

# FCI-InGaAs-QXXX

## Large Active Area InGaAs Quadrants

FCI-InGaAs-QXXX series are large active area InGaAs photodiodes segmented into four separate active areas. These photodiodes come in 1mm and 3mm active area diameter. The InGaAs Quad series with high response uniformity and the low cross talk between the elements are ideal for accurate nulling or centering applications as well as beam profiling applications. They exhibit excellent responsivity from 1100nm to 1620nm, and are stable over time and temperature, and fast response times necessary for high speed or pulse operation. The photodiodes are packaged in isolated TO-5 or TO-8 cans with a broadband double sided AR coated flat window, and also can be mounted on ceramic substrate per request.



### APPLICATIONS

- Position Sensing
- Beam Alignment
- Beam Profiling

### FEATURES

- High Responsivity
- Low Noise
- Spectral Range 900nm to 1700nm
- Low Crosstalk
- Wide Field of View

### Absolute Maximum Ratings

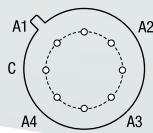
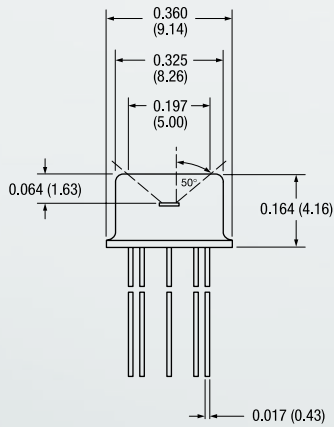
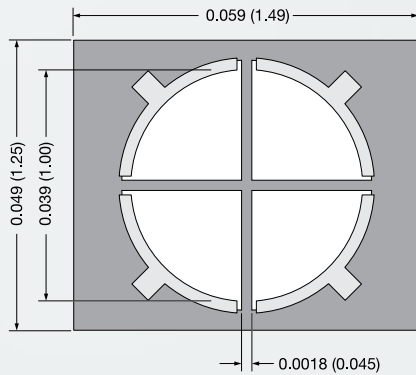
PARAMETERS	SYMBOL	MIN	MAX	UNITS
Storage Temperature	$T_{stg}$	-55	+125	°C
Operating Temperature	$T_{op}$	-40	+75	°C
Soldering Temperature	$T_{sld}$	---	+260	°C

### Electro-Optical Characteristics (per 1 element)

$T_A = 23^\circ\text{C}$

PARAMETERS	SYMBOL	CONDITIONS	FCI-InGaAs-Q1000			FCI-InGaAs-Q3000			UNITS
			MIN	TYP	MAX	MIN	TYP	MAX	
Active Area Diameter	$AA_\phi$	---	---	1000	---	---	3000	---	$\mu\text{m}$
Responsivity	$R_\lambda$	$\lambda = 1310\text{nm}$	0.85	0.90	---	0.85	0.90	---	A/W
		$\lambda = 1550\text{nm}$	0.90	0.95	---	0.90	0.95	---	
Element Gap	---	---	---	0.045	---	---	0.045	---	mm
Capacitance	$C_j$	$V_R = 5.0\text{V}$	---	---	25	---	---	225	pF
Dark Current	$I_d$	$V_R = 5.0\text{V}$	---	0.5	15	---	2.0	100	nA
Rise Time/ Fall Time	$t_r/t_f$	$V_R = 5.0\text{V}$ , 50 $\Omega$ 10% to 90%	---	3	---	---	24	---	ns
Crosstalk	---	$\lambda = 1550\text{nm}$ , $V_R = 5.0\text{V}$	---	---	1	---	---	1	%
Max. Reverse Voltage	---	---	---	---	15	---	---	10	V
NEP	---	$\lambda = 1550\text{nm}$	---	1.20E-14	---	---	2.50E-14	---	W/ $\sqrt{\text{Hz}}$

**InGaAs-Q1000**

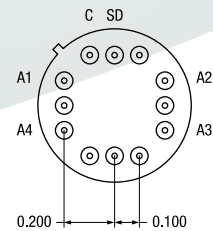
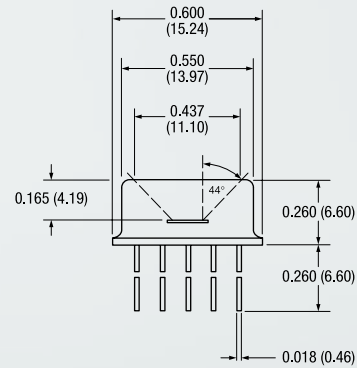
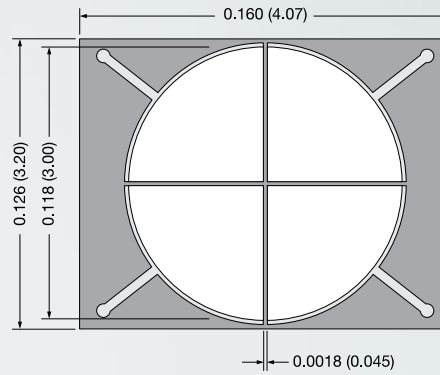


Pin Circle Dia.=0.230  
Bottom View

**Pinout**

PIN	Description
A1	ANODE QUADRANT 1
A2	ANODE QUADRANT 2
A3	ANODE QUADRANT 3
A4	ANODE QUADRANT 4
C	COMMON CATHODE

**InGaAs-Q3000**



Bottom View

**Pinout**

PIN	Description
A1	ANODE QUADRANT 1
A2	ANODE QUADRANT 2
A3	ANODE QUADRANT 3
A4	ANODE QUADRANT 4
C	COMMON CATHODE
SD	SUCTION DIODE

**Notes:**

- All units in inches (mm).

# Mouser Electronics

Authorized Distributor

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