

FEATURES

- Low Noise
- Low Dark Current and Capacitance
- High Sensitivity
- Detection in LWIR
- Hermetic
- Isolated Anode and Cathode

DESCRIPTION

The SD0050-3111-111 is a high sensitivity, low noise, 0.25 mm diameter active area InGaAs photodiode for detection at SWIR, NIR wavelengths for imaging and sensing applications. The photodetector is assembled in a TO-46 package with a flat window cap.

APPLICATIONS

- Industrial Sensing
- Security
- Communication
- Medical

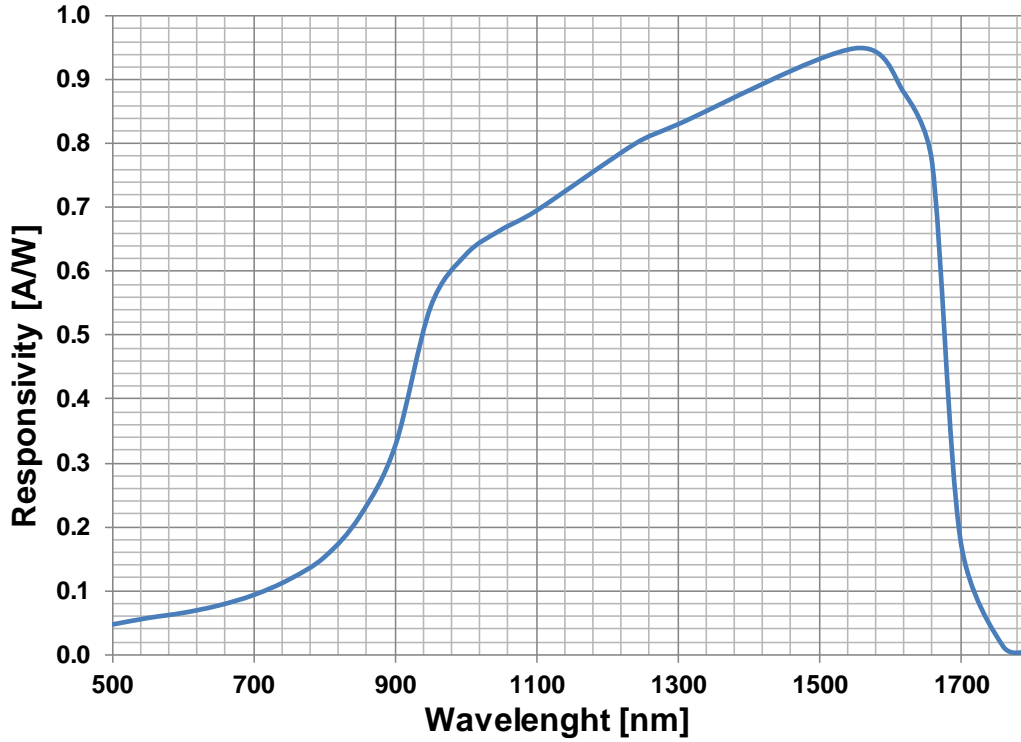
> Absolute Maximum Ratings

| Part No. | Wavelength Range [nm] | Reverse Voltage [V] | Operating Temperature [C] | Storage Temperature [C] | Package |
|-----------------|-----------------------|---------------------|---------------------------|-------------------------|---------|
| SD0050-3111-111 | 900 to 1700 | 20 | -40 to +100 | -55 to +125 | TO-46 |

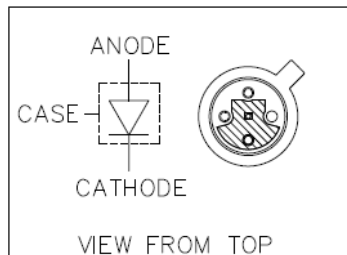
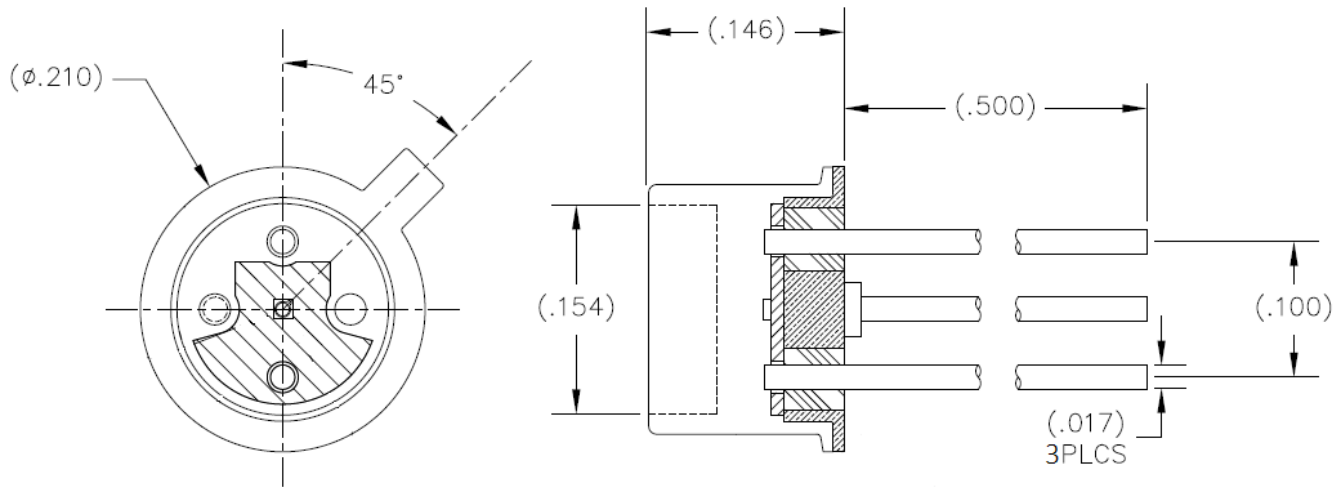
> Electrical and Optical Characteristics

| Typical Characteristics (T=23°C unless specified) | | | | | | |
|---|--------------------------|----------|-----|---------|-----|------|
| Parameter | Test Conditions | Symbol | Min | Typical | Max | Unit |
| Breakdown Voltage | $I_R=1\mu A$ | V_{BD} | 35 | - | - | V |
| Dark Current | $V_R=10V$ | I_d | - | 0.2 | 1 | nA |
| Forward Voltage | $I_f=3mA$ | V_f | - | 0.6 | 0.8 | V |
| Diode Capacitance | $V_R=5V, F=1MHz$ | C_D | - | - | 6 | pF |
| Shunt Resistance | $V=10mA$ | R_s | 40 | - | - | MΩ |
| Responsivity | $V_R=5V, \lambda=1300nm$ | R | 0.8 | 0.83 | - | A/W |
| | $V_R=5V, \lambda=1550nm$ | | 0.9 | 0.95 | - | |

> Spectral Response



> TO-46 Package



>Soldering Conditions: 260°C 1/16 inch away from case for 3 seconds max.

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MATERIALS SAFETY

This product is free of conflict minerals and meets REACH compliance. Please see website for reports.