

Flexible Fused Silica Capillary Tubing

- Standard & Precision Cleaving
- Laser Cutting
- Saw Cutting

Cutting Edge Technologies

Optimal performance in many capillary applications is dependent upon the end face quality. Selection of the right cleaving or cutting technology is important. Polymicro Technologies offers a range of capillary cleaving and cutting capabilities, including:

- ◀ **Standard Cleaving**
- ◀ **Precision Cleaving**
- ◀ **Laser Cutting**
- ◀ **Saw Cutting**

Standard Cleaving

Polymicro employs Standard Cleaving for general capillary applications. Capillaries are cleaved to customer specified lengths with end face quality providing excellent performance in analytical techniques such as GC and CE. For customer convenience, standard cleaved capillaries are typically packaged in polymer bags with quantities up to 50 per baggie. Standard cleaves are available on windowed capillary products as well as many capillary assemblies and arrays. To address high volume demands, Polymicro implements fully automated cleaving technology to minimize production cost. Put the superior reproducibility of Polymicro Cleaved Capillaries in your laboratory.



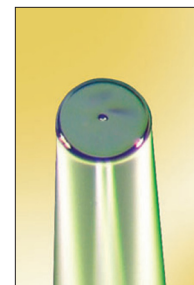
Precision Cleaving

Polymicro has worked diligently to develop and optimize devices which yield high quality, precision cleaves. Precision Cleaving yields nearly perpendicular end faces and tight length tolerances while minimizing debris and surface defects, making this the technique of choice in emerging high performance, analytical methods. Precision cleaving is employed when preparing capillary for use in applications such as Nano-LC, Electrospray MS, Mass Flow Control, and Microfluidic interfaces. Cleaving operations are conducted in micro-clean environments and parts are packaged in high quality bags; both minimize particle contamination.



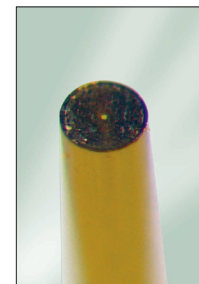
Laser Cutting

Polymicro has state of the art laser capabilities which yield ultra-high quality precision cuts. Laser cutting offers the added feature of a defect free, polished end face while maintain exacting length tolerances. Although there is some dependence on wall thickness, laser cutting of ID down to 5 μ m has been demonstrated. Laser cutting removes a few millimeters of the coating from the tip and rounds the edges of the capillary leaving a smooth end-face transition. It is not uncommon for both ends to be laser cut, although this is not mandatory for all applications. Laser cut capillary is used in applications where durable, high quality, low debris end faces are required. Examples include MS interfaces and nebulizers.



Saw Cutting

Many high volume applications are best served by employing a saw cutting approach for preparing capillary pieces. Saw cut pieces often have chips and minor fractures, but are produced in bulk processes that help minimize costs. If improved end faces are critical, lapping steps can be added. For the highest quality end faces, a final polishing step is included. Critical, and sometimes limiting, factors to consider include the capillary wall thickness, ID, and overall part length. This approach is often selected for short, thick wall parts, with ID greater than 100 μ m.



Let one of Polymicro's Technical Sales staff assist you in selecting the best technique for your application.

- Flexible Capillary
- Multimode Optical Fiber
- Specialty Assemblies
- Micro-Components

Polymicro
TECHNOLOGIES

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