

General Products Description

SelenOptics produces a new generation of Mid Infrared Fibers

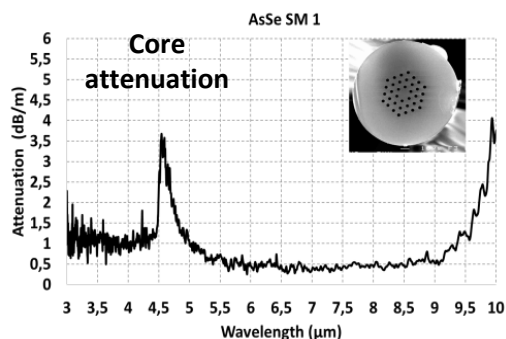
Advantages

- Transmission from 1.5 up to 10 μm
- High Nonlinearity
- Chromatic Dispersion management
- Easy Coupling

Applications

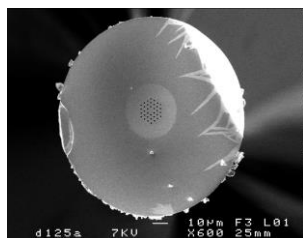
- Nonlinear Applications: Supercontinuum; Wavelength conversion; Brillouin Fiber Laser
- Mid-IR Laser Beam Delivery (QCL, OPO)

Broadband single mode fiber



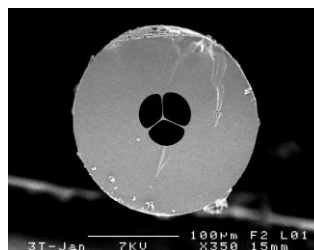
- ✓ Applications: Mid IR laser beam delivery
- ✓ Single mode up to 10 μm
- ✓ Excellent beam quality
- ✓ Compatible with FC/PC connectors

Highly nonlinear fiber



Highly nonlinear single mode fiber

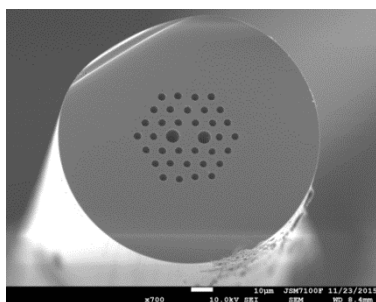
- ✓ Applications: Brillouin fiber laser
- ✓ Transmission from 1.5 to 4 μm



Highly nonlinear multi mode fiber

- ✓ Applications: Wavelength conversion, supercontinuum
- ✓ Transmission from 1.5 to 10 μm

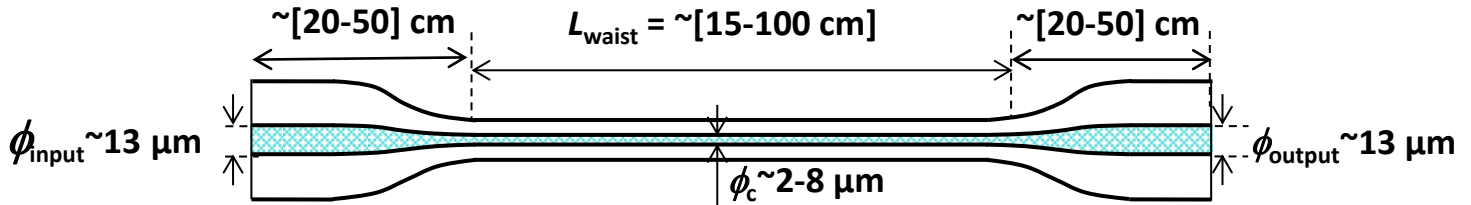
Polarization Maintaining fiber (preliminary)



- ✓ Applications: Mid IR laser beam delivery
- ✓ Transmission from 1.5 to 10 μm
- ✓ Probably the only PM fiber beyond 5 μm

General Products Description

Tapered fiber

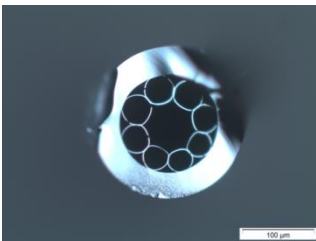


- ✓ Tapered fiber is a solution to increase the nonlinearity and to manage the chromatic dispersion
- ✓ Applications: Brillouin fiber laser, supercontinuum, wavelength conversion
- ✓ The fiber design is homothetic in the waist region
- ✓ Transmission from 1.5 to 10 μm (depending on the core size in the waist region)

R&D and Customized fibers

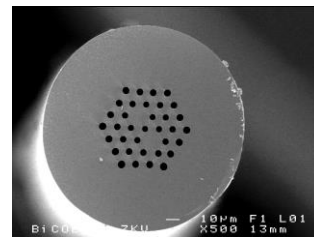
- ✓ In close collaboration with the Glass and Ceramics group from Rennes University, we can help you to make specific design based on various glasses compositions.

- **Example of a Negative Curvature fiber for high power transmission :**



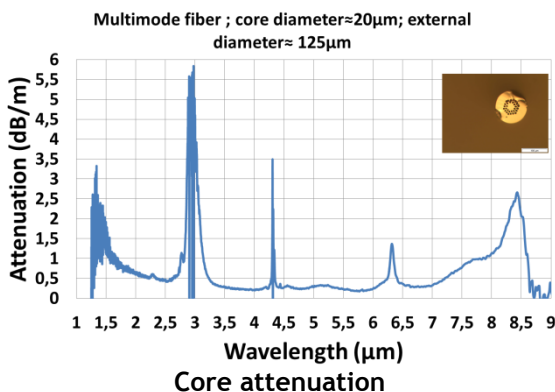
TeAsSe Negative Curvature fiber: More 99% of power will be guided in the air

- **Example of a dual core fiber:**



AsSe dual core fiber for mid infrared coupler

- **Example of a Multimode fiber:**



- **Various glasses compositions:**

- ✓ Sulphide based glass (AsS)
- ✓ Tellurium based glass (TeAsSe)
- ✓ Selenium based glasses (AsSe and GeAsSe)