Fiber Phase Shifter (FPS-003)

The FPS-003 all fiber phase shifter/modulator combines a wide modulation bandwidth (up to 60 kHz) with low half-wave voltages to create a long-range device that can be driven by standard function generators. Like General Photonics' other phase shifters, it employs all fiber construction and has low insertion loss and back reflection. In addition to fiber sensor systems, this compact device is ideal for fiber laser systems, fiber resonators, and fiber interferometers for precision phase tuning or phase modulation.

Specifications:

Wavelengths	1310/1550, 1060, or 780nm
Fiber Type	1310/1550nm: Corning ClearCurve ZBL or equiv. 1060nm: 980-1550nm fiber with MFD 5µm at 980nm 780nm: Nufern 780HP or equiv.
Insertion Loss	<0.5 dB (at 1550nm, excluding connectors)
Return Loss	>55 dB (excluding connectors)
Total Phase Shift @500Hz, Vpp=150V	>55π (at 1550nm)
Half Wave Voltage (Vπ) @500Hz	1-3V typical
Resonance Frequency	36-39kHz typical
Vπ @resonance frequency	<150mV typical
PDL	<0.05 dB at 1550nm
Residual Amplitude Modulation	±0.01 dB (at 1550nm)
Capacitance of Piezo	5-12 nF
Maximum Applied Voltage	150V
Electrical Interface	Molex WM9131-ND or equivalent
Operation Temperature	10 to 50° C
Storage Temperature	−40° to 85° C
Fiber Length (Total)	500 ±10 cm
Dimensions	31.0 (L) x 31.0 (W) x 14.5 (H) mm

Note:
Specifications in this table are for SM fiber. Information for devices with other types of fiber is available on request.

Features:

- Wide frequency range
- Low half-wave voltage
- Large phase shift range
- Compact
- Low insertion loss
- Low residual amplitude modulation
- Low PDL

Applications:

- Fiber interferometers
- Fiber laser systems
- Fiber sensor systems

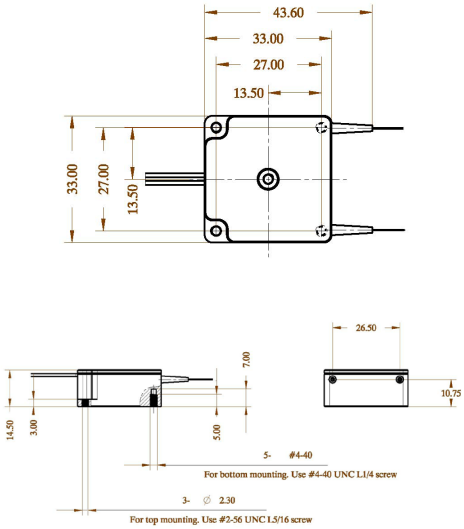
Related Products:

- Phase Shifters (FPS-001, FPS-002)

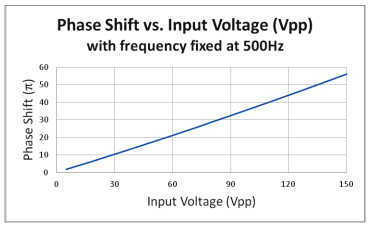
FAQ:

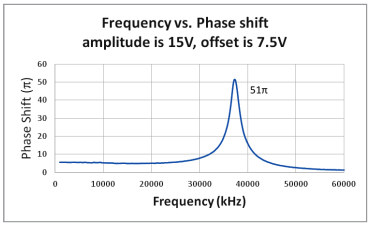
- Phase Shifters

Dimensions (in inches):



Typical Performance Data:





Note: Plots shown here are for FPS-003 with ClearCurve ZBL fiber, measured at 1550nm.

Ordering Information:

FPS — 003 — □ □ — □ □ — □

Wavelength:
35 = 1310/1550nm
10 = 1060nm
78 = 780nm

Fiber Type:
SS = SM fiber

Connector Type:
FC/PC, FC/APC
SC/PC, SC/APC
NC = no connectors
Others specify

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