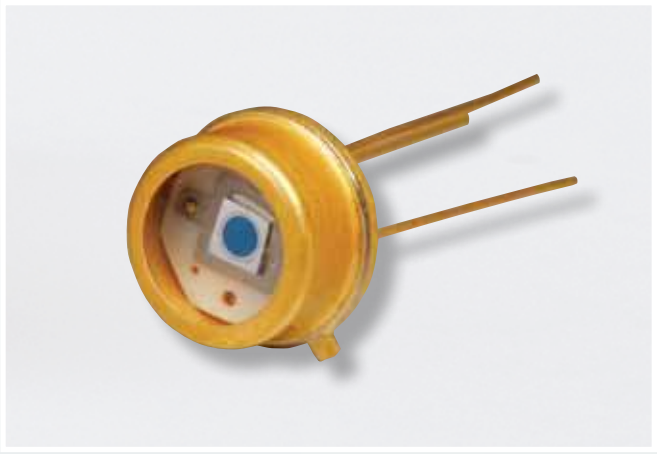
FCI-InGaAs-XXX-X

Large Active Area InGaAs Photodiodes

FCI-InGaAs-XXX-X series with active area sizes of 1mm, 1.5mm and 3mm, are part of OSI Optoelectronics's large active area IR sensitive detectors which exhibit excellent responsivity from 1100nm to 1620nm, allowing high sensitivity to weak signals. These large active area devices are ideal for use in infrared instrumentation and monitoring applications. The photodiode chip are isolated in TO-46 or TO-5 packages with a broadband double sided AR coated flat window. FCI-InGaAs-3000-X come with different shunt resistance values of 5, 10, 20, and 40MΩ.



APPLICATIONS

- Optical Instrumentation
- Power Measurement
- IR Sensing
- Medical Devices

FEATURES

- High Responsivity
- Large Active Area Diameter
- Low Noise
- Spectral Range 900nm to 1700nm

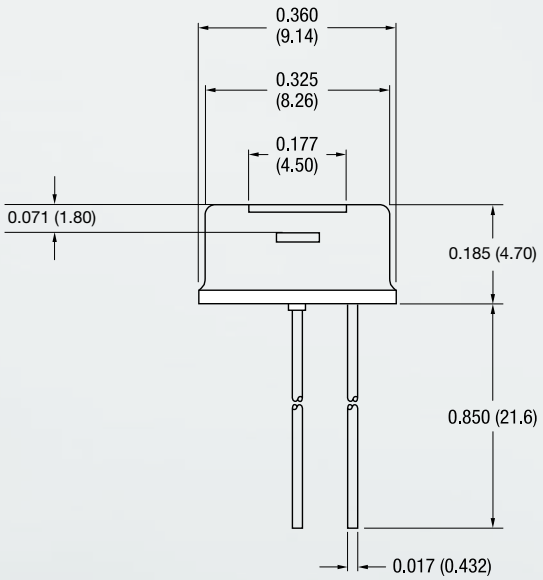
Absolute Maximum Ratings

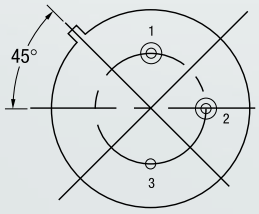
PARAMETERS	SYMBOL	MIN	MAX	UNITS
Storage Temperature	T_{stg}	-55	+125	°C
Operating Temperature	T_{op}	-40	+75	°C
Soldering Temperature	T_{sld}	---	+260	°C

Electro-Optical Characteristics T_A=23°C

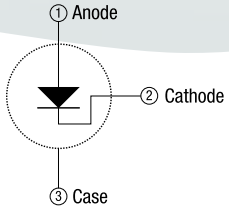
PARAMETERS	SYMBOL	CONDITIONS	FCI-InGaAs-1000			FCI-InGaAs-1500			FCI-InGaAs-3000-X			UNITS
			MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	
Active Area Diameter	AA_ϕ	---	---	1.0	---	---	1.5	---	---	3.0	---	mm
Responsivity	R_λ	λ=1310nm	0.80	0.90	---	0.80	0.90	---	0.80	0.90	---	A/W
		λ=1550nm	0.90	0.95	---	0.90	0.95	---	0.90	0.95	---	
Capacitance	C_j	V_R=0V	---	80	200	---	200	450	---	750	1800	pF
Shunt Resistance	R_{SH}	V_R=10mV	30	---	---	---	20	---	---	20	---	MΩ
Max. Reverse Voltage	---	---	---	---	5	---	---	2	---	---	2	V
Max. Reverse Current	---	---	---	---	1	---	---	2	---	---	2	mA
Max. Forward Current	---	---	---	---	10	---	---	10	---	---	10	mA
NEP	---	---	---	2.45E-14	---	---	3.01E-14	---	---	4.25E-14	---	W/√Hz

FCI-InGaAs-3000-X



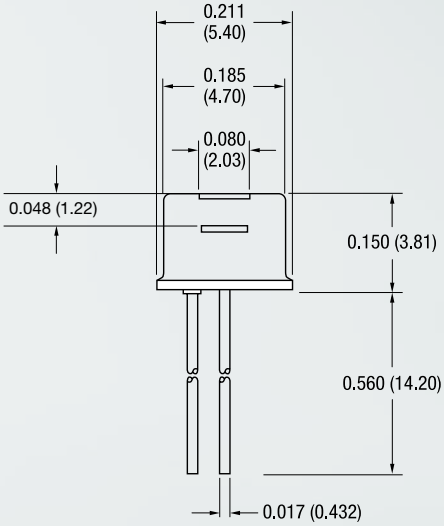


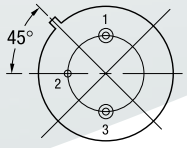
Bottom View



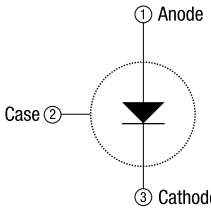
Pin Circle Diameter = 0.200 (5.08)

FCI-InGaAs-1000 & FCI-InGaAs-1500





Bottom View



Pin Circle Diameter = 0.100 (2.54)

Notes:
- All units in inches (mm).
- All tolerances: 0.005 (0.125)
- The flat window devices have broadband AR coatings centered at 1310nm
- The thickness of the flat window=0.008 (0.21)