

An OSI Optoelectronics Company

# SD0800-3111-111

### **FEATURES**

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

## DESCRIPTION

The SD0800-3111-111 is a high sensitivity, low noise, 1 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<br>Range [nm] | Reverse<br>Voltage [V] | Operating Temperature<br>[C] | Storage Temperature<br>[C] | Package |  |
|-----------------|--------------------------|------------------------|------------------------------|----------------------------|---------|--|
| SD0800-3111-111 | 900 to 1700              | 20                     | -40 to +100                  | -55 to +125                | TO-46   |  |

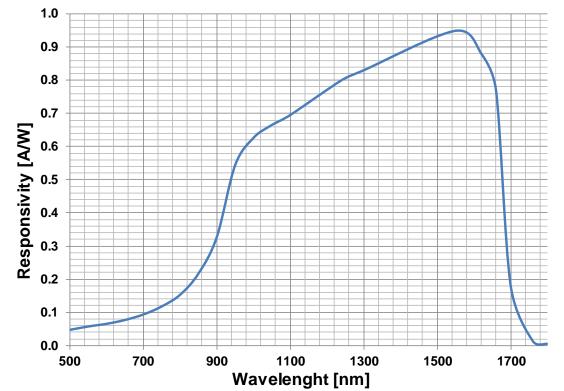
#### > Electrical and Optical Characteristics

| Typical Characteristics (T=23°C unless specified) |                              |        |     |         |     |      |  |  |  |
|---------------------------------------------------|------------------------------|--------|-----|---------|-----|------|--|--|--|
| Parameter                                         | Test Conditions              | Symbol | Min | Typical | Max | Unit |  |  |  |
| Breakdown Voltage                                 | I <sub>R</sub> =1µA          | VBD    | 35  | -       | -   | V    |  |  |  |
| Dark Current                                      | V <sub>R</sub> =10V          | ld     | -   | 0.5     | 5   | nA   |  |  |  |
| Forward Voltage                                   | I <sub>f</sub> =3mA          | Vf     | -   | -       | 0.8 | V    |  |  |  |
| Diode Capacitance                                 | V <sub>R</sub> =5V, F=1MHz   | CD     | -   | 75      | 100 | pF   |  |  |  |
| Shunt Resistance                                  | V=10mA                       | Rs     | 40  | -       | -   | MΩ   |  |  |  |
| Beeneneitivity                                    | V <sub>R</sub> =5V, λ=1300nm | Р      | 0.8 | 0.83    | -   | A/W  |  |  |  |
| Responsitivity                                    | V <sub>R</sub> =5V, λ=1550nm | R      | 0.9 | 0.95    | -   |      |  |  |  |

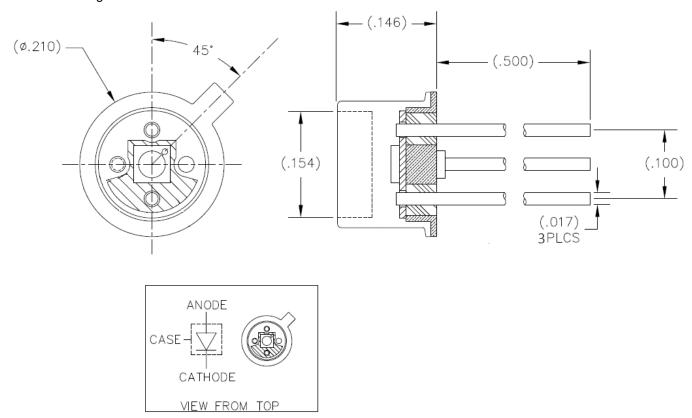
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# SD0800-3111-111

## > Spectral Response



> TO-46 Package



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

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# **MATERIALS SAFETY**

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