

0.9 - 2.5 μm Spectrometers

(low cost, ultra-high sensitivity, high resolution, USB)

Patent pending

Product Description

This SWIR series of Spectrometer is based on a patent-pending scanning technology, offering unprecedented benefits: 1) extending spectral bands beyond traditional spectrometers' coverage; 2) eliminating detector array resulting in low cost; 3) deeply cooling with low power consumption for ultra-high sensitivity; 4) overcoming limitation in resolution. The spectrometer has a photon integration option for low noise detection, a USB or RS232 interface, and a user-friendly GUI. The unit has an internal calibration option. OEM module is also available.



Performance Specifications

Parameter	Min	Typical	Max	Unit
Center Wavelength	9000		25000	nm
Resolution Bandwidth	0.5		3	nm
Wavelength Accuracy		1	3	nm
Wavelength Repeatability	-		± 1	nm
PDL	-	0.3	1	dB
Signal to Noise Ratio ^[1]			15000:1	
Dark Readout Noise ^[1]		± 1	-	RMS
Power Accuracy		± 0.05	-	dB
Scan Time	30		10000	s
Input Optical Power	Standard version		0.3	W
	High power version		5	W
Electronic Interface			Mini USB	
Operating Temperature	0	20	60	$^{\circ}\text{C}$
Storage Temperature	-14	-	70	$^{\circ}\text{C}$

[1] The low level requires -40 cooling, the high level is room temperature. These also related to the integration time setting.

Features

- Low Cost
- High Sensitivity
- High Resolution
- Ease to Use

Applications

- Sensor
- Testing
- Instrumentation

Dimensions (Unit: mm)

*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Electrical/Computer Connection

12V DC power input, a wall pluggable power supply is provided
 About 3 W electrical power consumption

USB 2.0, 480 Mbps

Ordering Information

Prefix	Type	Wavelength	Optical Power	Cooling	Entry Slit	Detector Slit	Connector
02							1
SWIR-	module	0.9- 2.0 μ m=1 0.9- 2.5 μ m=2 Special = 0	Standard = 1 High Power=2	Non = 1 -10C=2 -20C=3 -30C=4 -40C=5 Special=0	Non=1 25 μ m=2 50 μ m=3 100 μ m=4 200 μ m=5 300 μ m=6 500 μ m=7 Special=0	Non=1 25 μ m=2 50 μ m=3 100 μ m=4 200 μ m=5 300 μ m=6 500 μ m=7 Special=0	SMA905 = 1 FC/PC = 2 SC/PC = 4 ST/PC = 6 Special = 0