# 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
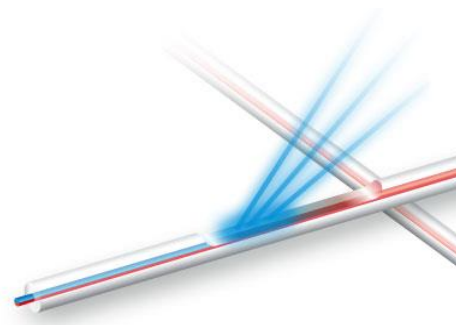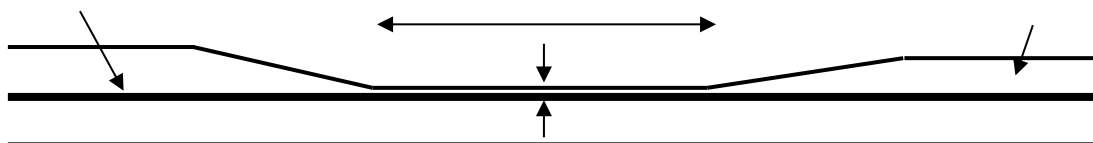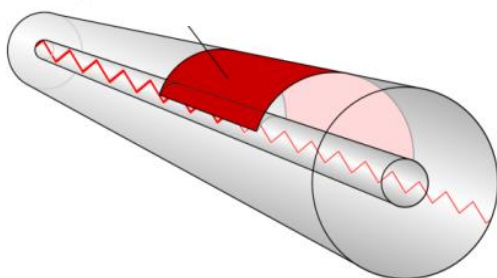
Features & Applications

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

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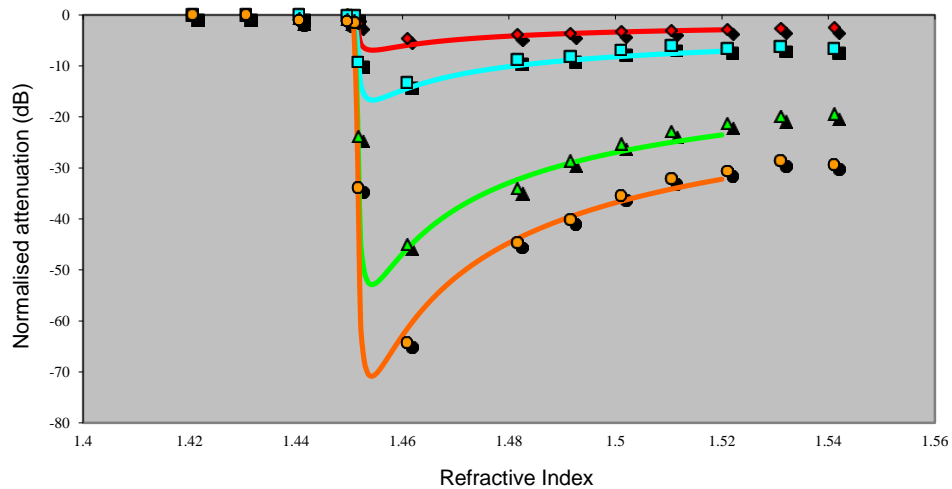www.phoenixphotonics.com

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STANDARD SPECIFICATIONS

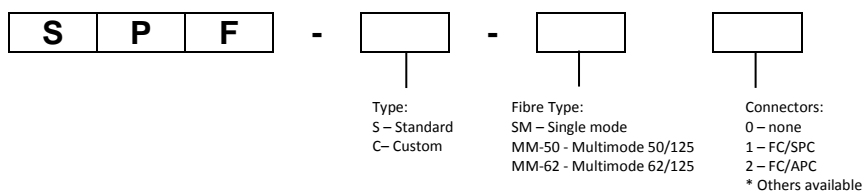| Wavelength	nm	1310, 1550
Insertion loss in air	dB	<0.1
Insertion loss in refractive index 1.5	dB	>45 (Typ. 60)
Polished region length	mm	17
Fiber type		SMF28

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 poliahing depths - theoretical line and data points

Ordering Information

| S | P | F | - | | - | | | |

Type:
S – Standard
C– Custom

Fibre Type:
SM – Single mode
MM-50 - Multimode 50/125
MM-62 - Multimode 62/125

Connectors:
0 – none
1 – FC/SPC
2 – FC/APC
* Others available