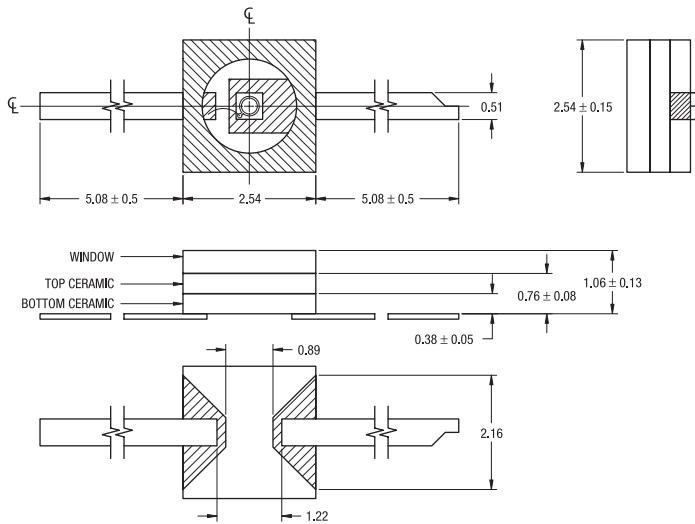


FCI-InGaAs-XXX-CCER

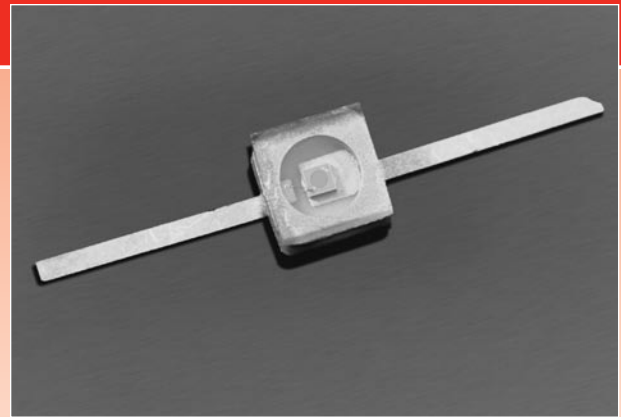
High Speed InGaAs Photodiodes Mounted on Cavity Ceramic Packages

FCI-InGaAs-XXX-CCER with active area sizes of 70 μm , 120 μm , 300 μm , 400 μm and 500 μm are part of OSI Optoelectronics's high speed IR sensitive photodiodes mounted on gull wing ceramic substrates with glass windows. These devices have a glass window attached to the ceramic where fibers can be directly epoxy mounted onto. The chips can be epoxy or eutectic mounted onto the ceramic substrate. These devices can be provided with custom AR coated windows.



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.



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

Absolute Maximum Ratings

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

Electro-Optical Characteristics

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

PARAMETERS	SYMBOL	CONDITIONS	FCI-InGaAs-70CCER			FCI-InGaAs-120CCER			FCI-InGaAs-300CCER			FCI-InGaAs-400CCER			FCI-InGaAs-500CCER			UNITS
			MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	
Active Area Diameter	AA_{ϕ}	---	---	70	---	---	120	---	---	300	---	---	400	---	---	500	---	μm
Responsivity	R_{λ}	$\lambda = 1310\text{nm}$	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/ $\sqrt{\text{Hz}}$