

# Optical Fiber Feedthroughs for UHV

VACOM Optical Fiber Feedthroughs are designed for ultrahigh vacuum applications and feature extremely low outgassing rates and helium leak rates. The connectors are high quality FC/PC or FC/APC that allow for high transmission and minimal losses at interconnects. The maintenance friendly design with integrated fiber and short coupling length dramatically reduces risk of fiber fracture. In case of a fracture in any of the fiber cables the feedthrough may remain in service and only affected fiber cables have to be replaced. Special vacuum cables in FC/PC and FC/APC, as well as atmosphere cables with nearly any connector type are available.

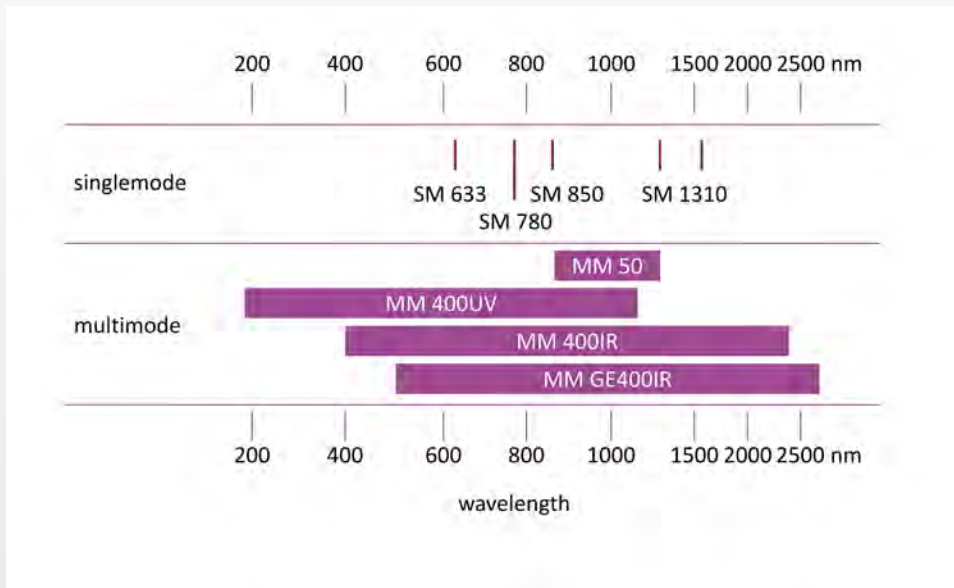
- Completely assembled
- UHV compatible to  $5 \cdot 10^{-11}$  mbar
- Helium leak rate  $< 1.0 \cdot 10^{-10}$  mbar l/s
- Low insertion loss ( $\ll 1$  dB, for details see feedthrough specifications)
- Integrated singlemode or multimode fiber
- FC/PC or FC/APC connectors
- Adapter cables available for atmosphere use
- Operating temperature  $-25$  °C to  $75$  °C
- Bakeout temperature up to  $180$  °C



# Standard Feedthroughs

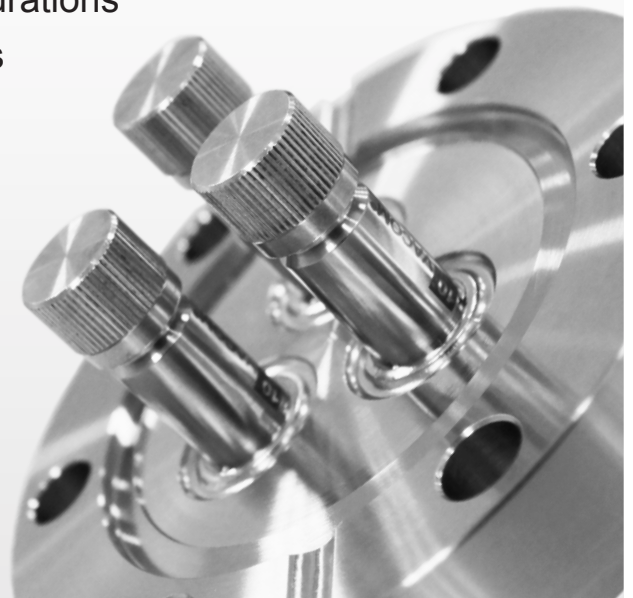
- Standard Feedthroughs available for 8 different fiber types covering a wide range of applications (see below)
- Configured as single weldable feedthroughs, or on CF / ISO / KF / QCF flange

Standard fibers at VACOM and wavelengths / wavelength ranges



# Special Feedthroughs

At VACOM, optical fiber feedthroughs are assembled in-house. We look forward to realizing special feedthrough configurations with different kinds of optical fiber feedthroughs or along with electrical or other feedthroughs on one flange. Also, production of feedthroughs with special fibers is easily possible. Please do not hesitate to contact us with your specific application and requirements.



# Optical Fiber Cables

- Optical fiber cables for use on atmosphere completely assembled with connectors for nearly any connector type
- Ultra high vacuum cables with FC/PC and FC/APC connectors
- Special fiber protection for ultra high vacuum cables with ETFE buffer and / or additional stainless steel tubing available on request



## FC Connectors\*

- Connectors for FC/PC and FC/APC
- Two versions for use on atmosphere and in ultra high vacuum
- For attaching existing fibers to VACOM optical fiber feedthroughs



\* Please note: for fiber- connector- assembly, special equipment is necessary. Please contact us for more information.

## FC Coupling

- For quick and secure connection of two FC cables or connectors (either FC/PC or FC/APC)
- 2 hole flange for M2 screws allows easy attachment to other components
- Order codes:  
KUP-A-FC for atmospheric use  
KUP-V-FC for ultra high vacuum



## ■ Feedthroughs

Optical Fiber Feedthroughs are available for all VACOM standard fibers SM633, SM780, SM850, SM1310, MM50, MM400UV, MM400IR and MMGE400IR. Replace the text “SM1310” by the fiber you need. Other flange sizes and feedthrough configurations are available.

with FC/PC Connectors			with FC/APC Connectors		
Order code	Flange	Feed-throughs	Order code	Flange	Feed-throughs
<b>W-SM1310-FCPC</b>	-	1	<b>W-SM1310-FCAPC</b>	-	1
<b>CF16-SM1310-FCPC-1</b>	CF16	1	<b>CF16-SM1310-FCAPC-1</b>	CF16	1
<b>CF40-SM1310-FCPC-1</b>	CF40	1	<b>CF40-SM1310-FCAPC-1</b>	CF40	1
<b>CF40-SM1310-FCPC-2</b>	CF40	2	<b>CF40-SM1310-FCAPC-2</b>	CF40	2
<b>CF40-SM1310-FCPC-3</b>	CF40	3	<b>CF40-SM1310-FCAPC-3</b>	CF40	3
<b>CF63-SM1310-FCPC-1</b>	CF63	1	<b>CF63-SM1310-FCAPC-1</b>	CF63	1
<b>CF63-SM1310-FCPC-3</b>	CF63	3	<b>CF63-SM1310-FCAPC-3</b>	CF63	3
<b>CF63-SM1310-FCPC-5</b>	CF63	5	<b>CF63-SM1310-FCAPC-5</b>	CF63	5

## ■ Cables

Optical fiber cables are manufactured on request. Please specify fiber type, fiber length, and desired connector configuration.

## ■ Connectors

The following ultra high vacuum connectors are available for optical fiber feedthroughs. For atmosphere connectors replace the “V” in the order code by “A”.

Order code	Suitable for	Connector
<b>CONN-SM-FCAPC-V</b>	SM633, SM780, SM850, SM1310	FC/APC
<b>CONN-SM-FCPC-V</b>	SM633, SM780, SM850, SM1310	FC/PC
<b>CONN-MM50-FCAPC-V</b>	MM50	FC/APC
<b>CONN-MM50-FCPC-V</b>	MM50	FC/PC
<b>CONN-MM400-FCPC-V</b>	MM400UV, MM400IR, MMGE400IR	FC/PC