

**61099**

**PHOTODIODE-AMPLIFIER HYBRID**

**Mii**

**OPTOELECTRONIC PRODUCTS  
DIVISION**

**Features:**

- Hermetically sealed
- 4 Pin TO-5 Package
- High sensitivity
- Low noise/Grounded Case
- Feedback Circuit Built In

**Applications:**

- Light Detection/Light Measurement
- Guidance Systems
- Industrial Control
- Pollution Monitoring
- Bar Code Readers
- Medical

**DESCRIPTION**

The **61099** combines a large-area photodiode with a low-noise operational amplifier in a transimpedance connection. The feed back resistor and a shunt capacitor are included within the case, which is grounded for shielding. The sensing area is one square centimeter.

**ABSOLUTE MAXIMUM RATINGS**

|   |                  |
|---|------------------|
| Storage Temperature.....  | -30°C to + 100°C |
| Operating Temperature .....                                       | 0°C to + 70°C    |
| Supply Voltage.....   | ±18V             |
| Lead Soldering Temperature (1/16 inch from case – 5 seconds)..... | 240°C            |

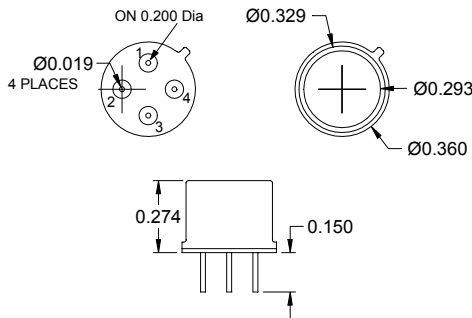
**Notes:**

(1) Derate linearly @ 1.33 mW/°C for T<sub>A</sub> > 25°C.

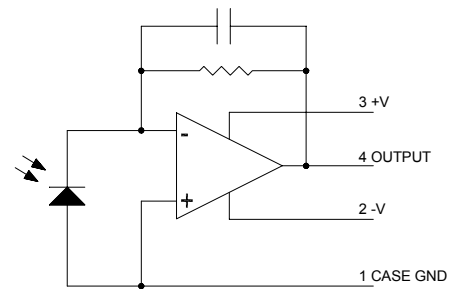
**Package Dimensions**

**Schematic Diagram**

**TOP VIEW**



DIMINIONS ARE IN INCHES  
DIMINIONS ARE NOMINAL



**ELECTRICAL CHARACTERISTICS**

At 25°C unless otherwise specified.

| PARAMETER  | MIN | TYP             | MAX       | UNITS                                  |
|--|-----|-----------------|-----------|--|
| Responsivity<br>$\lambda = 254\text{nm}$<br>$\lambda = 340\text{nm}$<br>$\lambda = 900\text{nm}$ |     | 50<br>60<br>225 |           | V/ $\mu$ W<br>V/ $\mu$ W<br>V/ $\mu$ W |
| Dark Offset Voltage  |     |                 | $\pm 1.0$ | MV                                     |
| Rise Time  |     |                 | 5.0       | Msec                                   |
| High Frequency Noise (0.1 to 10 kHz)   |     |                 | 0.75      | MVrms                                  |
| Ambient Light Offset Voltage   | +12 |                 |           | Volts                                  |