FCI-InGaAs-XXX-ACER with active area sizes of $75 \mu \mathrm{~m}, 120 \mu \mathrm{~m}, 300 \mu \mathrm{~m}, 400 \mu \mathrm{~m}$ and $500 \mu \mathrm{~m}$ is part of OSI Optoelectronics's high speed IR sensitive photodiodes mounted on angled ceramic substrates. The ceramic substrate with an angled surface by $5^{\circ}$ greatly reduces the back reflection. The chips can be epoxy/ eutectic mounted onto the angled ceramic substrate.

## APPLICATIONS

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


## FEATURES

- $5^{\circ}$ Angle Ceramic
- Low Noise
- High Responsivity
- High Speed
- Spectral Range 900 nm to 1700 nm


Notes:

- All units in millimeters (inches).
- All devices are eutectic mounted with tolerance of $\pm 50 \mu \mathrm{~m}$.


|  |  |  |  |  |  | Electro-Optical Characteristics |  |  |  |  |  |  |  |  | $\mathrm{T}_{\mathrm{A}}=23^{\circ} \mathrm{C}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PARAMETERS | SYMBOL | CONDITIONS | FCI-InGaAs-75ACER |  |  | FCI-InGaAs-120ACER |  |  | FCI-InGaAs-300ACER |  |  | FCI-InGaAs-400ACER |  |  | FCI-InGaAs-500ACER |  |  | UNITS |
|  |  |  | MIN | TYP | MAX | MIN | TYP | MAX | MIN | TYP | MAX | MIN | TYP | MAX | MIN | TYP | MAX |  |
| Active Area Diameter | $\mathrm{AA}_{\text {¢ }}$ | --- | --- | 75 | --- | --- | 120 | --- | --- | 300 | --- | --- | 400 | --- | --- | 500 | --- | $\mu \mathrm{m}$ |
| Responsivity | $\mathrm{R}_{\lambda}$ | $\lambda=1310 \mathrm{~nm}$ | 0.80 | 0.90 | --- | 0.80 | 0.90 | --- | 0.80 | 0.90 | --- | 0.80 | 0.90 | --- | 0.80 | 0.90 | --- |  |
|  |  | $\lambda=1550 \mathrm{~nm}$ | 0.90 | 0.95 | --- | 0.90 | 0.95 | --- | 0.90 | 0.95 | --- | 0.90 | 0.95 | --- | 0.90 | 0.95 | --- | A/W |
| Capacitance | $\mathrm{C}_{\mathrm{j}}$ | $\mathrm{V}_{\mathrm{R}}=5.0 \mathrm{~V}$ | --- | 0.65 | --- | --- | 1.0 | --- | -- | 10.0 | --- | --- | 14.0 | --- | --- | 20.0 | --- | pF |
| Dark Current | $\mathrm{I}_{\mathrm{d}}$ | $\mathrm{V}_{\mathrm{R}}=5.0 \mathrm{~V}$ | --- | 0.03 | 2 | --- | 0.05 | 2 | --- | 0.30 | 5 | --- | 0.40 | 5 | --- | 0.50 | 20 | nA |
| Rise Time/ Fall Time | $\mathrm{t}_{\mathrm{r}} / \mathrm{t}_{\mathrm{f}}$ | $\begin{gathered} \mathrm{V}_{\mathrm{R}}=5.0 \mathrm{~V}, \\ \mathrm{R}_{\mathrm{L}}=50 \Omega \\ 10 \% \text { to } 90 \% \\ \hline \end{gathered}$ | --- | --- | 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 | --- | --- | --- | $\begin{array}{\|c\|c\|} \hline 3.44 \mathrm{E}- \\ 15 \end{array}$ | --- | --- | $\begin{array}{\|c} 4.50 \mathrm{E}- \\ 15 \end{array}$ | --- | --- | $\begin{array}{\|c} 6.28 \mathrm{E}- \\ 15 \end{array}$ | --- | --- | $\begin{gathered} 7.69 \mathrm{E}- \\ 15 \end{gathered}$ | --- | --- | $\begin{array}{\|c} 8.42 \mathrm{E}- \\ 15 \end{array}$ | --- | W/VHz |

