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SPIDER High Dynamic Range VIS-SWIR Photodetector



Stock #26-740 **3 In Stock**

⊖ 1 ⊕ **\$5,747⁰⁰**

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General

Type:
Voltage Output
USB Output

Physical & Mechanical Properties

Weight (g):
218

Dimensions (mm):
101.5 x 81 x 28.5

Active Area (mm):Si - 2.4 x 2.4
InGaAs - Ø1**Optical Properties****Spectral Response (nm):**

320 - 1700

Peak Response Wavelength (nm):Si - 920
InGaAs - 1550**Electrical****Voltage Noise, Low Gain (V/Hz^{1/2}):**20 x 10⁻⁹**Voltage Noise, High Gain (V/Hz^{1/2}):**680 x 10⁻⁹**Transimpedance Gain (Ω):**8 Selectable Levels - 1.5kΩ, 4.6kΩ, 14.4kΩ,
44.8kΩ, 142kΩ, 446kΩ, 1.4MΩ, 4.4MΩ**Dark Current I_d (nA):**Si - 0.13
InGaAs - 1**Frequency (kHz):**Min - 29kHz
Max - 56kHz**Sampling Rate (kSPS):**8 Predefined Rates: 120, 100, 80,
64, 32, 16, 10, 5, 2.5, 1, 0.5**Transimpedance Gain (dBΩ):**8 Selectable Levels - 64, 73, 83,
93, 103, 113, 123, 133**Hardware & Interface Connectivity****Connector:**

USB

Output Voltage (V):

0-10 on BNC

Power Supply:

Included 12V Power Supply or Power Over USB

GPIOs:

3

Environmental & Durability Factors**Operating Temperature (°C):**

+10 to +40

Storage Temperature (°C):

-20 to +70

Regulatory Compliance**Certificate of Conformance:**[View](#)**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

