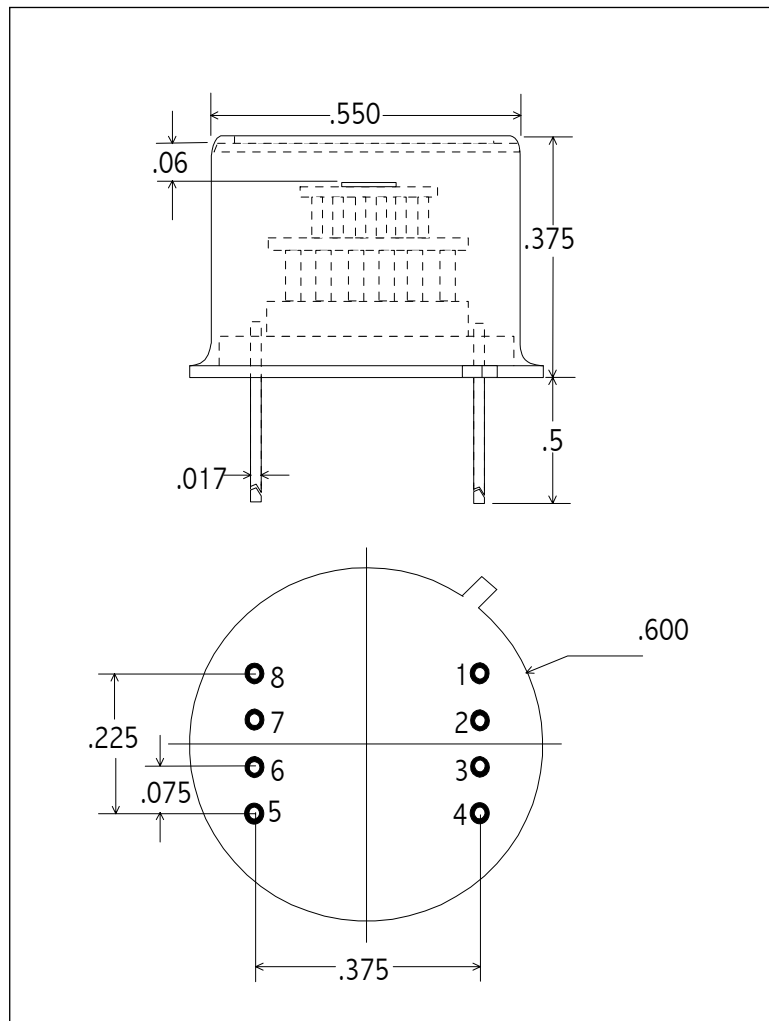


## TE - COOLED PHOTODIODE



**Part No:** IGA-050-TE2

### PIN OUT

- 1 = COOLER (-)
- 2 = THERMISTOR
- 3 = THERMISTOR
- 4 = COOLER (+)
- 5 = DETECTOR CATHODE
- 6 = DETECTOR ANODE
- 7 = NO CONNECT
- 8 = NO CONNECT

**Note:** Dimensions in Inches

### Operating Note

The TE cooled photodiode series consists of a high performance photodiode mounted on a thermoelectric cooler, all housed in a TO-8 package. A thermistor is mounted to the TEC's cold plate to provide a precise, reliable temperature monitor. Before operation VERIFY ELECTRICAL WIRING, else catastrophic damage may be sustained by the unit.

Electrical power consumption can exceed 2.5 Watts (2V / 1.25A); therefore, this package must be suitably heat sunk. Thermal grease with secure clamping is recommended for power dissipation. Temperature levels below  $-45^{\circ}\text{C}$  are possible with an optimized mechanical assembly.

### SPECIFICATIONS

| Operating Temperature ( $^{\circ}\text{C}$ )                   | 22                    | -30                   |
|--|-----------------------|-----------------------|
| Shunt Resistance ( $\text{M}\Omega$ )                          | 0.25 min              | 10 min                |
| Shunt Capacitance (pF)   | 1500 typ              | 1500 typ              |
| Responsivity @ $1.3 \mu\text{m}$ (A/W)                         | 0.9                   | 0.9                   |
| NEP ( $\text{W}/\text{Hz}^{1/2}$ ) @ $1.3 \mu\text{m}$ , 100Hz | $< 2 \times 10^{-13}$ | $< 4 \times 10^{-14}$ |
| Thermistor Resistance ( $\text{k}\Omega$ )                     | 1.8 typ               | 40 typ                |
| Cooler Current (A)   | 0.00                  | 0.65 TYP.             |
| Maximum Cooler Current (A)                                     | 1.25                  |                       |