

Two-Color Infrared Sandwich Detector Series A-600

TYPICAL APPLICATIONS

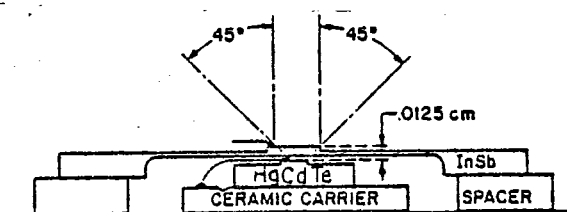
- Thermal Imaging
- Military Surveillance
- Remote Sensing
- Laser Ranging

SPECIAL FEATURES

- Fast Response
- Long Wavelength Response
- Hi Sensitivity

DESCRIPTION

The Series A-600 two-color sandwich detector utilizes n-type InSb and photoconductive HgCdTe. The photovoltaic InSb provides maximum sensitivity in the 1-5 μ m region and also acts as a filter for the HgCdTe detector which responds in the 5-15 μ m region. This unique construction technique provides simultaneous observation in both spectral bands without sacrificing sensitivity and simultaneous focusing since the spacing between sensitive areas is minimized. The detector sandwich is available in standard design dewars (see Bulletin 2-312), both glass and metal as well as custom designs.



HgCdTe sandwich detector

TEST CONDITIONS

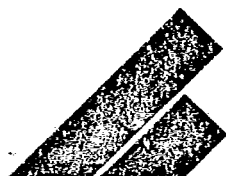
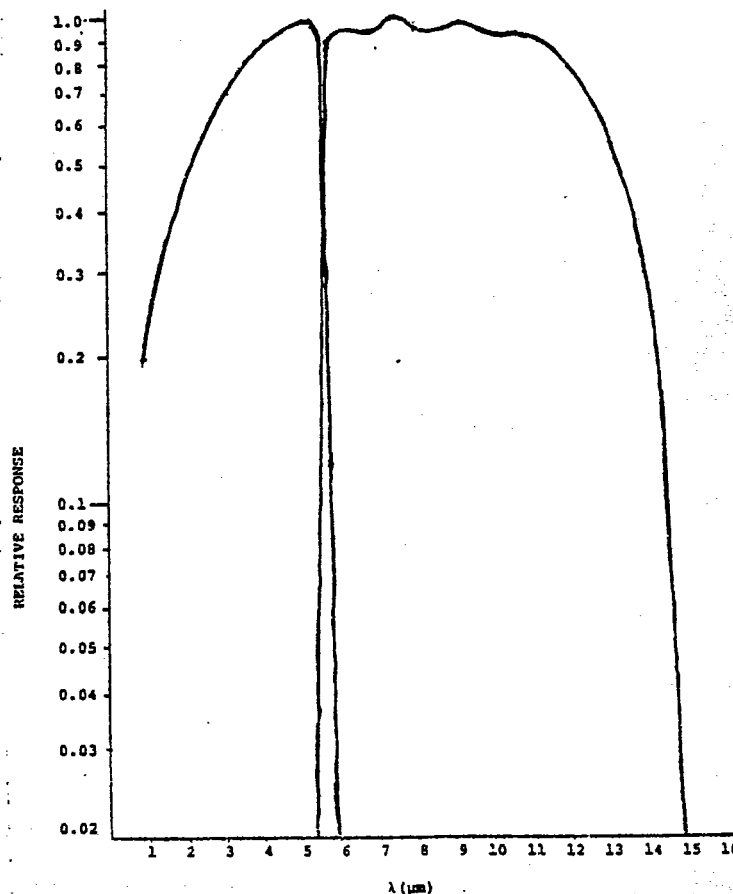
Blackbody Temperature	500 K
Background Temperature	300 K
Cell Temperature	77 K
Flux Density	$2 \mu\text{W}/\text{cm}^2$
Bandwidth	6 Hz
Window Material	Irtran 2
Detector Separation	0.005"

TYPICAL ELECTRICAL CHARACTERISTICS

Detector Area [cm^2]
 $D^*(500, 900, 1) [\times 10^{10} \text{cm Hz}^{1/2} \text{W}]$
 $D^*(\lambda_p, 900, 1) [\times 10^{10} \text{cm Hz}^{1/2} \text{W}]$

HgCdTe	InSb
.01	.01
.415	4.2
.88	21

Barnes offers a series of IR Detectors with liquid nitrogen holding times to 12 hours. Detectors from this line can be modified to your exact requirements. In all cases, prices are either lower than, or competitive with standard Dewar designs of other manufacturers.

**BARNES**

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