

Reset-Free Polarization Stabilizer

- PolaStay™

The PolaStay™ polarization stabilizer actively maintains a stable output state of polarization (SOP) against rapid input SOP fluctuations as fast as 2 ms, and tracks against an endlessly rotating input SOP up to $16\pi/s$ without reset. This unique product is a complete system consisting of General Photonics' polarization controller, in-line polarization monitor, and proprietary algorithm. The output of the product can either be single mode fiber or PM fiber with the output polarization aligned to its slow axis. When a polarizer is placed at the output, the maximum power fluctuation caused by input polarization fluctuation is less than 0.1 dB. This instrument can be used to suppress noise figure in optical amplifiers, reduce PDL effects, demultiplex polarization division multiplexed channels, and eliminate polarization fading in coherent communication and fiber sensor systems.



Preliminary Specifications

Operating Wavelength Range	1260 to 1650 nm
SOP recovery time	< 7 ms (2 ms typical)
SOP rotation tracking speed	16 π/s , endless tracking & reset free
SOP accuracy ¹	< 0.1 dB
Repeatability	< 0.1 dB
Insertion loss	0.8 dB typical, 1.2 dB max.
Return loss	> 50 dB
Isolation in orthogonal polarization	20 dB
Minimum optical input	-13 dBm
Optical Power Handling	20 dBm max. and higher possible
Operating Temperature	0 °C to 50 °C
Storage Temperature	-20 °C to 70 °C
Power Supply	100 ~ 120 VAC, 50 ~ 60 Hz, or 200 ~ 240 VAC, 50 ~ 60 Hz
PC Interface	RS-232, USB, Ethernet
Dimensions	2U 19 inch half rack width 3.5"(H) x 8.5" (W) x 14" (L)

1. The output power fluctuation caused by SOP fluctuation after passing through a polarizer.

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

Applications:

- Optical amplifier noise reduction
- Polarization demultiplexing
- Elimination of polarization fading
- Coherent communication

Unique Features:

- Reset free operation
- 2 ms recovery time
- 16 π/s tracking speed
- Plug and play

Ordering Information:

POS - 103A - XX

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Output fiber type:
SM
PM

Making Light Work Lighter
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Corporation

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