SILICON PHOTODIODES — CENTRONIC EO | DISTANCE & POSITION DETECTORS

PHOTONICS

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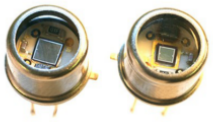
Partner Centronic EO

Product offering

Series 7 Super UV Photodiodes

General Purpose Silicon Sensors (Series 0)

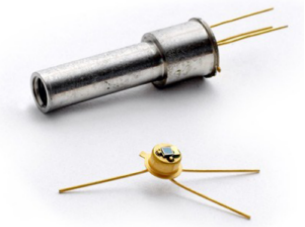


Series E Silicon Photodetectors

Blue and UV Sensitive (Series 1)

General Purpose Silicon Sensors (Series 5T)

High Speed 1064nm Pulse sensing (Series 4X)

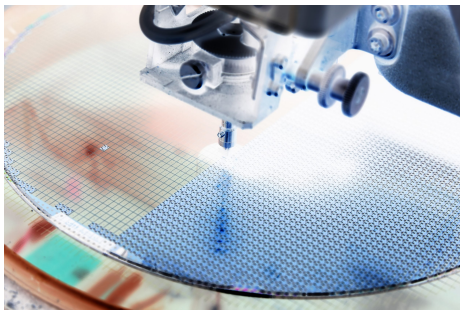


High Speed Detectors (Series BPX65)

Silicon Photodiodes — Centronic EO | Distance & Position Detectors

Series 7 Super UV Photodiodes

Series 7 Super UV Photodiodes are designed for demanding UV detection applications in the 194–400 nm range, where high shunt resistance and maximum sensitivity are essential. They are available in a range of standard packages with different window options to suit specific application needs.



These detectors are part of Centronic's UV-enhanced photodiode portfolio and are intended for applications that require reliable UV response, low leakage, and stable performance. The series includes single-element devices with different active areas and package sizes, making it easier to match detector size and optical performance to the system design.

Key Features:

- Optimized for 194–400 nm UV detection.
- High shunt resistance for low-noise operation.
- Maximum sensitivity in UV applications.
- Available in multiple standard packages.
- Choice of window materials, including quartz, UV transmissive glass, and open-frame options
- Suitable for applications needing strong UV response and compact detector formats.

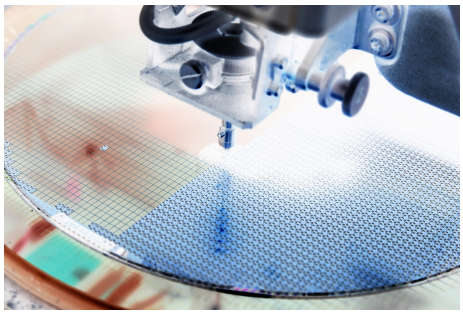
Applications include UV measurement and detection in scientific, industrial, and medical environments. Typical applications include UV intensity monitoring, analytical instrumentation, photometric systems, and OEM detection solutions where accurate response in the UV range is required.

For more information, simply complete the contact form, and a member of our team will be in touch shortly.

Silicon Photodiodes — Centronic EO | Distance & Position Detectors

General Purpose Silicon Sensors (Series 0)

Series 0 photodiodes are designed for operation at up to 30 V reverse bias, making them ideal for applications where low capacitance and high speed are important. They are tailored for peak responsivity in the 780–950 nm range and are also successfully used in pulsed applications across the 430–1064 nm spectral range.



The Series 0 range uses pn-junction silicon technology and offers a practical solution for general-purpose optical detection. With a responsivity of 0.54 A/W at 900 nm and a bias range of 0–30 V, these detectors are well suited to systems that need a balance of speed, sensitivity, and flexible operating conditions.

Key Features:

- Designed for up to 30 V reverse bias.
- Low capacitance for faster response.
- Peak responsivity in the 780–950 nm range.
- Usable across 430–1064 nm for pulsed applications.
- pn-junction silicon technology.
- Responsivity at 900 nm: 0.54 A/W.

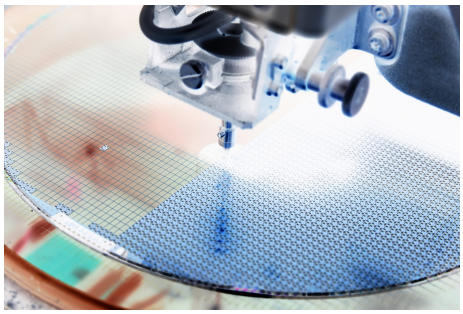
Applications include pulsed light detection, low-capacitance optical sensing, high-speed measurement systems, near-infrared monitoring, and general-purpose photodetection where strong response and fast performance are required.

For more information, simply complete the contact form, and a member of our team will be in touch shortly.

Silicon Photodiodes — Centronic EO | Distance & Position Detectors

Series E Silicon Photodetectors

Series E photodetectors are eye-response detectors that use the successful Series 5T chip together with high-quality glass colour-correcting filters. Their spectral response approximates the human eye, making them ideal for general photometric applications.



The Series E range is colour corrected to provide a photopic response, which makes it well suited for low-cost illuminance monitoring in instrument and industrial environments. These detectors are available in several package sizes and active areas, with standard products available from stock.

Key Features:

- Eye-response spectral behavior for photometric use.
- Built on the proven Series 5T chip.
- High-quality glass colour-correcting filters.
- Suitable for low-cost illuminance monitoring.
- Multiple active areas and package options available.
- Standard products generally available from stock.

Applications include general photometric applications, low-cost illuminance monitoring, instrument lighting measurement, and industrial illuminance sensing.

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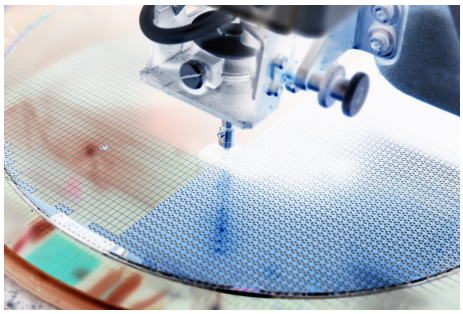
Silicon Photodiodes — Centronic EO | Distance & Position Detectors

Blue and UV Sensitive (Series 1)

Series 1 photodiodes offer a broadband spectral response extending into the UV region. They are designed for applications from 250 to 430 nm where high levels of illumination occur, and they can be operated either with reverse bias up to 10 V or in photovoltaic mode for the best signal-to-noise performance.



The Centronic Series 1 range is particularly suitable for UV lamp monitoring and other demanding blue and UV detection tasks. With strong UV sensitivity and flexible operating modes, these detectors provide a practical solution for photometric and industrial applications where reliable short-wavelength response is important.

Key Features:

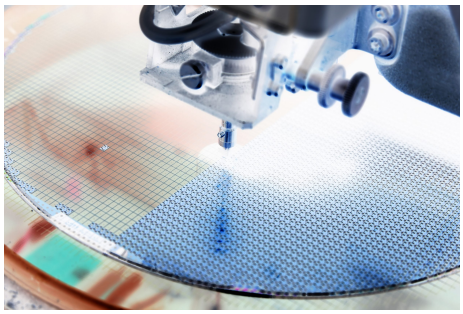
- Broadband spectral response extending into the UV region.
- Optimized for applications from 250 to 430 nm.
- Can be used in photovoltaic mode or with reverse bias up to 10 V.
- Designed for best signal-to-noise performance.
- Suitable for monitoring UV lamp operation.
- Available in single elements, quadrants, linear arrays, and matrix arrays.

Applications include UV lamp monitoring, photometric measurement, blue and UV detection, industrial illumination monitoring, and other applications where high short-wavelength sensitivity is required.

For more information, simply complete the contact form, and a member of our team will be in touch shortly.

General Purpose Silicon Sensors (Series 5T)

The Centronic Series 5T detectors offer high blue sensitivity coupled with high shunt resistance and low dark leakage current. They are particularly suited to low light level applications from 430–900 nm where the highest signal-to-noise ratio is important.



These detectors may be operated photovoltaically or with a reverse bias of up to 12 V where lower capacitance is needed. The 5T range provides the most economic solution for all applications where high speed of response above 800 nm is not critical.

Key Features:

- High blue sensitivity.
- High shunt resistance.
- Low dark leakage current.
- Suitable for 430–900 nm spectral range.
- Photovoltaic or reverse bias operation (up to 12 V).
- Economical choice for non-high-speed applications.

Applications include low light level measurement, photometric detection, industrial sensing, scientific instrumentation, and visible-to-near-infrared sensing systems where high signal-to-noise performance is required.

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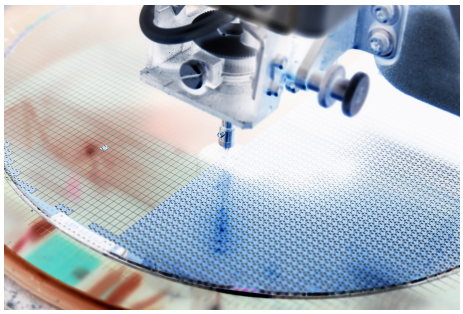
Silicon Photodiodes — Centronic EO | Distance & Position Detectors

High Speed 1064nm Pulse sensing (Series 4X)

Series 4X photodetectors are designed specifically for high-speed 1064 nm Nd:YAG laser pulse sensing. They offer high pulsed and DC responsivity at wavelengths up to 1100 nm, together with extremely low capacitance per unit area.



The detector structure is designed to be fully depleted at 150 V reverse bias, which supports fast response and stable performance in demanding laser applications. The Series 4X range includes single elements and quadrant detectors, giving flexibility for different beam sensing and positioning needs.

Key Features:

- Optimized for high-speed 1064 nm pulse sensing.
- High responsivity up to 1100 nm.
- Very low capacitance per unit area.
- Fully depleted at 150 V reverse bias.
- Available in single-element and quadrant formats.
- Optional guard ring connected on selected versions.

Applications include high-speed 1064 nm Nd:YAG laser pulse detection, pulsed laser monitoring, beam positioning, and other near-infrared sensing tasks where low capacitance and fast response are critical.

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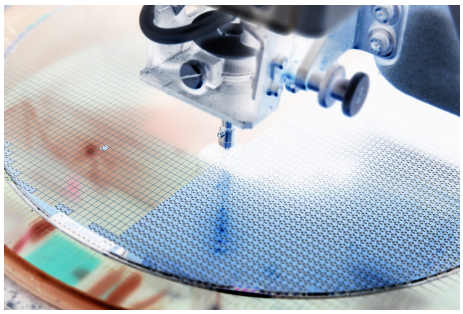
Silicon Photodiodes — Centronic EO | Distance & Position Detectors

High Speed Detectors (Series BPX65)

The BPX65 Series features Centronic’s 1 mm² high-speed, high-sensitivity silicon chip, proven in a wide variety of applications. It is well suited for fibre-optic communication, encoder designs, and advanced laser warning systems.



The BPX65 family is built around a compact detector chip that combines fast response with strong sensitivity. It is available in several package options, including TO18, TO46, and epoxy-encapsulated formats, making it adaptable to different mechanical and optical integration needs.

Key Features:

- High-speed, high-sensitivity 1 mm² silicon chip.
- Suitable for fibre-optic communication applications.
- Available in multiple package styles.
- Low capacitance for fast response.
- Reverse bias operation up to 50 V maximum.
- Used in encoder designs and laser warning systems.

Applications include fibre-optic communication, encoder sensing, laser warning systems, and other high-speed optical detection tasks where compact size and high sensitivity are important.

For more information, simply complete the contact form, and a member of our team will be in touch shortly.