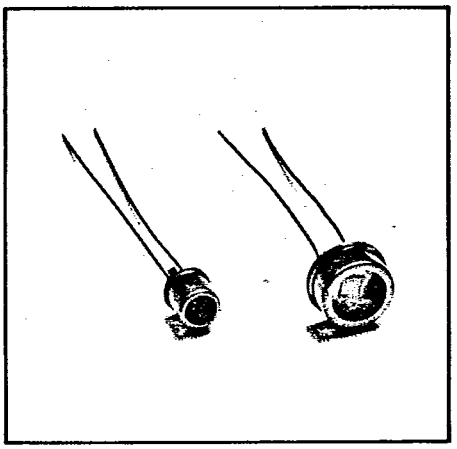
HIGH SPEED SILICON BLUE-ENHANCED PHOTODIODES

Specifications subject to change without notice for product revisions and improvements.

High Speed Silicon Blue-Enhanced Photodiodes

High speed blue-enhanced photodiodes are designed for photoconductive or photovoltaic applications. These blue-enhanced devices offer the electro-optics engineer optimized spectral response in the blue region with linear response over a wide incident irradiance range. The versatile, high-speed blue series is designed to be used in applications where low noise, high speed and best blue response are needed.



Applications

- Medical Instrumentation
- Densitometry
- Particle Detection and Measurement
- Currency Changers
- Pollution Monitoring
- Photometry – Colorimetry
- Food Processing Instrumentation
- Spectral Signature Analysis

Military Applications

Advanced Detector Corporation has extensive experience in supplying detectors for military and aerospace applications. The ADC Quality Assurance Program has been developed to meet the requirements of MIL Q-9858A. ADC enjoys a reputation in the military/aerospace community as a high quality and reliable supplier. A copy of ASEC 91-6064 Quality Assurance Program Document which delineates the quality assurance policies implemented on all products to assure compliance with specifications is available upon request.

Features

- Excellent Blue Response
- High Sensitivity
- Consistent Spectral Characteristics
- Linear Response
- Hermetic Packaging
- High Reliability

ELECTRICAL CHARACTERISTICS

Type No.	Outlines	Effective Photosensor Surface cm^2	Dark Reverse Current I_{DR} @ −1V nA	Dark Reverse Current I_{DR} @ −10V* nA	Reverse Breakdown Voltage V_{BR} Typ Volts	Reverse Breakdown Voltage V_{BR} Min Volts	Source Impedance R_{SO} Typ MΩ	Source Impedance R_{SO} Min MΩ	Typical Junction Capacitance C_J @ 0 Volts pf	Typical 10-90% (ns) Rise Time 50 ohm load @ 0V	Typical Noise Equiv. Power (NEP) (W/Hz½)
22BH18M	TO18	.023	5	20	120	80	100	50	50	6	2×10^{-14}
33BH05M	TO5	.051	8	20	60	40	60	30	95	11	4×10^{-14}
44BH05M	TO5	.170	20	40	30	15	30	15	270	30	6×10^{-14}

Minimum responsivity @ 550 nm = .33 A/W. Allow 8% reduction for glass window cap.
*Reverse Voltage: Use −10V or $V_{BR}/_2$ where applicable.

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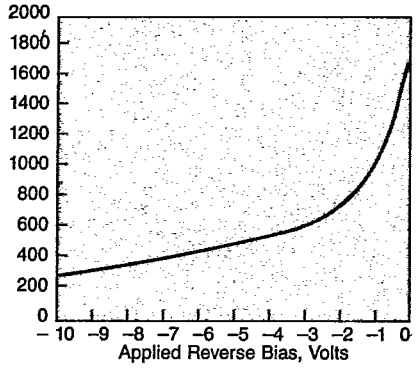
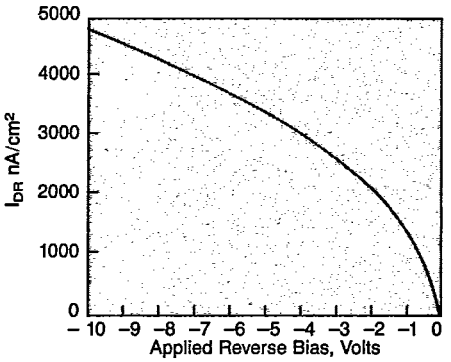
Typical Performance Curves

Max Dark Current vs. Bias

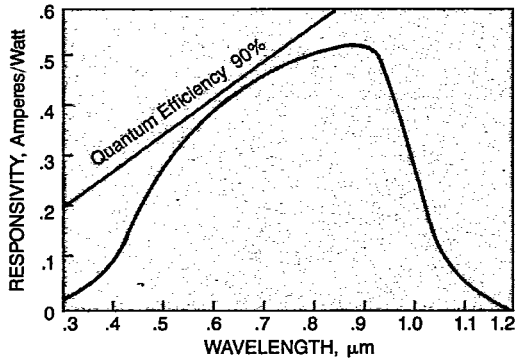


Cj pF/cm²

Junction Capacitance vs. Bias



Responsivity vs. Wavelength



(Peak Responsivity Range 0.885 ± .05 µm)

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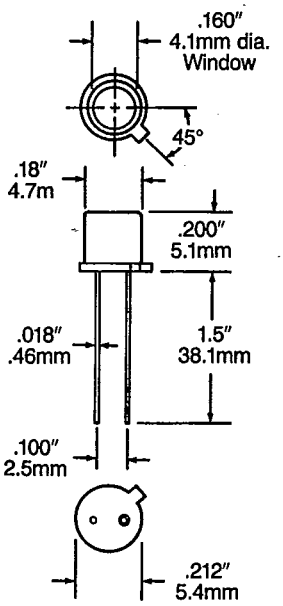

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