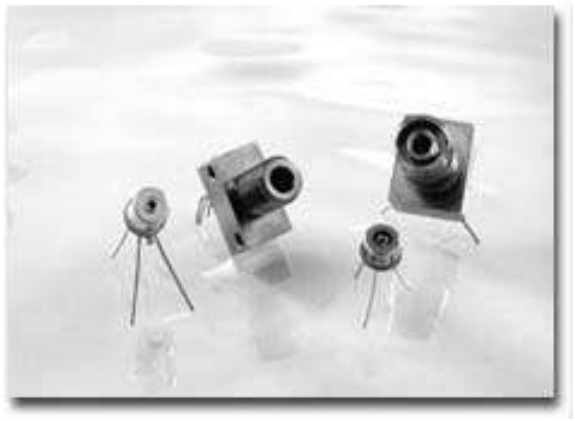
FIBER OPTIC SERIES



APPLICATIONS	FEATURES
• Fiber Optic Communication Links	• Speeds in sub ns
• Video Systems	• High gain
• Laser Monitoring Systems	• Low dark current
• Computers and Peripherals	• Low capacitance
• Industrial Controls	• TO-46 metal can With lensed cap
• Guidance Systems	
• FDDI Local Area Networks	
• High Speed Optical Communications	

UDT Sensors offers a variety of fiber optic detectors. They include:

Fiber Optic Series-Silicon: are several families of small active area silicon photodiodes divided into High Responsivity Series (HR), High Speed Series (HS) and Ultra High Speed (UHS) series.

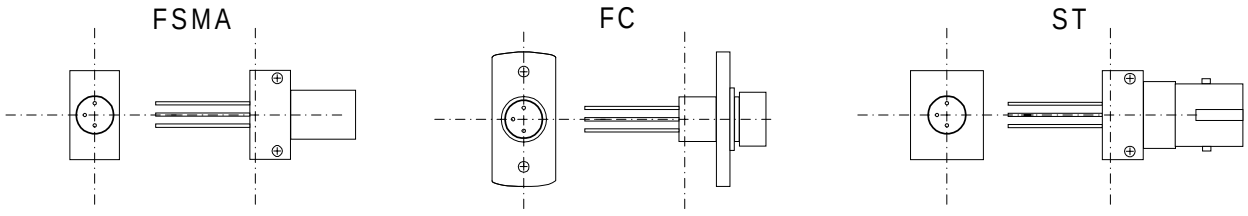
Fiber Optic Series-Silicon / Hybrid: is a 90 MHz integrated silicon photodetector / transimpedance amplifier hybrid with a single power supply and linear differential output voltage for applications such as Ethernet and token ring systems. This detector is available with a micro lens cap.

Fiber Optic Series-Silicon APD: is a small active area Silicon Avalanche Photodiode with gains up to a few hundred with a typical reverse bias of only 325 V. It provides high gain bandwidth product and high responsivity compared to detector/transimpedance amplifier combination.

Fiber Optic Series-Silicon BPX-65: is a 1 x 1 mm active area high speed silicon photodetector for high modulation bandwidth applications where a large active area is needed.

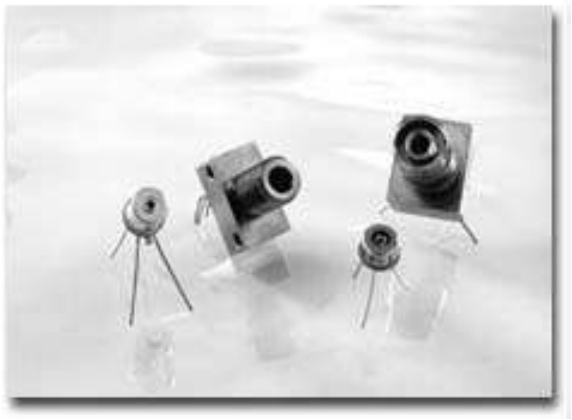
Fiber Optic Series-InGaAs: devices are high speed InGaAs detectors exhibiting a spectral range of 850 to 1700 nm. These detectors are specifically designed for NIR optical communication, providing high responsivity, low capacitance and high speed. They are available with micro lens cap.

All of the above detectors and /or hybrids are also available with a spherical micro lens cap to enhance fiber optic coupling efficiency. They can also be provided with any of the standard receptacles such as SMA, ST, FC, etc., for direct optical fiber coupling.



HIGH SPEED INGAAS PHOTODIODES

FIBER OPTIC PHOTODIODES



APPLICATIONS

- High Speed LAN
- FDDI Local Area Networks
- High-Speed CATV, Telecom

FEATURES

- High Speed Response
- Very Low Capacitance
- Micro Lens Cap

The InGaAs detectors exhibit a spectral response range from 900 nm to 1700nm. These detectors are specifically designed for optical communication applications, providing high responsivity, low capacitance and high speed. They are provided with a spherical lens to enhance coupling efficiency. The detectors are also available with any of the standard receptacles such as SMA, ST and FC for direct optical fiber coupling.

Applying reverse bias is required to achieve the fastest response. The reverse bias should be limited to maximum reverse voltage as specified in the table below, to avoid damage to the detector. Detector output can be coupled to high frequency amplifiers or measured directly with an oscilloscope as shown in figure 10 in the Photodiode Characteristics section of this catalog.

TYPICAL ELECTRO-OPTICAL SPECIFICATION AT TA=23°C

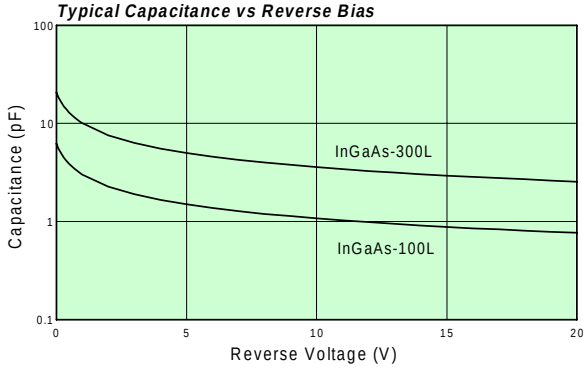
Model No.	Active Area		Responsivity (A/W)		Capacitance (pF)		Dark Current (nA)		Rise/Fall Time (ns)	Reverse Voltage (V)	Reverse Current (mA)	Forward Current (mA)	Temp Range (°C)		Package Style ¶
	Area (mm^2)	Dimension (mm)	1300 nm		-5 V 1 MHz		-10 V		-5 V 1300 nm 50 ohm				Operating	Storage	
			min	typ	typ	max	typ	max	max	max	max	max			
InGaAs-100L	.008	.10φ	0.8	0.9	1.5	2.0	0.05	1.0	0.5	20	1	5	-40 ~ +100	-55 ~ +125	16 / TO-18
InGaAs-300L	.071	.30φ			5.0	7.0	0.1	1.0	4	20	1	5			

Responsivity measured with a 8.7/125 fiber for InGaAs-100L and 62.5/125 fiber for InGaAs-300L.

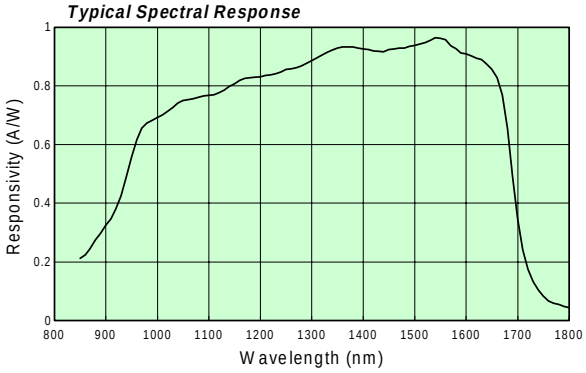
PRECAUTION: These devices are sensitive to electrostatic discharge (ESD). Use proper handling and testing procedure.

For MECHANICAL DRAWINGS Click Here

Typical Capacitance vs Reverse Bias



Typical Spectral Response



UDT Sensors Inc. Phone: 310-978-0516 Fax: 310-644-1727 http:\\www.udt.com