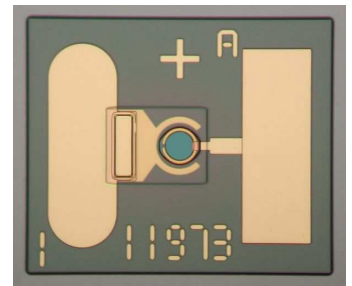


# APD32T-XS

## 10 Gb/s Long Wavelength APD

APD32T-XS is a top illuminated, high speed avalanche photodiode chip with a dual pad layout and an optical aperture of 32  $\mu\text{m}$ . The APD is optimized for single-mode 10 Gb/s SONET/SDH as well as 10G PON applications.

A key feature of this innovative APD is low excess noise, enabling receiver sensitivities of -29 dBm for 10 Gb/s NRZ signals when used with an appropriate TIA.



The APD can be operated at a low bias voltage of typically 29 V and has an excellent gain-bandwidth product of 90 GHz. The pad metallization is optimized for wire-bonding with the pads positioned to enable easy and direct bonding to most common TIA layouts. In addition, the small chip footprint saves valuable space in small packages such as TO-46.

### BENEFITS

- Enables a receiver sensitivity of -29 dBm with commercially available TIAs
- Straightforward optical coupling into topside 32  $\mu\text{m}$  optical aperture
- High gain-bandwidth product: 90 GHz
- Large pads with space for two wire bonds
- Small chip footprint

### FEATURES

- Top illuminated 10 Gb/s avalanche photodiode
- Optical aperture: 32  $\mu\text{m}$
- Low operating bias: 29 V
- Low temperature dependence: 25 mV/ $^{\circ}\text{C}$
- Low capacitance: 140 fF
- Operating temperature range: -40 to 85 $^{\circ}\text{C}$

### APPLICATIONS

- 10 Gb/s SONET / SDH
- 10G PON

### AVAILABILITY

- Volume production

