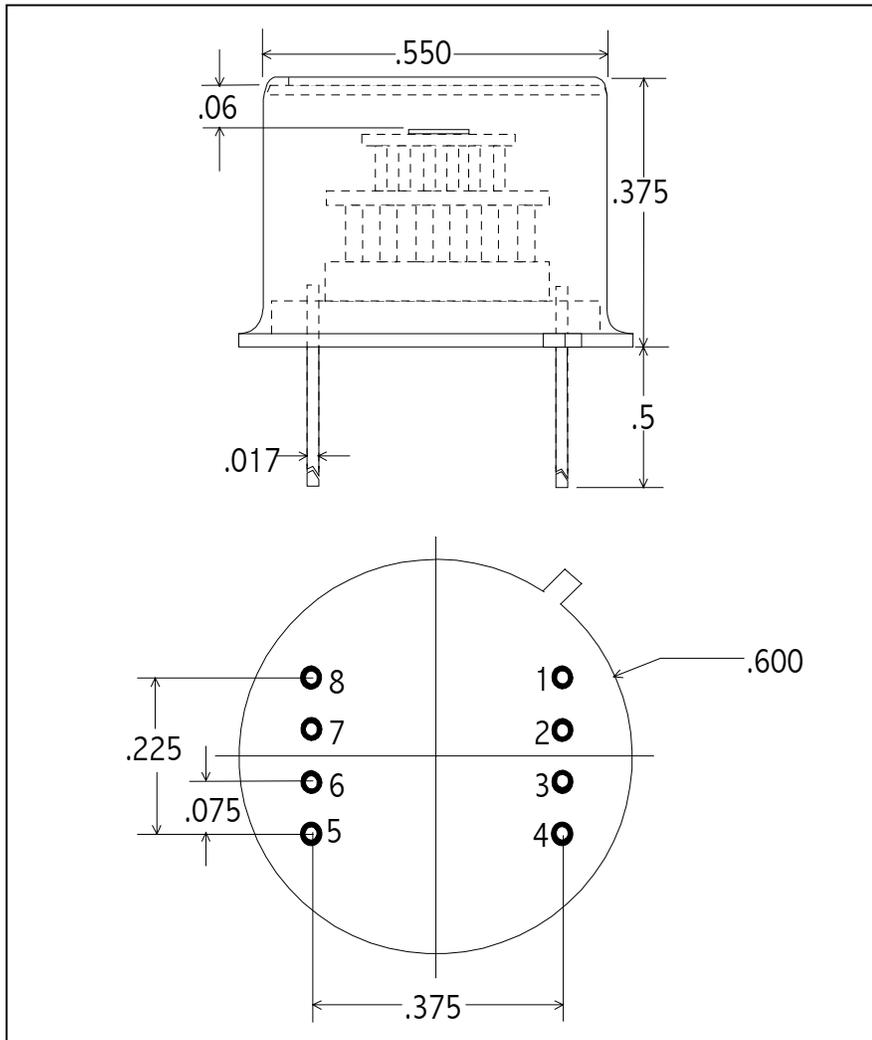


2-COLOR TE-COOLED DETECTOR



Part No:
S/PBS-050-TE2

PIN OUT

- 1 = COOLER (-)
- 2 = THERMISTOR
- 3 = THERMISTOR
- 4 = COOLER (+)
- 5 = BOTTOM DETECTOR
- 6 = BOTTOM DETECTOR
- 7 = TOP ANODE
- 8 = TOP CATHODE

Note: Dimensions in inches

Operating Note

This TE cooled 2-color series detector consists of a high performance photodiode / photoconductor 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°C are possible with an optimized mechanical assembly.

SPECIFICATIONS

| Detector Type | Top: 5 mm dia Silicon | Bottom: 5 mm x 5 mm PbS |
|--|------------------------------|---|
| Operating Temperature - ($^{\circ}\text{C}$) | 22 / -30 | 22 / -30 |
| Shunt Resistance - (Ω), min | 200M / $> 10^9$ | 1M / 3M typ. |
| Shunt Capacitance - (pF), typ | 1500 / 1400 | N/A |
| Responsivity @ pk | 0.5 A/W | 0.3×10^5 / 1×10^5 V/W |
| Operating Wavelength - (nm) | 300 - 1000 | 1000 / 2800 |
| Thermistor Resistance - ($\text{k}\Omega$) typ | 1.8 / 40 | |
| Cooler Current - (A) typ | 0.00 / 0.6 | |
| Maximum Cooler Current - (A) | 1.25 | |