

ACTIVE POLARIZATION MODULES

**Mini Dynamic Polarization Controller - PolaRITE™ III
(MPC-3/4X)**



In response to customer requests for low profile polarization controllers for system integration, General Photonics made a special effort in designing this third generation polarization controller, the PolaRITE™ III, with significantly reduced height and size. The height reduction is especially advantageous for integration in test equipment, fiber sensors, fiber lasers and optical network modules. Due to a special athermal design, the temperature stability is also significantly improved over our earlier version PolaRITE™ II. Like the other products in the PolaRITE™ family, PolaRITE™ III essentially eliminates insertion loss and back reflection with its unique all fiber construction. Combined with General Photonics' miniature piezo driver card, it can be controlled either by a digital or analog signal to obtain any desired polarization output from an arbitrary input polarization state.

Specifications:

Intrinsic Insertion Loss	0.05 dB
Return Loss	> 65 dB
Wavelength	1260 to 1650 nm standard, others specify
Rise and Fall Time ¹	30 μs max.
V _π at DC (at 23 °C)	35 volts max. @ 1550nm
Max. Activation Loss	0.01 dB (P grade), 0.05 dB (A grade) with 0 – 150VDC applied to all axes
Polarization Mode Dispersion	0.05 ps
Operating Temperature	-25 to 80 °C
Storage Temperature	-40 to 85 °C
Fiber Pigtail	9/125 μm single mode fiber standard, others specify
Electrical Interface	8 pin 0.03 inch square, with 0.098 inch pitch
Dimensions	2.58" × 0.80" × 0.63" (3 axes) 3.27" × 0.80" × 0.63" (4 axes)
Maximum Applied Voltage	150 volts
<p>Note: Values are referenced without connectors</p> <p>1. 10 to 90% transition for a voltage change of V_π.</p>	

Features:

- No intrinsic insertion loss
- No intrinsic back reflection
- Fast response
- Compact size

Applications:

- PMD compensation
- Polarization stabilization
- Polarization demultiplexing
- Fiber sensor
- Fiber laser
- Testing equipment

Related Products:

- Polarization Controller with Driver Card (PCD-M02)
- Components

Tech Info:

- What is Polarization?
- Polarization in Fiber Systems: Squeezing out More Bandwidth
- Combat Polarization Impairments with Dynamic Polarization Controllers
- PolaRITE™ II/III Polarization Controllers/ Scramblers Application Note

FAQ:

- Polarization Controllers

Dimensions (in inches):





