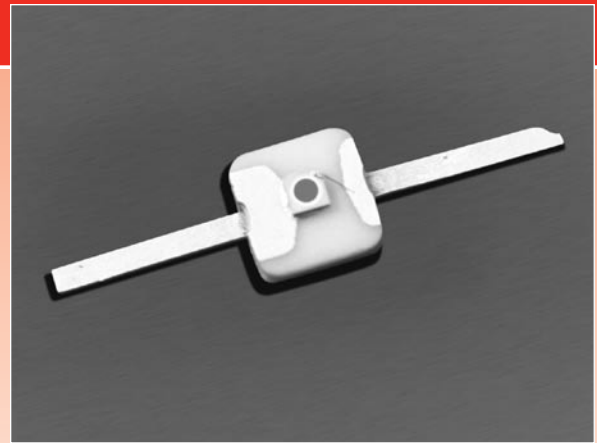


## FCI-InGaAs-XXX-LCER

High Speed InGaAs Photodiodes Mounted on Ceramic Packages w/Leads

FCI-InGaAs-XXX-LCER with active area sizes of 70 $\mu\text{m}$ , 120 $\mu\text{m}$ , 300 $\mu\text{m}$ , 400 $\mu\text{m}$  and 500 $\mu\text{m}$  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.

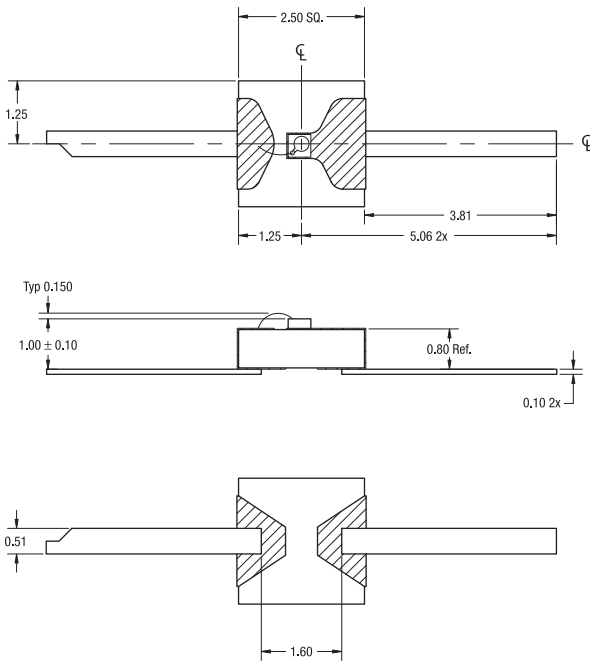


### APPLICATIONS

- 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  $\pm 25\mu\text{m}$ . Eutectic mounting is also available upon request.

### Absolute Maximum Ratings

PARAMETERS	SYMBOL	MIN	MAX	UNITS
Storage Temperature	$T_{\text{stg}}$	-40	+85	$^{\circ}\text{C}$
Operating Temperature	$T_{\text{op}}$	0	+70	$^{\circ}\text{C}$
Soldering Temperature	$T_{\text{slid}}$	---	+260	$^{\circ}\text{C}$

### Electro-Optical Characteristics

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

PARAMETERS	SYMBOL	CONDITIONS	FCI-InGaAs-70LCER			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	$AA_{\phi}$	---	---	70	---	---	120	---	---	300	---	---	400	---	---	500	---	$\mu\text{m}$
Responsivity	$R_{\lambda}$	$\lambda = 1310\text{nm}$	0.80	0.90	---	0.80	0.90	---	0.80	0.90	---	0.80	0.90	---	0.80	0.90	---	A/W
		$\lambda = 1550\text{nm}$	0.90	0.95	---	0.90	0.95	---	0.90	0.95	---	0.90	0.95	---	0.90	0.95	---	
Capacitance	$C_j$	$V_R = 5.0\text{V}$	---	0.65	---	---	1.0	---	---	10.0	---	---	14.0	---	---	20.0	---	pF
Dark Current	$I_d$	$V_R = 5.0\text{V}$	---	0.03	2	---	0.05	2	---	0.30	5	---	0.40	5	---	0.50	20	nA
Rise Time/ Fall Time	$t_r/t_f$	$V_R = 5.0\text{V}$ , $R_L = 50\Omega$ 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/ $\sqrt{\text{Hz}}$