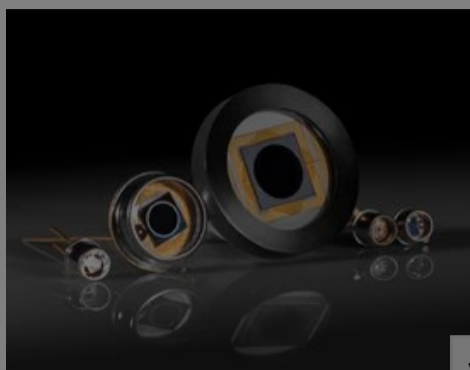


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Blue Enhanced



Silicon Photodiodes

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1

€143^{,00}

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Volume Pricing

Qty 1-4 €143,00 each

Qty 5-9 €128,00 each

Qty 10-24 €121,55 each

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Product Downloads



Curve:pdf



EO Spec Sheet



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General

Type: Unbiased

Typical Applications: Low light levels, wide spectral bandwidth response

Rise Time (µs): 2.0 @ 0 V/50 Ω, 410nm

Model Number: PIN-10DP/SB

Note: Blue Enhanced Response

Protective Window: Quartz

Package: BNC

Physical & Mechanical Properties

Active Area (mm²): 100.0

Construction: PIN

Outer Diameter (inches): 0.98

Length of Leads (inches): BNC

Optical Properties

Detectivity (cmHz^{1/2}/W): 5.0 x 10⁻¹² @ 0 V, 410nm

Electrical

Terminal Capacitance (pF): 8800 @ 0 V

Responsivity @ 410nm (A/W): 0.2

Noise Equivalent Power NEP (W/ Hz^{1/2}): 2.0 x 10⁻¹³

Shunt Resistance (MΩ): 10.00

Environmental & Durability Factors

Operating Temperature: -10 to 60

(°C):

Regulatory Compliance

Certificate of Conformance: [View](#)

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Product Details

- UV Enhanced, Blue Enhanced, and Normal Response Options
- Active Areas from <1 to 100mm²
- **C-Mount and S-Mount Mounting Solutions** Available

Through the photovoltaic effect, detectors provide a means of transforming light energy to an electrical current. The root of the theory behind this phenomenon is a small energy gap between the valence and conduction bands of the detector. When light, with enough energy to excite an electron from the valence to the conduction band, is incident upon the detector, the resulting accumulation of charge leads to a flow of current in an external circuit. Since light is not the only source of energy that can excite an electron, detectors will have some amount of current that is not representative of incident light. For example, fluctuations in thermal energy can easily be mistaken for light intensity changes. A variety of these “non-light” contributions are present and, when summed up, make up the total noise within the detector.

The ratio of the overall signal output to the noise level is known as the signal to noise ratio (s/n) and can be used to determine if noise will be a concern within a particular application. While noise is certainly a key means of characterizing detectors, it is only one of the characteristics which should be considered when selecting a detector.

Different Operation Modes

Photovoltaic (Unbiased): During PV operation, no external bias is applied to the photodiode. Since Dark Current is a function of bias magnitude, PV operation eliminates Dark Current as a source of noise. In this case, the NEP will be lower, thereby allowing greater sensitivity at lower wavelengths. This makes it ideal for low signal detection. One disadvantage is the slightly lower responsivity at higher wavelengths (see graph).

Photoconductive (Biased): During PC operation, a reverse bias on the photodiode results in a number of response advantages, such as a faster rise time. This makes this type of operation more suitable for high frequency applications. One inconvenience is that the dark current increases with this applied biased current, so noise is introduced into the system.

Technical Information

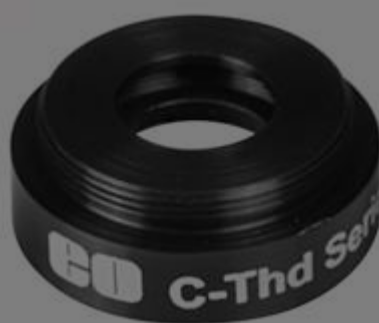
Units: inches

Accessories

Note: Compatible accessories for individual stock numbers may vary. If unsure about which accessories work with your products, please contact us [here](#).

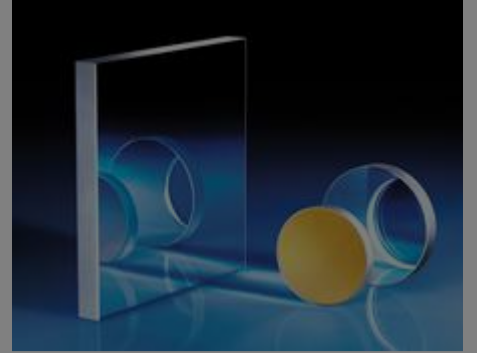
	Title	Compare	Stock Number	Price	Buy
MORE+	C-Mount, BNC Detector Mount		#58-734	€97,50 Volume Pricing Request Quote	14 In Stock <input type="text" value="1"/>

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C and S-Mount Diode Mounts

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€28,50

Qty

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