

Mode Selective Photonic Lantern



Features

- Mode multiplexer
- Compact design
- Custom fiber design
- High quality mode excitation
- Low insertion loss

Product Overview

The Photonic Lantern offers a single component multiplexer/demultiplexer for mode division multiplexing using Few Mode Fibers (FMFs). Unlike alternative approaches the fiber lantern is fabricated in the same medium as the fiber transmission and offers optimum performance in a single component, compact format. Phoenix utilizes in-house proprietary technology to fabricate the lantern to offer the best performance.

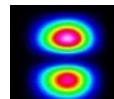
Product Details

The all-fiber Lantern is an adiabatic taper that provides a low loss transition from the input fibers to the modes supported by the waveguide at its output. The mode selective lantern is a mode multiplexer that converts the input from a single mode fiber to a specific mode in the output few mode fiber.

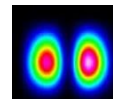
FMF output image



Input fiber 1
LP₀₁



Input fiber 2
LP_{11a}



Input fiber 3
LP_{11b}

For more information please contact Phoenix sales:
sales@phoenixphotonics.com or visit us at
www.phoenixphotonics.com

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Technical Information

Phoenix optical specification is based on launching into commercially available FMF, which is aligned and attached prior to delivery.

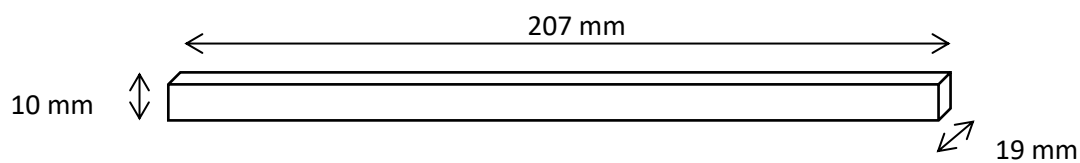
3-port fiber lantern

Parameter		Specification
No. of input fibers		3
Input fiber		Corning SMF28
Connectors		Optional – please specify
Output fiber ¹		OFS two mode graded index
Fiber coating		245mm acrylate
Mode extinction	dB	>15
Insertion loss fiber in to fiber out ²	dB	<2.5 (max)
Polarization dependent loss	dB	<0.5 (max)
Wavelength range	nm	1450 - 1640

¹ Alternative FMF fiber can be offered

² Maximum across all fibers, excluding connectors – loss is fiber-in to fiber-out.

Packaging: Below is the component version. Also available in benchtop format. Please contact us for further information.



Order code:

3	P	L	S	-		-	1	5	-	1	-		-		-	M	S
				FMF:			Wavelength:			Cable type:			SMF Connectors:			FMF Connectors:	
				GI – Graded Index			15 – 1530nm			0 – none			0 – none			0 – none	
				SI – Step index			14 – 1480 nm			1 – 900um jacket			1 – FC/SPC			1 – FC/SPC	
							13 – 1300 nm						2 – FC/APC			2 – FC/APC	
													* Others available			* Others available	

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