

Press Release

New Silicon Reach-Through Avalanche Photodiode

APD with Enhanced Sensitivity in the DUV/UV Wavelength Range

SUR series: New silicon reach-through avalanche photodiodes (APD) with high sensitivity in the DUV/UV wavelength range have been recently developed by LASER COMPONENTS.

Many applications, particularly in the medical and bio-medical fields require highly sensitive detectors in the short wavelength range (blue and below), but so far there have been few commercially available avalanche photodetectors with adequate performance to satisfy the demands of such applications.

New reach through APD. Through internal development efforts LASER COMPONENTS has succeeded in developing a reach-through avalanche photodiode with sensitivity and low noise performance operating in the blue wavelength range and superior to any similar detector available presently on the market.

SUR series offers excellent DUV performance. Furthermore, the sensitivity of the new LASER COMPONENTS reach-through APD extends further into the DUV than any devices currently available on the market. Its operation as a packaged component is ultimately limited only by the transmission of the package window, optimized for wavelengths starting at 250 nm and up. Such a high sensitivity even for wavelengths below 250 nm, possible if device is operated under vacuum conditions, has been achieved by a specially designed reach-through APD structure with an ultra thin surface top layer grown using a unique epitaxial procedure.

Advantage: unmatched noise and sensitivity. An important additional advantage of the new reach-through APD is its unmatched noise and sensitivity performance over the widest commercially available wavelength range, from 250 nm to 1100 nm. APD sizes from 0.5 mm dia. to 3 mm dia. active areas are available in special packaging optimized for the UV wavelength range.

Legend

Typical signal/noise measurements performed at 400 nm

The Company

LASER COMPONENTS is specialized in the development, manufacture, and sale of components and services for the laser and opto-electronics industries. With sales offices in four different countries, the company has served its customers since 1982. In-house production at six locations in Germany, Canada, and the USA began in 1986 and is meanwhile responsible for about half of its turnover. Currently, the family-run business employs more than 130 people worldwide.