

# Vacuum Fiber Optic Feedthrough



*FlexiRay®*

Optical fiber vacuum feedthroughs provide a flexible optical path into a vacuum or pressurized chamber in a pressure range from 10 Bar to  $10^{-7}$  Torr.

A high temperature version (up to 600°C) of the vacuum feedthrough is available with Cu-coated silica fiber assemblies.

Low-temperature version enables the work up to 4K (Liquid Helium).

Vacuum feedthroughs work in all spectral ranges from 0.2 to 18 $\mu$ m with different types of optical fibers

## Applications:

- ✓ Mid-IR spectroscopy
- ✓ Flexible IR pyrometry
- ✓ Illumination/detection for wide spectral range
- ✓ Power delivery for Quantum Cascade Lasers
- ✓ Power delivery for CO- and CO<sub>2</sub>-Lasers

## Features:

- ✓ Fits to any flange type
- ✓ Excellent signal throughput due to single-piece design of the unit
- ✓ Movable cable to fit its length inside the vacuum chamber
- ✓ Leakage rate better than  $5 \cdot 10^{-12}$  mbar·l/s
- ✓ Works at temperatures down to 2K

UV

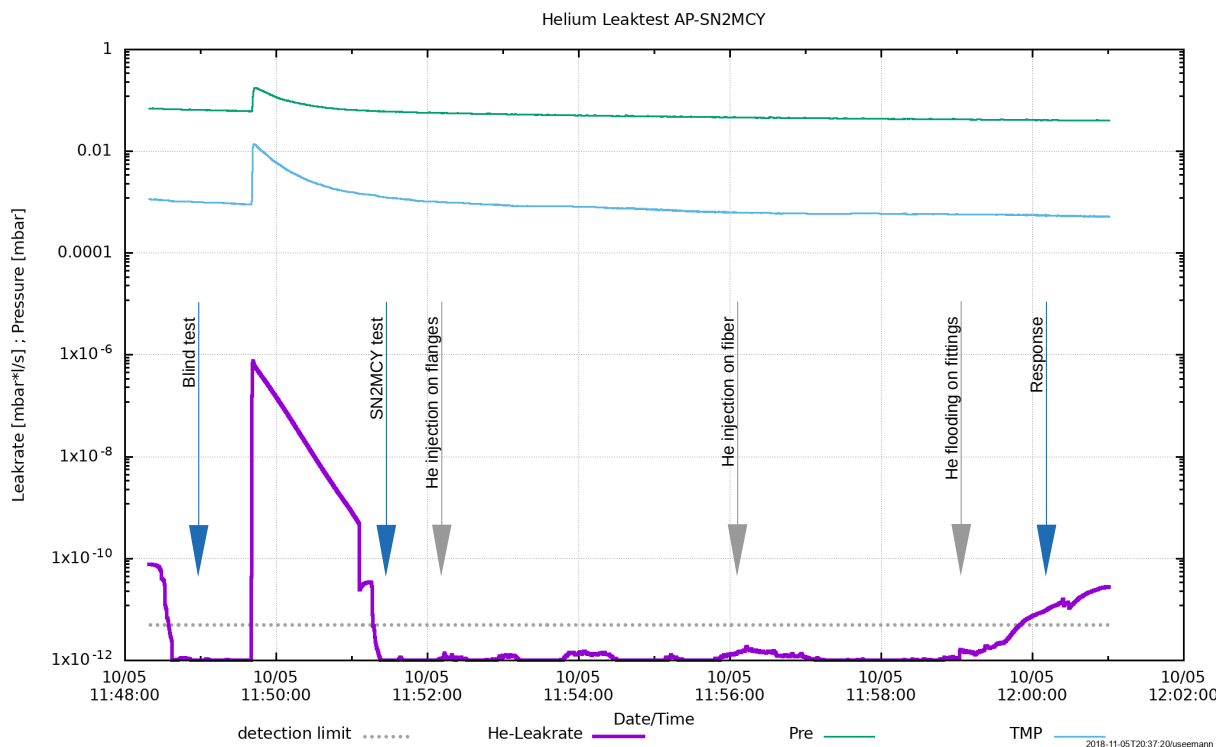
VIS

NIR

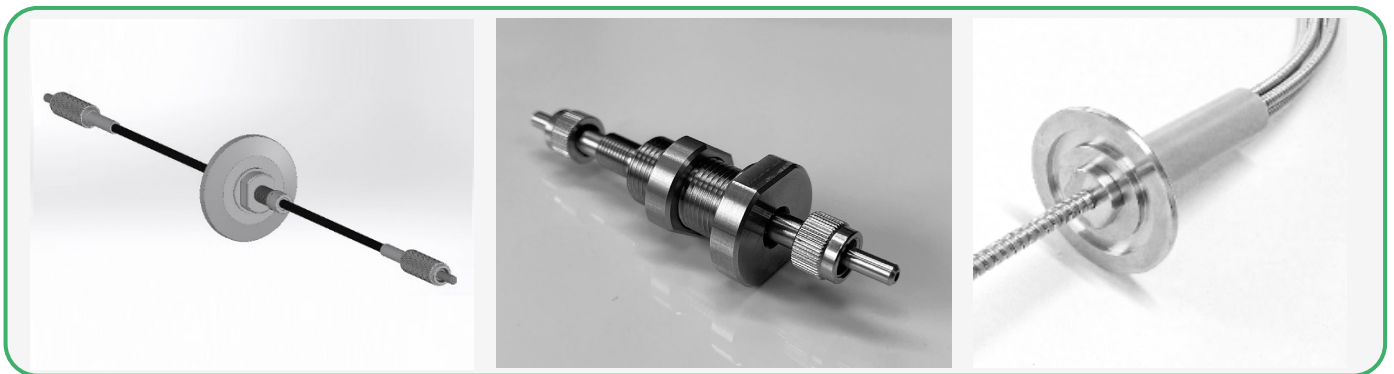
MIR

## Helium - Leak Test of Vacuum Feedthrough

Leak rate is below detection limit ( better than  $5 \times 10^{-12} \text{mbar} \cdot \text{l/s}$ )



Vacuum feedthrough comes with KF, CF and any other requested flange types .



Vacuum feedthrough can be equipped by fiber cables. Fiber cables are available from all kinds of artphotonics's fibers:

- ✓ PIR: <https://artphotonics.com/product/polycrystalline-infrared-fibers/>
- ✓ CIR: <https://artphotonics.com/product/chalcogenide-mid-ir-fibers/>
- ✓ Silica: <https://artphotonics.com/product/copper-coated-silica-fibers/>
- ✓ Indium and Zirconium Fluoride Glass fibers:  
<https://artphotonics.com/product/indium-and-zirconium-fluoride-glass-fibers/>