



# C-Band & L-Band Photosensitive Erbium-Doped Fiber

Nufern's high performance PS-ESF-3/125 is the ideal fiber for distributed feedback (DFB) and distributed Bragg reflector (DBR) lasers. Engineered to be inherently photosensitive, these fibers enable short device lengths and good pump conversion efficiency. Variants of this fiber with higher gain and/or photosensitivity are available upon request as custom products.

## Typical Applications

- Ultra-short very narrow linewidth all-optical DFB and DBR lasers

## Features & Benefits

- Inherently photosensitive with moderate Er dopant concentration—Enables short length devices with a superimposed fiber grating structure
- High efficiency—Good conversion of pump to signal power
- Perfectly matched passive fiber available—Facilitates the construction of fiber-based components and pigtails with low pump and signal coupling losses

## Optical Specifications

Operating Wavelength (nominal)	1550 nm
Core NA	0.280
Mode Field Diameter	$5.0 \pm 1.0 \mu\text{m}$ @ 1550 nm
Cutoff	$920 \pm 50 \text{ nm}$
Core Absorption	$8.5 \pm 1.0 \text{ dB/m}$ near 1530 nm

## PS-ESF-3/125

## Geometrical & Mechanical Specifications

Cladding Diameter	$125.0 \pm 1.0 \mu\text{m}$
Core Diameter	$3.0 \mu\text{m}$
Coating Diameter	$245.0 \pm 15.0 \mu\text{m}$
Coating Concentricity	$< 5.0 \mu\text{m}$
Core/Clad Offset	$\leq 0.50 \mu\text{m}$
Coating Material	UV Cured, Dual Acrylate
Operating Temperature Range	$-40 \text{ to } 85 \text{ }^\circ\text{C}$
Proof test Level	$\geq 100 \text{ kpsi}$ ( $0.7 \text{ GN/m}^2$ )

The passive version of this fiber is also available.



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Standard specifications and design parameters are listed above. Specifications are subject to change without notice. Other configurations such as alternative form factors, optimized cut-off and UV cured color coating may be available. Let us know how Nufern can assist with your requirements.

