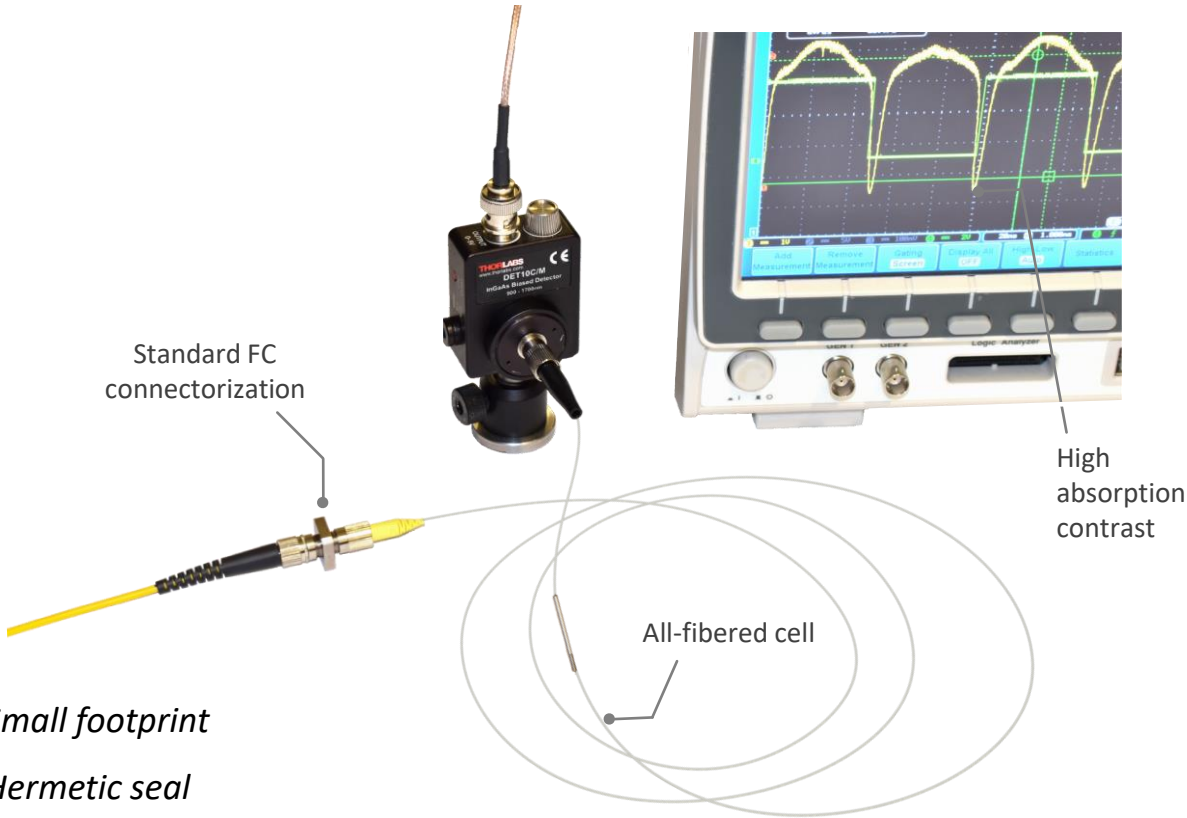
Quantum Technology

GLOphotonics
The Hollow-Core PCF & Photonic MicroCell™ company

ACETYLENE FIBERED CELLS – C2H2 PMC©

FOR FREQUENCY AND WAVELENGTH REFERENCE



Small footprint

Hermetic seal

High transmission & contrast

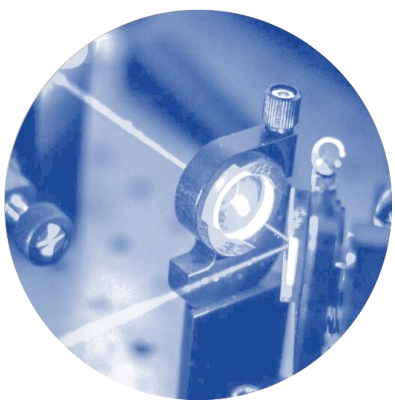
S & C band coverage

Absorption contrast on demand

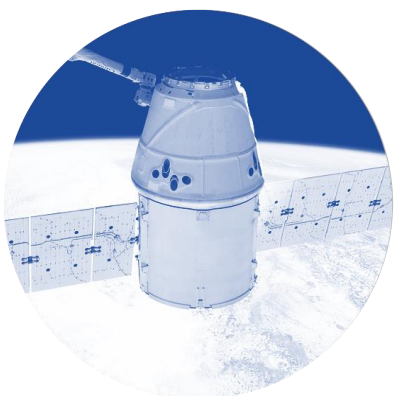
Plug and play – integration to standard fibered components

Telecom

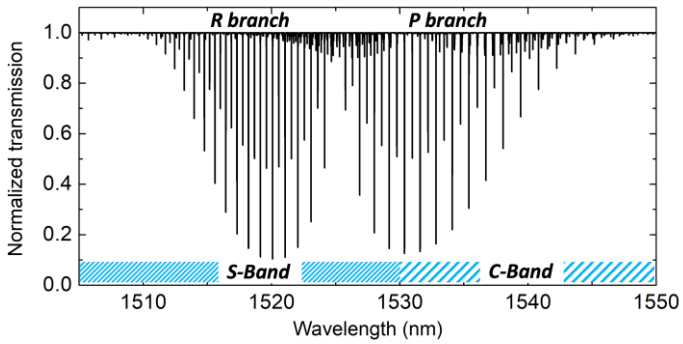
Instrument Calibration



Environment & Space



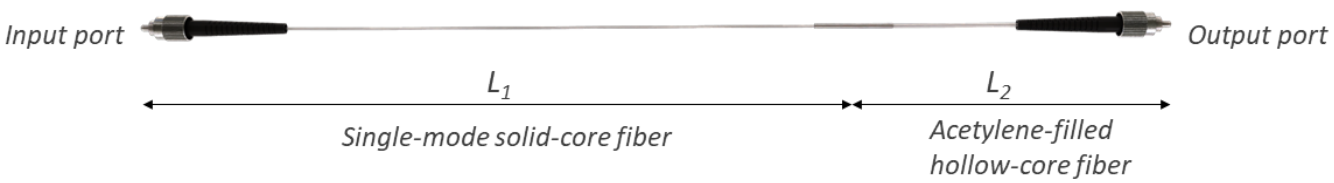
Spectroscopic [1] and optical properties [2]

Molecule	Acetylene ($^{12}C_2H_2$)
Wavelength range (nm)	1510 to 1550
Absorption contrast C (for P9 line – 1530,371 nm)	20 % ≤ C ≤ 95 %
FWHM linewidth (for P9 line – 1530,371 nm)	≤ 1.2 GHz
Typical spectrum of a C_2H_2 PMC [3]	
Insertion loss (with coupling efficiency of 100%)	≤ 3.5 dB

Physical Properties

Total length	45 cm ≤ L ≤ 2.3 m
Length of SMF 28 fiber L1	Upon request with a minimum value of 30 cm
Gas filled hollow-core fiber length range [5]	15 cm ≤ L2 ≤ 2 m
Connector types	Input port: FC/PC or FC/APC Output port: FC

(1) At room temperature (20°C)
(2) This PMC is designed for unidirectional use
(3) Data taken from Hitran database (conditions: Acetylene pressure = 0.01 Torr ; Cell length = 15 cm)
(4) By butt-coupling a FC/PC or FC/APC patchcord (from input to output port)
(5) The length of the PMC is adjusted within the reported range to fit customer spectroscopic properties requests
All specifications may be changed without notice



contact@glophotonics.fr
123 avenue Albert Thomas
87060 Limoges, FRANCE