

SPIDER High Dynamic Range VIS-SWIR Photodetector



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1

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£3,284^{.00}

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Note: This item requires accessories for use | [Learn More](#)

Product Downloads

General

Type:

Voltage Output

USB Output

Physical & Mechanical Properties

Weight (g):

218

Dimensions (mm):

101.5 x 81 x 28.5

Si - 2.4 x 2.4 InGaAs - Ø1		Active Area (mm):
Optical Properties		
320 - 1700		Spectral Response (nm):
Si - 920 InGaAs - 1550		Peak Response Wavelength (nm):
Electrical		
20 x 10 ⁻⁹		Voltage Noise, Low Gain (V/Hz ^{1/2}):
680 x 10 ⁻⁹		Voltage Noise, High Gain (V/Hz ^{1/2}):
8 Selectable Levels - 1.5kΩ, 4.6kΩ, 14.4kΩ, 44.8kΩ, 142kΩ, 446kΩ, 1.4MΩ, 4.4MΩ		Transimpedance Gain (Ω):
Si - 0.13 InGaAs - 1		Dark Current I _d (nA):
Min - 29kHz Max - 56kHz		Frequency (kHz):
8 Predefined Rates: 120, 100, 80, 64, 32, 16, 10, 5, 2.5, 1, 0.5		Sampling Rate (kSPS):
8 Selectable Levels - 64, 73, 83, 93, 103, 113, 123, 133		Transimpedance Gain (dBΩ):
Hardware & Interface Connectivity		
USB		Connector:
0-10 on BNC		Output Voltage (V):
Included 12V Power Supply or Power Over USB		Power Supply:
3		GPIOs:
Environmental & Durability Factors		
+10 to +40		Operating Temperature (°C):
-20 to +70		Storage Temperature (°C):
Regulatory Compliance		
View		Certificate of Conformance:

Product Details

- Two Color Si-InGaAs Chip for 320 – 1700nm Wavelength Range
- Embedded 24-Bit Analog-to-Digital Converter
- Digital USB Connection and Two Analog BNC Connections

NIREOS SPIDER High-Dynamic Range VIS-SWIR Photodetector is a broadband, amplified Si-InGaAs photodetector that allows for analog or digital connection and enables rapid development of high-performance sensing and spectroscopy solutions suitable in industrial, laboratory, and research environments. Featuring a two-color Si and InGaAs chip, this photodetector allows straightforward beam alignment and achieves a wide spectral response ranging from 320 - 1700nm. With an embedded 24-bit analog-to-digital converter (ADC), the Si and InGaAs analog outputs are simultaneously digitized with adjustable sampling rates from 0.5 to 120kSPS via USB connection. NIREOS SPIDER High-Dynamic Range VIS-SWIR Photodetector's Si and InGaAs channels are both independently amplified with analog bandwidths up to 56kHz, picowatt sensitivity, and 8 switchable transimpedance gain options ranging from 1.5kΩ to 4.4MΩ. This photodetector comes with a user friendly, plug-and-play software for ease of setup, and features DLLs allowing for programming using .NET based languages such as C++, C#, LabView, Python, and MATLAB.

Technical Information



