connectors.
1. Other wavelengths may be possible. Contact General Photonics for details.
2. Compared with Agilent 8509C polarization analyzer

INSTRUMENTS

POLARIZATION
MANAGEMENT MODULES

TIMING/DELAY
MANAGEMENT MODULES

SPECIAL POLARIZATION
COMPONENTS

ACCESSORIES

APPLICATION
GUIDE

FAQS

Features:
· Up to 625 kS/s polarization
 sampling rate
· Analog bandwidth up to 1MHz
· Real-time Poincaré sphere display
· Continuous scan mode
· External trigger mode
· Long-term monitoring mode

Applications:
· PMD monitoring and compensation
· SOP/DOP monitoring
· Polarization analysis
· Polarization stabilization
· Sensor systems
· Optical SNR monitoring/
 measurement
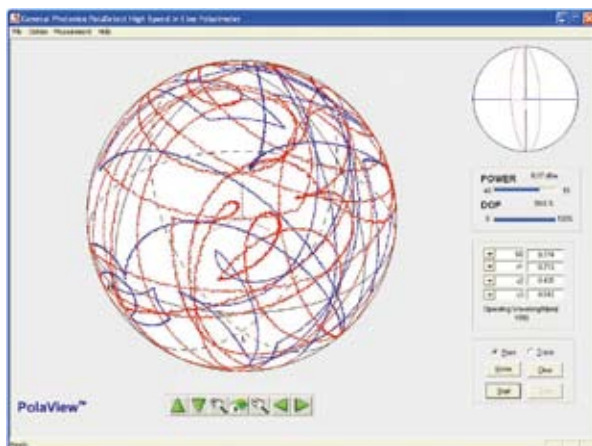
Tech Info: p. 81
FAQ: p. 144

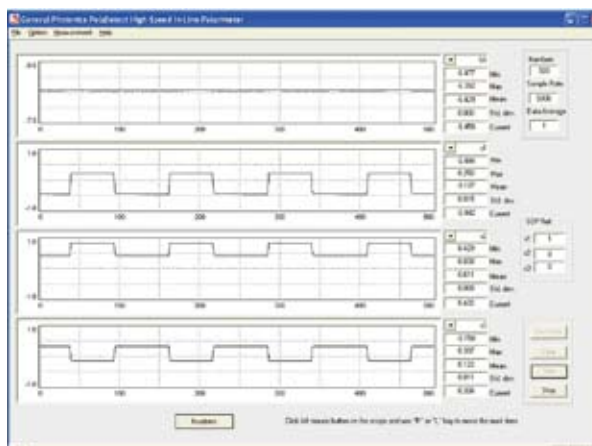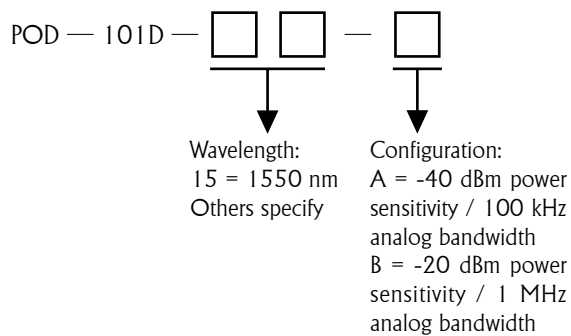PolaView™ Display Interfaces

Figure 1. Poincaré Sphere display

Figure 2. Oscilloscope display

Ordering Information:

POD — 101D — ☐☐ — ☐

Wavelength:
15 = 1550 nm
Others specify

Configuration:
A = -40 dBm power
sensitivity / 100 kHz
analog bandwidth
B = -20 dBm power
sensitivity / 1 MHz
analog bandwidth

Accessories:
NoTail™ Isolator   p. 71
NoTail™ Polarizer   p. 70

Note: Please specify power supply and
connector type when ordering.