

# FCI-InGaAs-XXX-LCER

## High Speed InGaAs Photodiodes Mounted on Ceramic Packages w/Leads

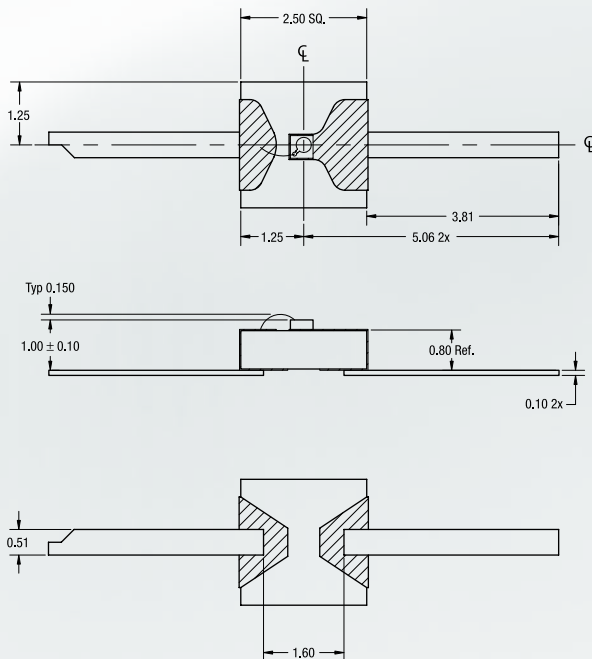
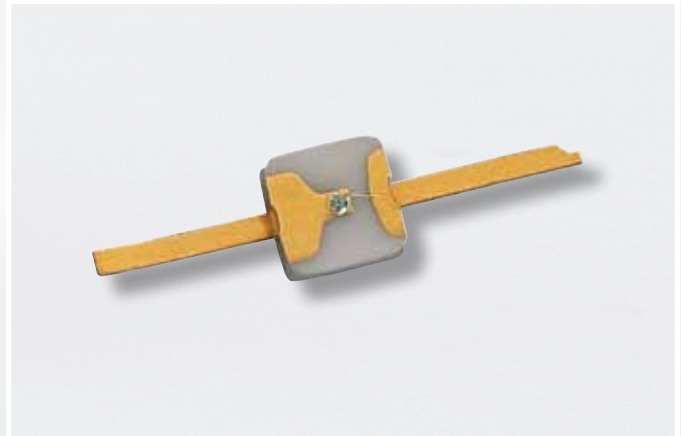
FCI-InGaAs-XXX-LCER with active area sizes of 75µm, 120µm, 300µm, 400µm and 500µm are part of OSI Optoelectronics's high speed IR sensitive photodiodes mounted on gull wing ceramic substrates. The chips can be epoxy/eutectic mounted onto the ceramic substrate.

### APPLICATIONS

- High Speed Optical Communications
- Gigabit Ethernet/Fibre Channel
- SONET / SDH, ATM
- Diode Laser Monitoring
- Instrumentation

### FEATURES

- Low Noise
- High Responsivity
- High Speed
- Spectral Range 900nm to 1700nm



### Notes:

- All units in millimeters.
- All devices are mounted with low out gassing conductive epoxy with tolerance of ±25µm. Eutectic mounting is also available upon request.

### Absolute Maximum Ratings

PARAMETERS	SYMBOL	MIN	MAX	UNITS
Storage Temperature	T <sub>stg</sub>	-40	+85	°C
Operating Temperature	T <sub>op</sub>	0	+70	°C
Soldering Temperature	T <sub>slid</sub>	---	+260	°C

### Electro-Optical Characteristics

T<sub>A</sub> = 23°C

PARAMETERS	SYMBOL	CONDITIONS	FCI-InGaAs-75LCER			FCI-InGaAs-120LCER			FCI-InGaAs-300LCER			FCI-InGaAs-400LCER			FCI-InGaAs-500LCER			UNITS
			MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	
Active Area Diameter	AA <sub>φ</sub>	---	---	75	---	---	120	---	---	300	---	---	400	---	---	500	---	µm
Responsivity	R <sub>λ</sub>	λ = 1310nm	0.80	0.90	---	0.80	0.90	---	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	---	0.90	0.95	---	0.90	0.95	---	
Capacitance	C <sub>j</sub>	V <sub>R</sub> = 5.0V	---	0.65	---	---	1.0	---	---	10.0	---	---	14.0	---	---	20.0	---	pF
Dark Current	I <sub>d</sub>	V <sub>R</sub> = 5.0V	---	0.03	2	---	0.05	2	---	0.30	5	---	0.40	5	---	0.50	20	nA
Rise Time/ Fall Time	t <sub>r</sub> /t <sub>f</sub>	V <sub>R</sub> = 5.0V, R <sub>L</sub> = 50Ω 10% to 90%	---	---	0.20	---	---	0.30	---	---	1.5	---	---	3.0	---	---	10.0	ns
Max. Reverse Voltage	---	---	---	---	20	---	---	20	---	---	15	---	---	15	---	---	15	V
Max. Reverse Current	---	---	---	---	1	---	---	2	---	---	2	---	---	2	---	---	2	mA
Max. Forward Current	---	---	---	---	5	---	---	5	---	---	8	---	---	8	---	---	8	mA
NEP	---	---	---	3.44E-15	---	---	4.50E-15	---	---	6.28E-15	---	---	7.69E-15	---	---	8.42E-15	---	W/√Hz