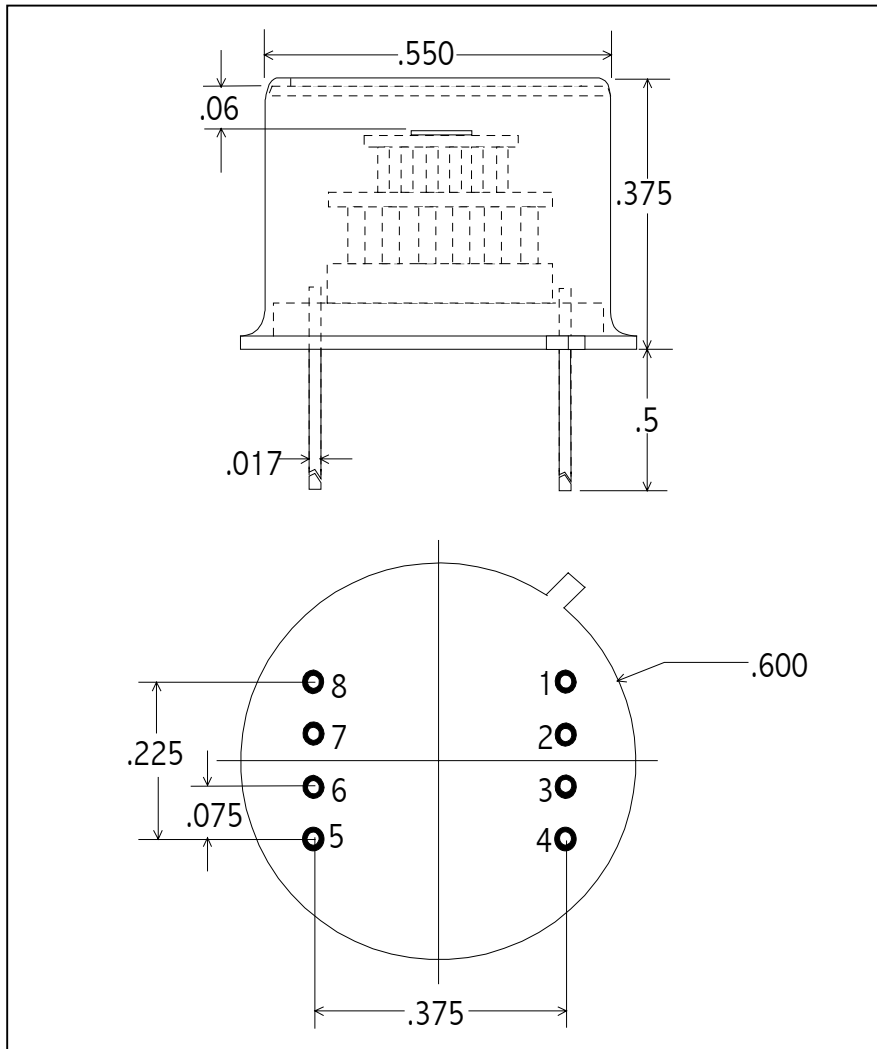


## 2-COLOR TE-COOLED DETECTOR



**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  $-45^{\circ}\text{C}$  are possible with an optimized mechanical assembly.

### SPECIFICATIONS

Detector Type	<b>Top: 5 mm dia Silicon</b>	<b>Bottom: 5 mm x 5 mm PbS</b>
Operating Temperature - ( $^{\circ}\text{C}$ )	22 / -30	22 / -30
Shunt Resistance - ( $\Omega$ ), min	200M / $> 10^9$	1M / 3M typ.
Shunt Capacitance - (pF), typ	1500 / 1400	N/A
Responsivity @ pk	0.5 A/W	$0.3 \times 10^5$ / $1 \times 10^5$ 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	