30-meter long optical path gas absorption cell (collimator).

Product Description

Based on Tunable Diode Laser Absorption Spectroscopy (TDLAS), this gas absorption cell utilizes a multi-reflection cavity long optical path design with Herriott cell concave mirrors. The mirrors are coated with high-quality gold, silver, and protective layers, ensuring high reflectivity. With a compact design, it provides a relatively long absorption path and high precision. The entire optical cavity gas cell is made from high-quality, corrosion-resistant materials. Depending on the detection mode, it can be configured as either a closed or open type for detecting and analyzing various gas

concentrations. The product can be directly installed with standard optical source collimators, eliminating the need for additional mirrors or adjustment components, making it highly convenient to use. This product is suitable for industrial applications, high-sensitivity gas analysis, academic institutions, scientific research, and online environmental monitoring.

Product features

The design uses a concave mirror emission focusing optical path, with mirror-coated anti-reflection films and protective coatings, as well as a shockproof mounting base. It ensures optical path stability and allows for direct connection to the collimated light source, making it easy to use、The gas cell is equipped with temperature and pressure display functions, which facilitate control over the gas cell’ s temperature and pressure, ensuring safe operation 、 The gas cell is made of stainless steel, high-quality anodized aluminum alloy, and quartz glass materials, with an O-ring seal that provides excellent sealing performance for real-time observation. It is equipped with standard gas connectors for easy integration into various applications

Part Number

MP-OGC-03-10-30-FF

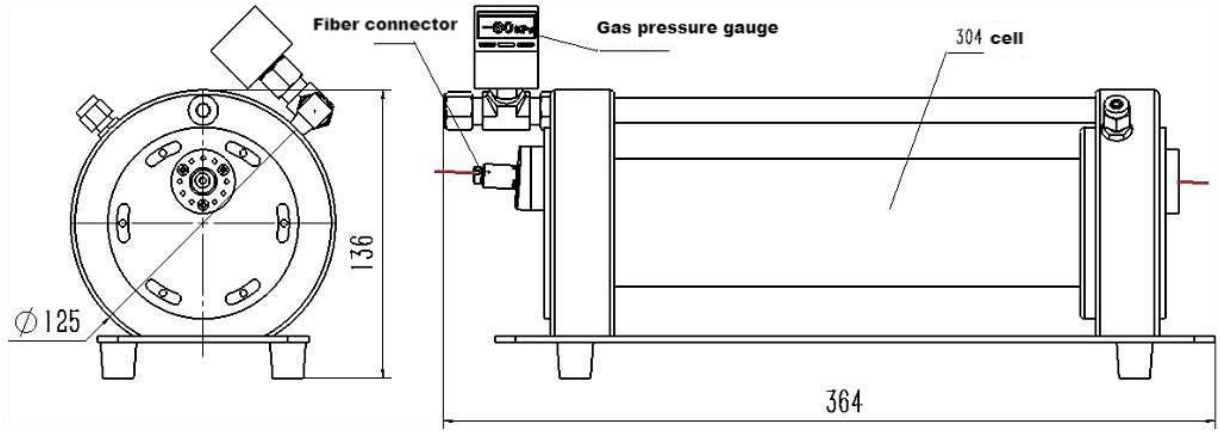
Application area

Monitoring tasks in industrial environments 、 Infrared absorption spectroscopy in scientific research、 Industrial online monitoring

Core parameters

Working Wavelength	Effective Optical Path
300nm-10um	30m

Dimension Drawing



General Parameters

Parameters

Effective optical path	30 meters
Beam diameter	⩽2.5mm

Mirror coating	Gold plating and protective film
Wavelength range	2 - 10um
Gas cell volume	1L (at standard atmospheric pressure)
Operating gas pressure	-100KPa to 100KPa
Window material	CaF2
Gas connector	ϕ6 quick connector
Dimensions	0.5X0.15X0.16(M)

Note: The gas cell should be placed on a stable workbench. The power fiber is connected to the FC/APC interface on the front face, and the incident power is turned on. The beam is reflected multiple times between the mirrors inside the cell and exits through the optical output hole at the rear face.

Warning:

Do not dismantle the gas sealing components and the fixed parts for optical input and output.

Do not look directly at the optical output hole.