10 m Optical Path Ultra-Small Gas Absorption Cell Wavelength 1500-1700nm

Product Description

The 10-meter optical path gas absorption cell is used for the spectral analysis and detection of various gases. The optical path structure of the gas chamber features an independently patented design with excellent optical stability, utilizing a flat-wave gas chamber (SlimBoss Gas Cell). It is equipped with a highly stable optical packaging structure, primarily composed of the gas chamber body, mirrors, standard fiber optic

connectors, gas inlet and outlet, and a vibration-damping base. The unique suspended optical path design ensures outstanding vibration and temperature stability, enabling it to work reliably in various complex environments. This makes it highly suitable for real-time online detection of various gases. The system has low noise and is ideal for trace gas analysis.

Product features

The gas chamber structure is stable, resistant to vibration, and external compression 、 The gas chamber is compact, lightweight, and easy to transport、 Long effective optical path、 Input uses standard single-mode fiber, and output can be in PD or fiber optic form、 Industrial online control

Part Number

MP-OGC-1517-10-FS

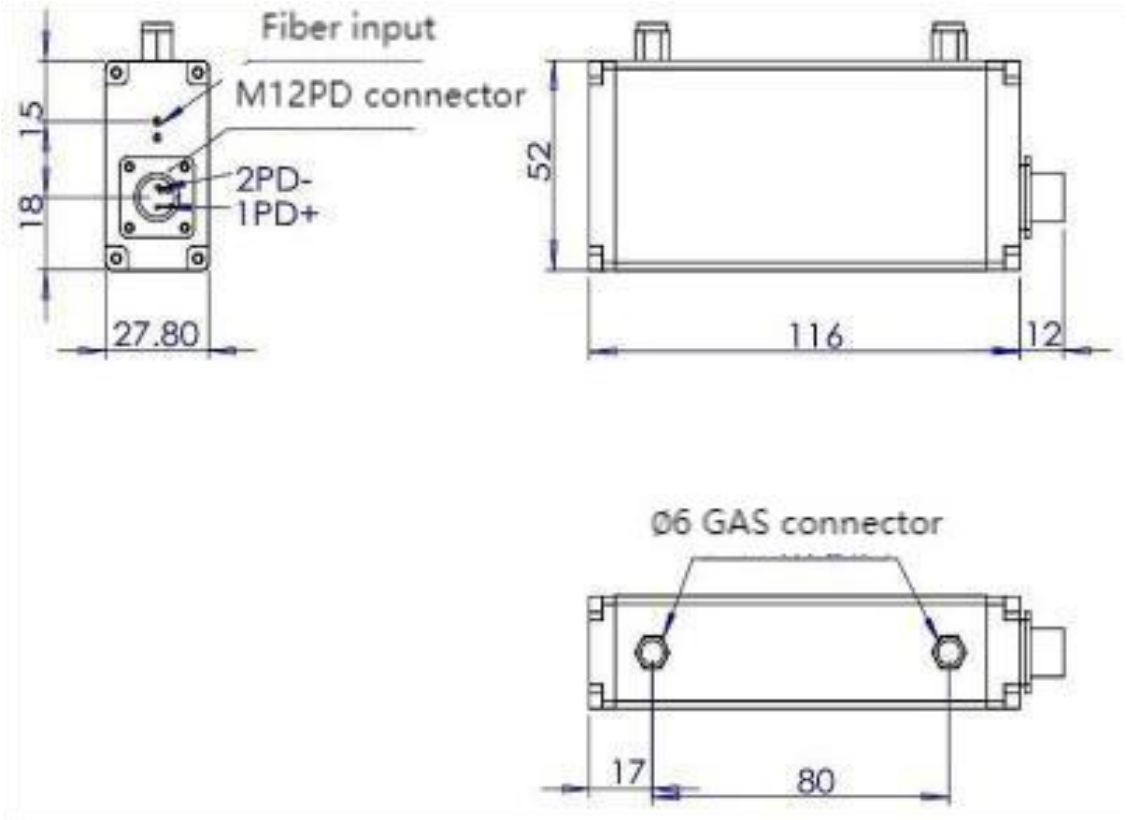
Application area

Display panel testing、 LED lighting flicker analysis、 Toy light flicker frequency and power measurement、 Gas analysis

Core parameters

Wavelength Range	Effective Optical Path	Insertion Loss
1500-1700nm	10m	⩽2dB

Dimension Drawing



General Parameters

Technical Parameters

Absorption Cell Parameters

Parameters	Technical Specifications
Effective Optical Path	10m
Wavelength Range	1500~1700nm
Insertion Loss	⩽2dB
Maximum Input Optical Power	2mW
Fiber Type	Yangtze Fiber, Yibei ultra-flexible bend-insensitive fiber
Output Type	PD
Mirror	Dielectric film
Pressure Range	⩽0.3MPa
Gas Interface	φ6 through-hole
Gas Volume	Approximately 69mL
Dimensions	See Figure 1
Total Product Weight	Approximately 450g
Housing Material	6061
Operating Temperature	-20℃ ~+70℃
Storage Temperature	-40℃ ~+85℃

PDl Parameters

Parameters	Symbol	Min	Typ.	Max	Unit
Storage Temperature	Tstg	-50	-	+125	°C
Operating Temperature	Top	-40	25	85	°C
PD Reverse Bias Voltage	VR	0	5	20	V
Linear Saturation Optical Power	VR=0V	2			mW
Saturation Optical Power	VR=5V	5			mW
Soldering Temperature	Tsol/t	260/10	-		℃/s
Wavelength Range	λp	1200	-	1680	nm
Bandwidth		68	-	-	MHZ
Photosensitive Area	Φ	1000			um
Responsivity	Re=1310	0.85	-	-	A/W
	Re=1550	0.90	-	-	A/W
Dark Current	ID(Te=+25℃/VR=5V)	-	0.3	1.0	nA
Capacitance	CJ(VR=5V，f=1MHz)	-	5.0	6.0	pF