

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



Coherent'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 pigtailed with low pump and signal coupling losses

## Optical Specifications

Operating Wavelength	1530 – 1625 nm
Core NA	0.280
Mode Field Diameter	5.0 ± 1.0 μm @ 1550 nm
Cutoff	920 ± 50 nm
Core Absorption	8.5 ± 1.0 dB/m near 1530 nm

## PS-ESF-3/125

## Geometrical & Mechanical Specifications

Cladding Diameter	125.0 ± 1.0 μm
Core Diameter	3.0 μm
Coating Diameter	245.0 ± 15.0 μm
Coating Concentricity	< 5.0 μm
Core/Clad Offset	≤ 0.50 μm
Coating Material	Acrylate
Operating Temperature Range	-40 to 85 °C
Proof Test Level	≥ 100 kpsi (0.7 GN/m <sup>2</sup> )



The passive version of this fiber is also available.

Nufern • 7 Airport Park Road, East Granby, CT 06026 • 860.408.5000 • Toll-free 866.466.0214 • Fax 860.844.0210 • Email: [tech.sales@coherent.com](mailto:tech.sales@coherent.com)  
[www.coherent.com](http://www.coherent.com) ; [www.shop.coherent.com](http://www.shop.coherent.com) • Coherent products are manufactured under an ISO 9001:2008 certified quality management system.



Custom developed fiber (FUD) 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 Coherent can assist with your requirements.

NU0109- 11/12/2020