

Thermistor Bolometers TB16 Series High Performance - Small Immersion Lens

TB16 Series Thermistor Bolometers with Small Immersion Lens are extremely rugged, reliable, broad band Infrared Detectors. Broad band spectral sensitivity from the 2 to 1,000 microns is limited in practice by the lens selection. Germanium lenses are standard. Detectivity (D*) of an active Thermistor element improves by a factor of almost four over standard D* when it is immersed with the small immersion lens. There are two Thermistor material options available - High or Low resistivity in a range of active areas and time constants.

Applications

- Railroad Hot-Box Detection Systems
- Industrial Temperature Measurement
- Space-Borne Horizon Sensors
- Radiometers

Features

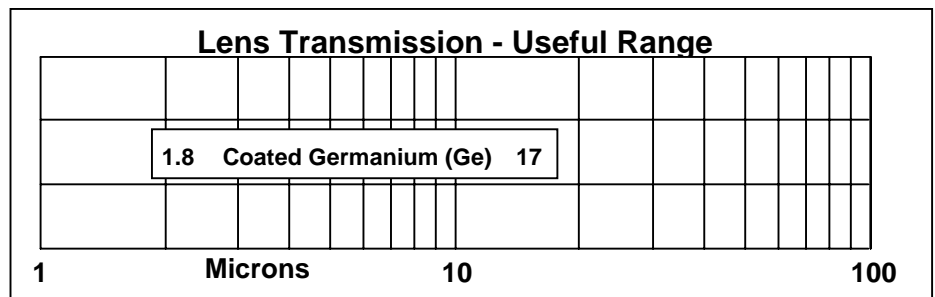
- Wide Spectral Range: 2 -> 1,000 μm
- Rugged Construction
- DC Operation

Typical Model Specifications

Model TB15 -	0.05 SR	0.1 SR	0.15 SR	0.25 SR	0.3 SR
Element Dimensions (mm)	0.05 x 0.05	0.1 x 0.1	0.15 x 0.15	0.25 x 0.25	0.3 x 0.3
Thermistor Resistivity (Megohm/Sq.)	2.5 or 0.25	2.5 or 0.25	2.5	0.25	0.25
Time Constant (ms)	1.2 or 2.5	1.2 or 2.5	2.5	2.5	2.5

OPTIONS

Package – Flange or Pin Base
Lens – Hemisphere, Hyperhemisphere

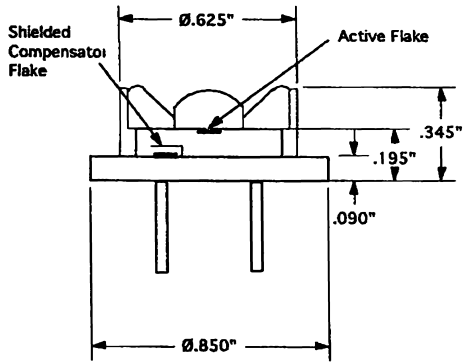


Infrared Sensing & Imaging

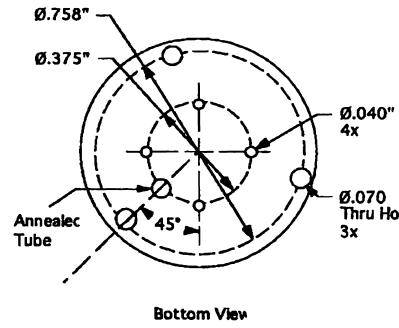
Flange-Base Package

Mechanical Data

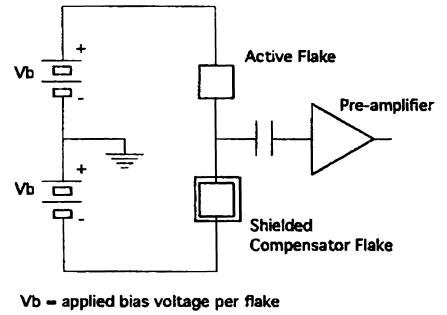
.140" Radius of Germanium Immersion Lens



Pin-Out

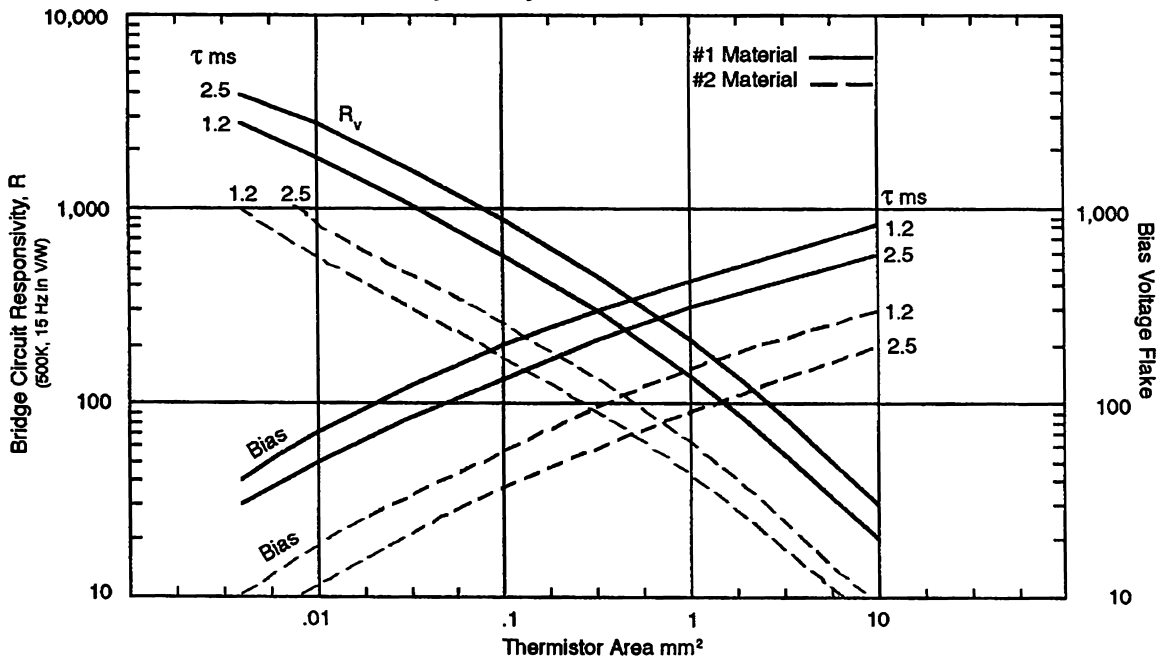


Circuit Diagram



Vb = applied bias voltage per flake

Responsivity and Bias vs. Area



Relative Responsivity vs. Frequency

