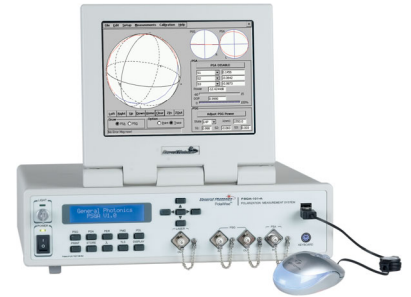


Polarization Measurement System – PolaWise™

PSGA-101-A for fiber optic applications

The PolaWise™ polarization measurement system accurately characterizes all polarization related properties of light sources and optical materials. Based on General Photonics' patented magneto-optic polarization generation and analysis technology, the PSGA-101-A is specially designed to effortlessly accomplish multiple functions in fiber optic applications, including polarization state generation (PSG) and measurement of state of polarization (SOP), polarization extinction ratio (PER), polarization dependent loss (PDL), and polarization mode dispersion (PMD). Another attractive feature of the instrument is its large flip-top LCD graphic display design, an industry first that allows large viewing area on a compact, portable enclosure. A 2x20 character front-panel LCD is also included for convenience in applications that do not require a graphic display, such as PER measurement. The PSGA-101-A's internal tunable laser enables PDL and PMD measurement up to 10 ps. The PSGA can also control tunable lasers from third parties via a GPIB port for measurement of larger PMD values. Finally, a VGA port allows the use of an external LCD graphic display of the user's choice. PolaWise™: a wise instrument and a smart choice!



Specifications

Operating Wavelength Range	1440 to 1620 nm (standard) ¹
SOP generation accuracy ²	±1° on Poincaré Sphere
SOP repeatability	±1°
Azimuth & ellipticity angle accuracy ²	< 0.25°
Stokes vector accuracy ²	±0.5%
DOP measurement accuracy ^{2,3}	±1%
PER dynamic range	> 40 dB (Input Power > -10 dBm)
PER axis accuracy ²	±0.2°
PMD measurement range	1 fs to 10 ps (Internal tunable laser) 1 fs to 400 ps (External laser, 0.01 nm < λ _{step} < 10 nm)
PDL measurement range	0 to 40 dB (Input power > -10 dBm)
Accuracy:	DGD ± (1 fs + DGD * 0.5%) SOPMD ± (SOPMD * 1%) PDL ± (0.05 dB + PDL * 2%)
Repeatability:	DGD ⁴ 0.03 fs SOPMD ⁴ 0.3 ps ² PDL ⁵ 0.04 dB
Resolution:	DGD 1 fs (1550 nm, λ _{step} = 2 nm) SOPMD 0.005 ps ² (1550 nm, λ _{step} = 2 nm) PDL 0.01 dB
Internal tunable laser	1528 to 1563 nm
Wavelength tuning step	50 GHz minimum for internal tunable laser
Operating Power Range	-40 dBm to +2 dBm
Optical Power Accuracy ²	± 0.25 dB
Optical Power Damage Threshold	300 mW
Operating Temperature	5 °C to 40 °C
Storage Temperature	-20 °C to 60 °C
Communication interfaces	GPIB, Ethernet
Displays	8" flip-top graphic LCD 2x20 character front panel LCD
External storage	USB removable storage media, such as flash drive
Power supply ⁶	100 – 120 VAC, 50-60 Hz 200 – 240 VAC, 50-60 Hz
Software	Control/display program (included).
Dimensions	2U, 3/4 of 19" rack width 3.5"(H) x 14" (W) x 14" (D)

Notes: Please specify connector types for laser and PSG input/output when ordering.

PSA input is free space and can accept either flat or angled FC connectors.

- Specs listed here apply to the standard 1440-1620nm model. Please contact General Photonics regarding other wavelength ranges.
- At 23±5°C.
- DOP measurement accuracy for C and L bands.
- Averaged over 10 steps, with wavelength step size = 2nm for DGD, 0.1nm for SOPMD.
- Measured by Mueller matrix method
- Universal power supply.

Applications:

- PMD measurement
- PDL measurement
- Polarization state generation (PSG)
- PER measurement
- PM fiber connector key alignment
- PM connector stress evaluation
- SOP measurement
- Source DOP measurement

Unique Features:

- Multiple operation modes
- Flip-top graphic display
- Front panel character LCD display
- External LCD monitor enabled
- USB removable storage media
- Compact & portable

Ordering Information:

PSGA - 101 - A - X

Ordering Options:

- with internal tunable laser
- without internal tunable laser

Making Light Work Lighter
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