



## **Fiber Optic Hermetic Feedthroughs**

It is increasingly common for HV (High Vacuum) and UHV (Ultra High Vacuum) applications to include flanges equipped with optical fiber feedthroughs. The fibers used are as diverse as the measurements and analyses they help to carry out: Singlemode - Low wavelengths Singlemode - Polarization-maintaining - Large cores for spectrometry, and more.

Each choice of fiber leads towards a type of connector standard: Singlemode and graded index fibers (cladding 125 $\mu$ m) to FC/PC & FC/APC connectors, including ceramic inserts ferrules and sleeves) will provide the critical degree of accuracy. Large cores (200 to 1500  $\mu$ m) to SMA connectors.



Technical specifications	ERVAC®	Optical fiber
Vacuum level	> 1.10 <sup>-8</sup> mbar	
Leak rate	≤ = than 1.10 <sup>-8</sup> mbar.l/s	
Total Mass Loss	TML < 0,1%	
Collected Volatile Condensable Material	CVCM < 0,01 %	
	SMA	Comments
insertion Loss	< 3 dB max. at 850nm	2 dB typ. (fiber 600µm at 850nm)
Fibers	200μm to 1000μm core fiber, Low OH, High OH, solarization resistant	
	FC/PC	Comments
insertion Loss	< 1 dB max. at 1550nm	0,3 dB typ. (fiber SMF28e at 1550nm)
Fibers	Singlemode, GI50/125, GI62,5/125, LCH50/125, LCH105/125	









## **Fiber Optic Hermetic Feedthroughs**

FC/PC feedthrough female/female singlemode or graded. index fiber

In line feedthrough up to 37 channels 900µm jacket



SMA feedthrough (male/male) large core fiber (200 to 1000µm)



FC/APC feedthrough male/male

singlemode



FC/PC feedthrough **ATEX** version singlemode or graded index fiber



1000µm core fiber, SMA port one side light is directly collected in vacuum chamber



In line feedthrough 10 channels



singlemode fibers, jacket 2.8mm





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