

InGaAs APD

Model: OPR200-IGA-APD



Applications

- Distance measurement
- Spatial light transmission
- OTDR
- Low-light-level detection

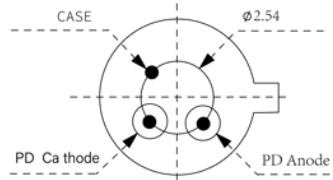
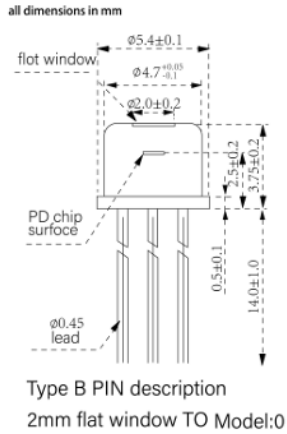
Absolute Maximum Rating

| Parameter | Symbol | Min. | Max. | Unit |
|-----------------------|-----------|------|----------|------|
| APD voltage supply | V_{PD} | | V_{BR} | V |
| Operating Temperature | T_C | -40 | +85 | °C |
| Storage Temperature | T_{STG} | -55 | +125 | °C |
| Forward Current | I_F | | 5 | mA |
| Reverse Current | I_R | | 3 | mA |

Electrical Characteristics ($T_C=22 \pm 3^\circ\text{C}$)

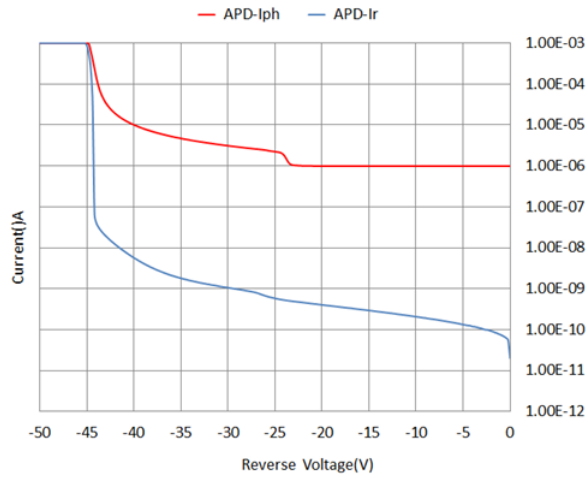
| Parameter | Symbol | Value | | | Unit | Test conditions |
|-------------------------------------|-----------|----------|------|------|---------------|--|
| | | Min. | Typ. | Max. | | |
| Response Spectrum | λ | 950~1700 | | | nm | |
| Active Diameter | D | | 200 | | μm | |
| Responsivity | R_e | 0.90 | 1.0 | | A/W | $\lambda=1550\text{nm}$, $P_{in}=1\mu\text{W}$, $M=1$ |
| Multiplication factor | M | 10 | | | | $\lambda=1550\text{nm}$, $P_{in}=1\mu\text{W}$, $V_R=V_{BR}-2V$ |
| Dark Current | I_D | | 8.00 | 50 | nA | $P_{in}=0\mu\text{W}$, $V_R=V_{BR}-2V$ |
| -3dB cut-off frequency | BW | 0.6 | 0.9 | | GHz | $M=10$, $R_L=50\Omega$ |
| Reverse Breakdown Voltage | V_{BR} | 40 | | 50 | V | $I_R=10\mu\text{A}$, $P_{in}=0\mu\text{W}$ |
| Capacitance | C | | 1.50 | 2.00 | pF | $V_R=V_{BR}-2V$, $f=1\text{MHz}$ |
| Temperature coefficient of V_{BR} | Y | 0.05 | 0.10 | 0.15 | V/°C | $I_R=10\mu\text{A}$, $P_{in}=0\mu\text{W}$ -55°C ~ +85°C |

Package Drawings



Type B PIN description
Bottom View

Photo Current and Dark Current vs. Reverse Voltage



Breakdown Voltage vs. Temperature

