Large NA NIR Fiber Spectrometer N Series

Product introduction

The N Series Cooled NIR Fiber Spectrometer is the core component that adopts an InGaAs linear image sensor, which has high sensitivity and stability in the near-infrared region. It is professional spectroscopy equipment for scientific research-grade near-infrared applications. It has the characteristics of small size, easy operation, and excellent performance.

Features

- Support GPIO
- Cooled InGaAs Detectors
- Batch Consistency Control
- High signal-to-noise ratio, low stray light
- Transmitted Light Paths

Technical Advantages

1. High sensitivity, high dynamic range

The N series spectrometer features Hamamatsu InGaAs linear image sensors, with TEC cooling, up to -20℃, which makes the detector less noisy, which makes it more suitable for low-light detection; the signal-to-noise ratio and dynamic range can reach 15000:1.

Continuing the high-throughput structure design of HiNa series, F/2 can not only fully couple the input from 0.22NA fiber, but also has design redundancy, which can be compatible with unique fiber with a larger numerical aperture or customized input optical paths.

2. Powerful PC software

The PC software provided with the spectrometer-FLAVOR is powerful software. In addition to the basic spectrum acquisition control functions, it also has functions such as saturation and automatic adjustment of the integration time, recording of the real integration time, and automatic peak finding. At the same time, the software also includes characteristic functions such as wavelet smoothing with patented technology.

SDK supports Windows, Android, and Linux operating systems, and can provide secondary development packages in C#, C++, Java, Python, and other languages.

3. High stability

0~40℃, the spectral resolution remains unchanged, which is the best choice for industrial applications.

4. Simple to use

No configuration, preheating, plug and play

Separate 5V DC power supply

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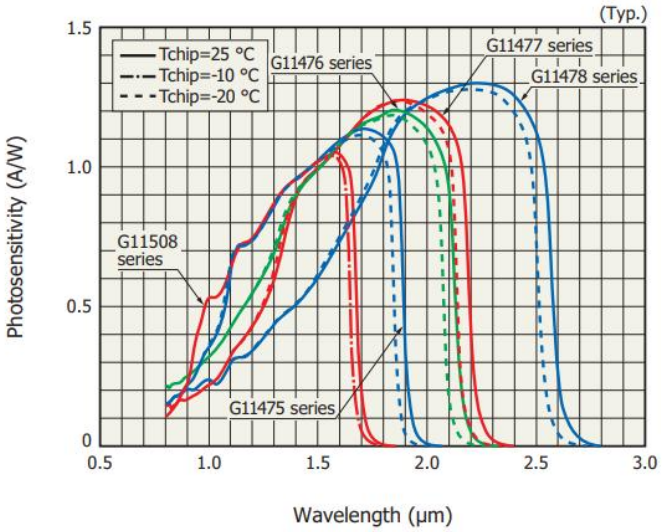
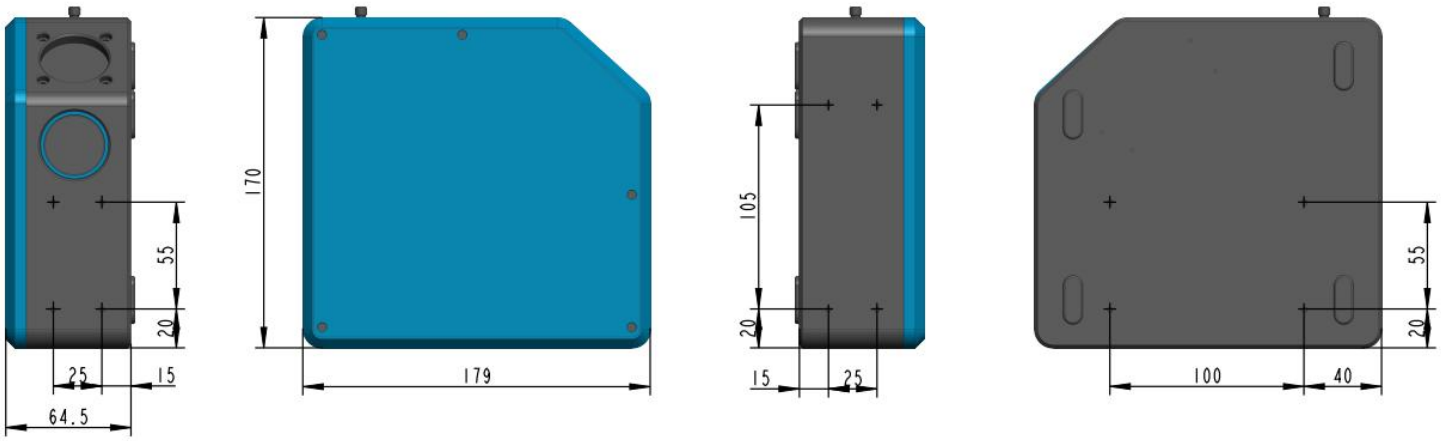
Technical parameters

Model	Wavelength Range	Grating lines/shining wavelengths	Resolution for different Slit Width				
			10μm	25μm	50μm	100μm	200μm
N/1064-1300p	1064-1300nm	830/1200nm	/	0.8nm	1.5nm	3nm	6nm
N/900-1700p	900-1700nm	300/1200nm	/	3nm	5nm	10nm	20nm
N/900-2200	900-2200nm	200/1550nm	/	/	10nm	16nm	32nm
N/900-2200p	900-2200nm	200/1550nm	/	5nm	8nm	16nm	32nm
N/900-2500p	900-2500nm	150/2000nm	/	6nm	9nm	18nm	36nm

Detector response curve



Product dimensions



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Product Parameters

Dimensions	170*179*64.5mm³
Weight	1.5 kg
Slit	10μm，25μm，50μm，100μm，200μm optional
Fiber optic holder	SMA905
Resolution	0.9nm FWHM or higher
Signal to Noise Ratio	1500:1
Dynamic range	15000:1
f/#	2.0
Pixels	256 pixels or 512 pixels (add "p" at the end of the model)
Detector	Hamamatsu，G14237-512WA，G11477-512WB，G11478-512WB
Integration time	5μs ~ 30min
Stray light	＜0.3%
Linearity	＞99.5%
A/D	16 bits
Power Consumption	5V DC@ 3 A
Output mode	10pin 2.54
Trigger mode	Free running, external hardware trigger, external synchronization trigger, rising edge trigger
Computer Interface	USB2.0，USB-B
Pixel size	12.5 μm
Pixel well depth	188Me-
Sensitivity	~400Me-

Product Applications

- Sugar detection
- Fat/lubricant detection
- Alcohol, moisture detection
- Power/laser characteristics detection
- Plastic Sorting
- Antique/Cultural Relic Detection, etc

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