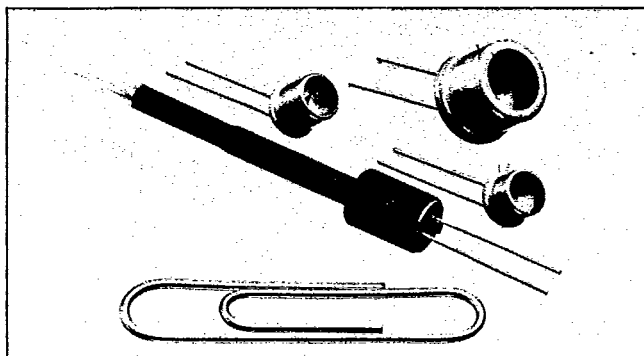


FAST GERMANIUM PHOTODIODES

GD SERIES

T-41-41



DESCRIPTION

The GD series photodiodes are high quality germanium diodes housed in TO18 or TO5 cans. Low dark current and high sensitivity in the near infrared spectral region make these units ideal for use in high speed 50 ohm circuitry. Lens, window and fiber pigtailed options are available in most cases.

SPECIFICATIONS

Characteristics	Units	Model Number					
		75	100	250	500	*1000	*2000
Active Areas LxW	$\mu\text{m}; * \text{mm}$	70x80	100x130	250x250	500x500	1x1	2x2
Risetime	ps; *ns	140	175	280	350	1.0	2.1
FWHM	ps; *ns	200	250	400	500	1.5	3.0
Freq. Bandwidth (-3dB)	GHz	2.5	2.0	1.2	1.0	0.3	0.1
Peak Responsivity	mA/mW	0.7	0.7	0.7	0.7	0.7	0.7
Breakdown Voltage (min)	V	30	30	25	25	15	15
Bias Voltage	V	18	18	15	12	10	5
Dark Current	μA	0.6	1.0	5.0	15	30	50
NEP (1.5 μm) $\times 10^{-13}$	W/ $\sqrt{\text{Hz}}$	4.5	6	10	20	30	50
Cap. @ 0 Volt	pF	1.5	2.5	15	35	110	420
Cap. @ Reverse Bias	pF	0.7	1.0	5.0	15	45	200
Impedance @ 0 Volt	kohm	800	500	100	50	25	5
Package Availability	can	TO18	TO18	TO18	TO18	TO18	TO5

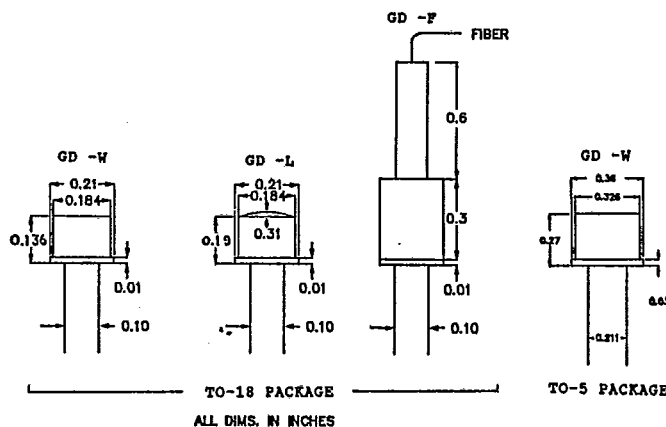
OPTICAL INPUT OPTIONS

- W A 4 mm diameter 1.0 mm thick glass window. The diode is 2.5 mm below the window.
- L A glass lens with a 4 mm diameter and a focal length of 4.0 mm. This lens is suitable for focusing a collimated beam or a slightly convergent beam onto the diode.
- F Two meters of optical fiber. The fiber is high quality multimode 50/125 μm core/cladding communications type fiber with a numerical aperture of 0.2. This makes the units suitable for use in singlemode or multimode fiberoptic systems.

NOTES:

- The GD series diodes have been optimized for use in a 50 ohm system. To achieve the pulsewidths and bandwidths specified here it is necessary to mount the photodiodes very carefully into a 50 ohm system.
- The GD2000 is available with window only.
- The GD1000 is available with window or lens only.

MECHANICAL SPECIFICATIONS



ORDERING INFORMATION

- The GD series germanium photodiodes are complete as shipped in a TO5 or a TO18 can.
- The complete units can generally be shipped from stock in small quantities.
- Please note package availability under specifications.
- **TO ORDER SPECIFY:** GD
 Model Number
 Optical Input Option