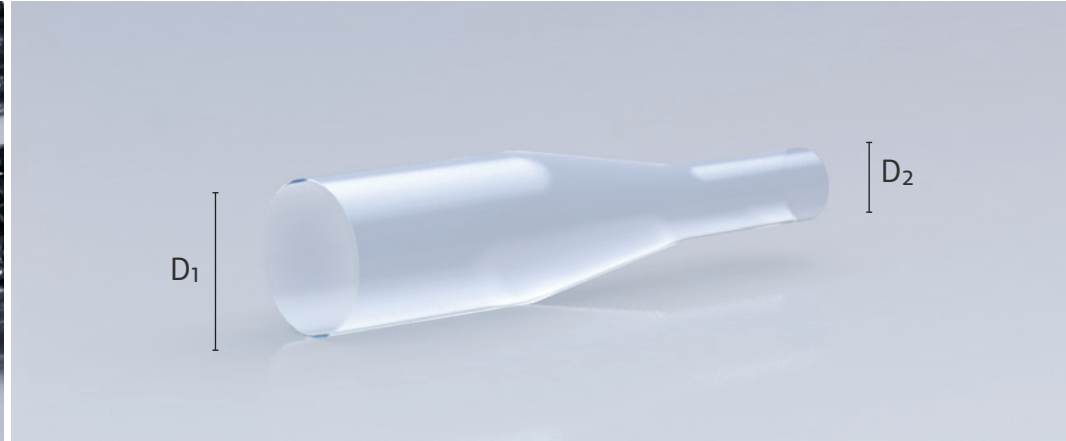


Fiber taper products

Optran® UV, WF, Ultra WFGE



CeramOptec®'s fused tapered fibers can be deployed from the deep UV to the NIR range. Taper products are required where input and output diameters differ. CeramOptec® offers a wide range of options, including for special applications.

Advantages

- Broad temperature range
- High resistance against laser damage
- Special jackets available for high temperatures, high vacuum and harsh chemicals
- High core / cladding ratio
- Constant core / cladding ratio throughout the entire fiber
- All dielectric, non-magnetic design
- Sterilisable using ETO and other methods
- Biocompatible material

Formula

A tapered optical fiber acts as a beam diameter and numerical aperture converter, with the input beam being converted according to the following formula:

$$NA_2 = \frac{D_1}{D_2} NA_1$$

NA₁: Input NA | NA₂: Output NA

D₁: Input diameter | D₂: Output diameter

The output NA is limited by the NA of the fiber used, which may result in a loss of light.

Options

Available fibers	Optran® UV Optran® WF Optran® WFGE
Wavelength	From deep UV to NIR
Core diameter	Available from 50 µm to 1000 µm
Standard taper ratios	2:1 3:1 4:1 5:1
Standard proof test	100 kpsi
Minimum bending radius	5 – 100 mm (depending on the selected fiber diameter)

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