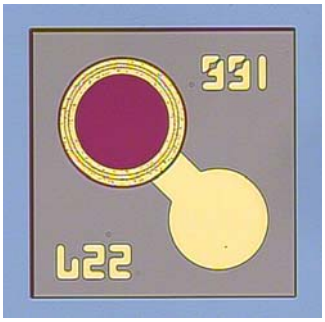
# TPD-1C12-019

## InGaAs PIN photodiode chip




### FEATURES:

- Optimized for fiber optic application.
- Low dark current and low capacitance.
- Design for long wavelength 2.5 Gbps application.

### ELECTRO-OPTICAL CHARACTERISTICS:

| PARAMETERS | SYMBOL | MIN | TYP | MAX | UNIT | TEST CONDITIONS |
|---|---|---|---|---|---|---|
| Responsivity | R | 0.9 | 1.1 | | A/W | $V_R$=1.5V, λ=1550nm |
| Dark Current | $I_D$ | | 0.1 | 1 | nA | $V_R$=5V |
| Breakdown Voltage | $V_{BD}$ | 25 | 35 | | V | $I_R$=10μA |
| Forward current | $I_f$ | | 3 | | mA | Vf=1V |
| Capacitance | C | | 0.75 | 0.9 | pF | $V_R$=1.5V, f=1 MHz |
| | | | 0.7 | 0.85 | pF | $V_R$=5V, f=1 MHz |
| Bandwidth | BW | 2 | | | GHz | $V_R$=1.5V |

Fig. 1 Typical Dark Current and Forward Current

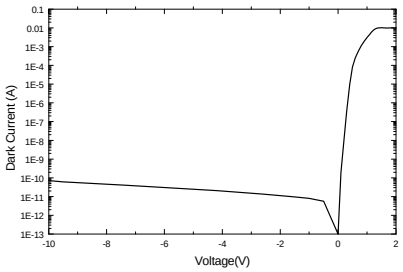



Fig. 2 Typical Photo-Current

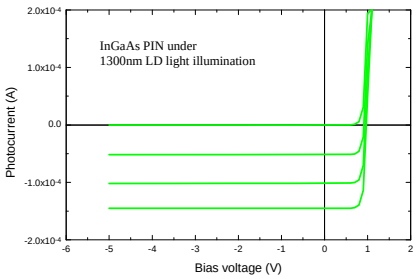



Fig. 3 Typical Breakdown Curve

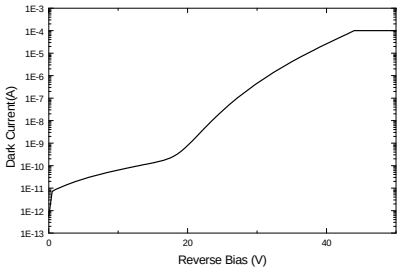
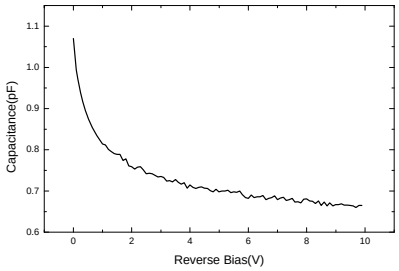
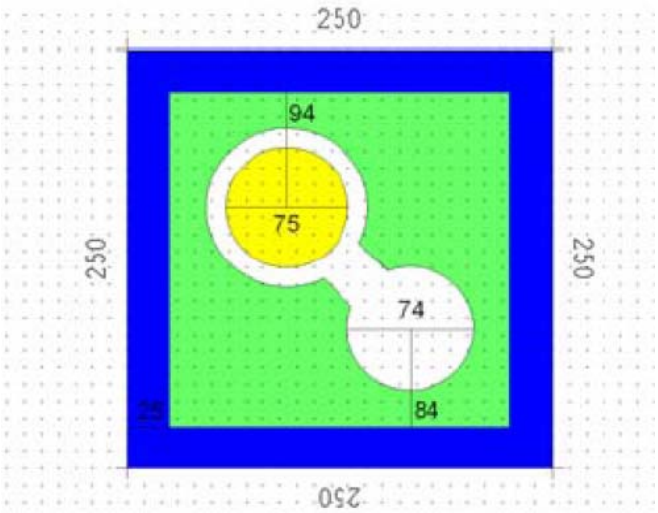



Fig. 4 Typical C-V Curve



## OUTLINE DIAGRAM:




• Chip size is typical 250x250 μm.

• Chip thickness is 200±30um

• Sensitive area is typical 75 μm in diameter.