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# 10 m Optical Path Ultra-Compact Gas Absorption Cell, 700-800nm



#### 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.

# Part Number

GC-10M-700-800



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## • 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.

#### • Application area

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

#### **Dimensional Drawing**



#### **Technical Parameters**

#### **Absorption Cell Parameters**

Parameters	Technical Specifications			
Effective Optical Path	10m			
Wavelength Range	700~800nm			
Insertion Loss	≤2dB			
Maximum Input Optical Power	2mW			
Fiber Type	Yangtze Fiber, Yibei ultra-flexible bend-insensitive			
	fiber			
Output Type	PD			
Mirror	Dielectric film			



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≪0.3MPa		
$\Phi$ 6 through-hole		
Approximately 69mL		
See Figure 1		
Approximately 450g		
6061		
-20°C ~+70°C		
-40°C ~+85℃		

## **PD** Parameters

Parameters	Symbol	Min	Тур.	Max	Unit
Storage Temperature	Tstg	-50	-	+ 125	°C
Operating Temperature	Тор	-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	-		°C/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° C/VR=5V)	-	0.3	1.0	nA
Capacitance	CJ(VR=5V,f=1MHz)	-	5.0	6.0	рF

