

## D Shaped / Side-polished optical fibers

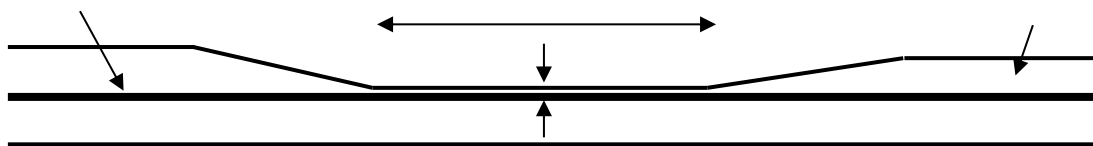
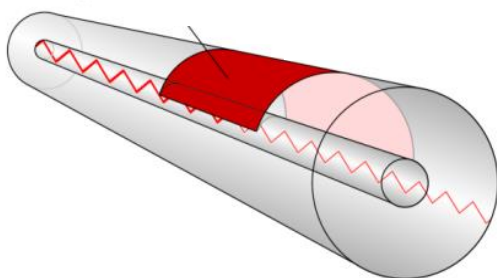
### Product Overview

Phoenix Photonics fiber side-polishing technology enables access to the evanescent field of the wave propagating in an optical fiber by removing a section of the cladding. Unlike the more common block mounted technology, this approach provides a surface of defined length parallel to the core. The propagation characteristics of the wave can be modified by the structure and material of the replacement cladding.

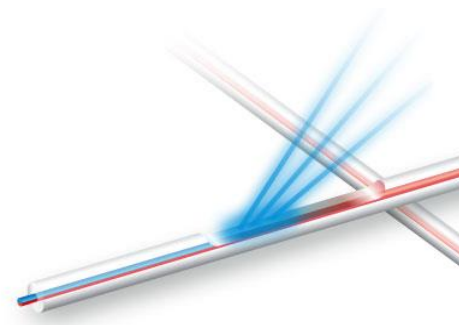
The evanescent field fibres enable investigation of components and sensing elements.

The figure below shows transmission curves for devices of different polished depths with different refractive index overlays.

*Removing a section of the cladding to gain access to the evanescent field*



V2 01405



### Features & Applications

#### FEATURES

- Good surface finish
- Low loss in air
- Most standard silica fibers can be polished
- Variable polishing depths
- Variable exposed core lengths

#### APPLICATIONS

- Sensing
- Thermal threshold detection
- Fiber components
- Propagation control

### STANDARD SPECIFICATIONS

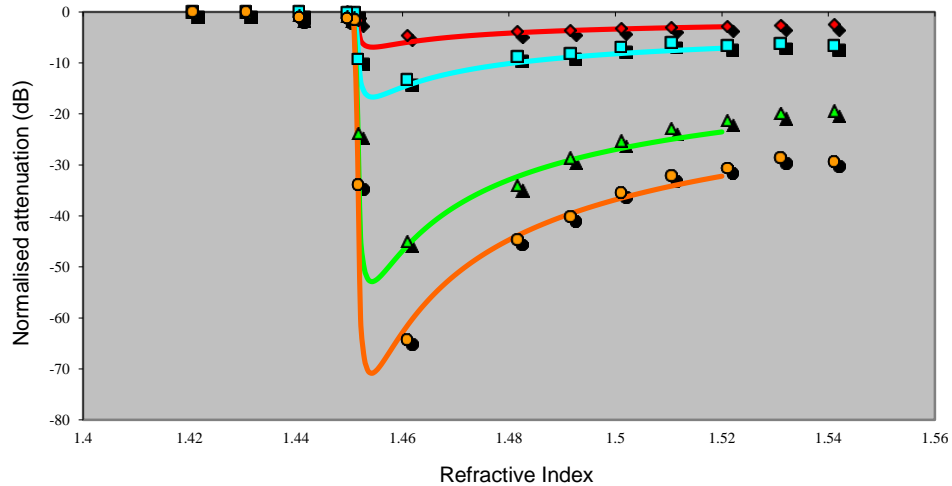
Wavelength	nm	1310, 1550
Insertion loss in air	dB	<0.1
Insertion loss in refractive index 1.5	dB	>45 (Typ. 60)
Polished region length	mm	17
Fiber type		SMF28

### Custom Specifications

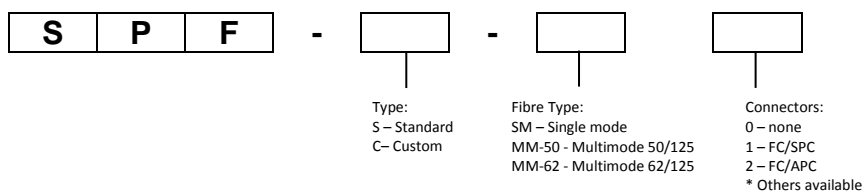
Many of the parameters can be adjusted in the fabrication process to provide arrange of options, please contact Phoenix directly with requirements. Options include:

- Different fiber types
- Different polished depths
- Different polished lengths
- Definition of attenuation at specific refractive index overlay
- With or without connectors
- Reflective devices with integrated fiber mirror

Attenuation response with overlay refractive index for different polishing depths - theoretical line and data points



### Ordering Information



For more information please contact Phoenix sales:  
[sales@phoenixphotonics.com](mailto:sales@phoenixphotonics.com) or visit us at  
[www.phoenixphotonics.com](http://www.phoenixphotonics.com)