Potential Applications

- **Unique sample detection & analysis**
  - Increased path-length detection cells
  - Evanescent wave optics
  - Guide fluorescent emissions from capillary tip
  - Study capillary surface chemistries
  - Monitor emissions from ligands bound to capillary internal surface

- **UV transmission inside of capillary**
  - Initiate light-activated chemistries
  - Cure UV adhesives
  - Detect light producing reactions

- **Chromatographic columns for µ-LC**
  - New technologies for improved column durability after frit formation
  - Windows like standard capillary for on-column detection methods

- **Optically monitor fluids**
  - Before, during or after delivery/sampling

Handling and Interfacing

LTSP cleaves like standard capillary. However, optical quality precision cleaving or fiber style polishing is recommended for optimum light input and output. Simple “T” style fittings have been used to make the optical/fluid end connections. Polymicro can manufacture optical fiber to closely match the tubing OD, which facilitates proper optical alignment. Further, the core of the fiber and the annular core of LTSP can be precisely matched when making custom designs in order to optimize light launching and collection. In some instances, smaller optical fiber can be used if spacing is adjusted to optimize light launch into the capillary’s annular core end face. This unique tubing can be made with either High or Low-OH glass depending upon the application requirements and would normally be made with a 0.22 NA. Depending on the refractive index of substances introduced into the capillary interior, the light guiding optics can be modified significantly. This is discussed in detail in an Applications Note at www.polymicro.com.

Typical Attenuation

Data from LTSP150375 Standard cut-back attenuation on 253m segment

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A Subsidiary of *molex*

18019 N. 25th Avenue • Phoenix, AZ 85023-1200
Voice: (602) 375-4100 Fax: (602) 375-4110
E-Mail: polymicrosales@molex.com
URL: http://www.polymicro.com

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- Multimode Optical Fiber
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