

# FCI-InGaAs-XXX-WCER

## High Speed InGaAs Photodiodes Mounted on Wraparound Ceramic

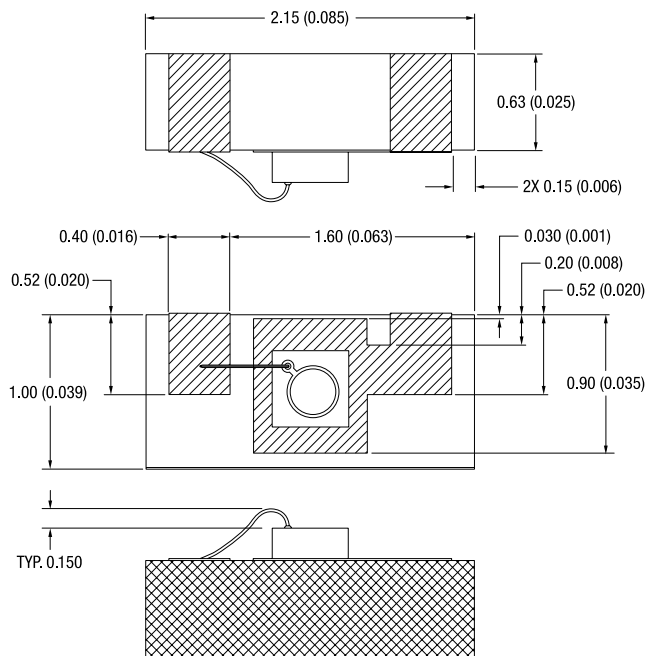
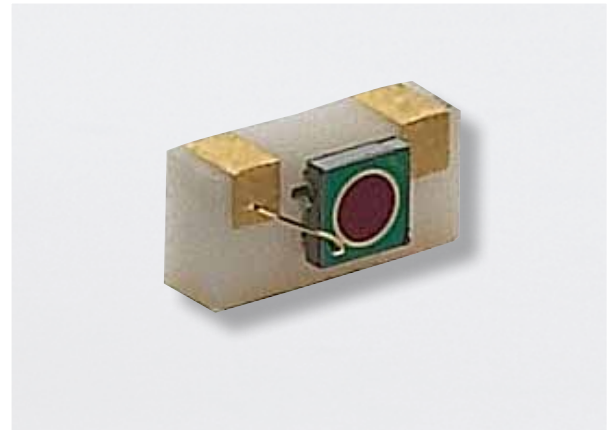
FCI-InGaAs-XXX-WCER with active area sizes of 75µm, 120µm, 300µm, 400µm and 500µm are part of a line of monitor photodiodes mounted on metallized ceramic substrates. These compact assemblies are designed for ease of integration. The chips can be epoxy or eutectic mounted onto the ceramic substrate.

### APPLICATIONS

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

### FEATURES

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



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### Notes:

- All units in millimeters (inches).
- All devices are eutectic mounted with tolerance of ±50µm.

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-75WCER			FCI-InGaAs-120WCER			FCI-InGaAs-300WCER			FCI-InGaAs-400WCER			FCI-InGaAs-500WCER			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>s</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