High-Performance Photonics for Space and Astronomy

KEY FEATURES

- Wide Spectral Sensitivity (UV to IR)
- Radiation-Hardened and Vacuum-Compatible
- Hermetically Sealed, All-Metal Packages
- Long-Life, High-Output LEDs

APPLICATIONS

- Satellite Optical Calibration & Beacon Systems
- Spaceborne UV & Solar Radiation Sensing
- Deep Space & Astronomical Spectroscopy
- Radiation-Tolerant Optical Communication

Opto Diode's UVG series photodiodes and radiation hardened LEDs are designed to meet the demanding optical requirements of space and astronomy platforms. These components provide exceptional stability, low noise, and high output performance for missions operating in vacuum, thermal extremes, and radiation-rich environments.

In orbital and deep-space applications, UVG photodiodes are used for solar UV monitoring, cosmic radiation detection, and spectroscopic instruments. Their metal-can packaging and UV-optimized construction ensure reliable operation with minimal degradation over time. The OD-800 series LEDs, including wide, narrow, and focused beam variants, are used in optical beacon systems, telescope calibration, and non-intrusive infrared signaling.

These devices are ideal for integration into satellites, telescopes, and space-based research platforms. Engineered and built in the USA, Opto Diode components offer dependable optoelectronic performance for aerospace system designers and mission-critical applications in astronomy and space science.

Featured Products

Opto Diode Products for Space and Astronomy

Model Number	Part Number	Active Area Size (mm^2)	Detection Range (nm)
UVG100	ODD-UVG-002	100	190 - 400
UVG12	ODD-UVG-014	12	190 - 400
UVG20C	ODD-UVG-004	19	190 - 400
UVG20S	ODD-UVG-013	24	190 - 400

Opto Diode Standard LEDs

Model Number	Typ. Power Output (mW)	Peak Emission Walvelength (λ_P)	Typ. Forward Voltage (V)
OD-800F	3.0	810nm @ 50mA	1.45V @ 100mA
OD-800L	3.0	810nm @ 50mA	1.45V @ 100mA
OD-800W	3.0	810nm @ 50mA	1.45V @ 100mA

Engineered for Space and Astronomy Applications

Opto Diode's 810 nm LEDs are designed for reliability in the most demanding environments, making them ideal for space-based optical systems and astronomical instrumentation. With stable output, low forward voltage, and a hermetically sealed TO-46 package, these LEDs support precision alignment, beaconing, and illumination tasks where performance and longevity are critical under vacuum and radiation-prone conditions.