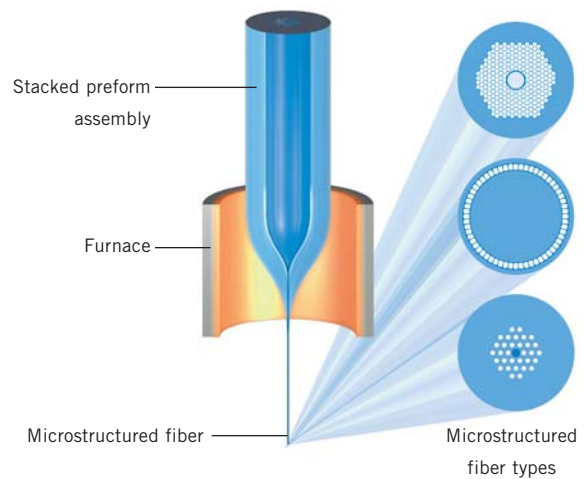




## High Purity Synthetic Fused Silica for Photonic Crystal Fibers

As a key supplier of synthetic fused silica to the fiber optics industry, Heraeus is committed to innovative and up-and-coming technologies such as microstructured or photonic crystal fibers (PCF). Heraeus offers rods and tubes as semi-finished products for redraw. In addition Heraeus can manufacture capillaries and small rods for the direct assembly of these preforms. We are able to service customers dedicated needs by supplying specialized solutions e.g., rods and tubes with hexagonal or rectangular inner and/or outer shape.

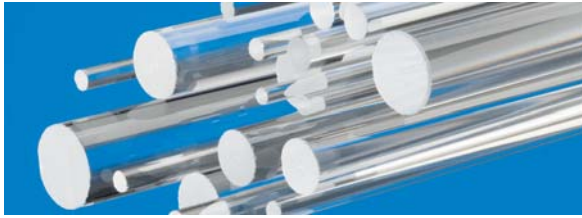
**What can we do for you?**



## Rods

Precision finished rods in a wide range of diameters, manufactured with tight tolerances, are available for stack and draw directly. Heraeus can also provide larger semi-finished rods which can be redrawn to your final dimensions. These rods can be used as wave guiding parts or to fill undesirable voids in the PCF structure.

Outer diameter: 1 ... 90 mm  
 Tolerance: 15 µm  
 Length: 500 ... 1,500 mm



## Capillary tubing

Our high precision capillaries are drawn to meet your exacting dimensional needs. We can also supply tubes which can be used to redraw precision capillaries to your final required dimensions.

Outer diameter (OD): 1 ... 5 mm  
 OD / ID ratio: 1.05 ... 15  
 OD tolerance: 15 µm  
 Wall thickness tolerance: 15 µm  
 Length: 500 ... 1,500 mm



## Overcladding tubes

We offer a wide range of tubes as overcladding materials for photonic crystal and microstructured fibers. For conventional stacks, we can provide thin and heavy walled jacket tubes. Furthermore we can supply tubes with hexagonal ID's and / or OD's for advanced preform designs.



## Materials

Tubing and rod products can be made from a spectrum of different material grades. These include F300, reduced OH content F500, UV resistant high OH F100 or F110, and highly fluorine doped material made using our proprietary plasma technology.

	VIS/NIR		UV/VIS	
	F300	F500	F100	F110
OH [ppm] specified	≤ 1	≤ 0.1	-	-
typical	0.2	0.02	700	400
Cl	≤ 2,500	≤ 2,500	200 ... 300 ppm	200 ... 300 ppm
Trace impurities	Below detection limit of ICP-MS			
Refractive index*	3.5 ... 5.0 x 10 <sup>-4</sup>		-1.0 ... 0 x 10 <sup>-4</sup>	

Typical values, if not stated otherwise

\*Difference to un-doped silica (Heraeus standard)

## Heraeus' in-house services

With Heraeus' extensive expertise in fused silica materials we can supply machining, assembly, and draw services for microstructured and PCF preforms. Our capabilities allow quick turn around time for both large and small quantities based on our customer's requirements. Our services allow you to save time, money, and precious in-house resources.

## About us

Heraeus is the key global supplier of high purity synthetic fused silica products for optical fiber manufacturing. We have been a reliable partner in the world telecommunications industry since 1976.

We are certified for ISO 9001:2000 and our Total Quality Management system is based on the Business Excellence Model of the European Foundation for Quality Management (EFQM).

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