

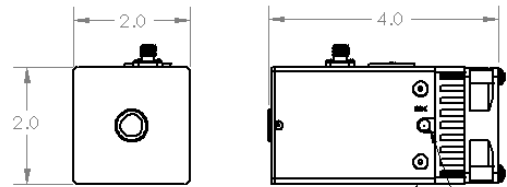


# Amplified ABaT™ Unipolar Barrier Detector

## 4.7-4.9 μm Cutoff Wavelength

Amethyst Barrier Technology, ABaT™, is Amethyst Research's new and disruptive infrared (IR) detector technology which offers low noise and high responsivity with excellent linearity over a broad spectral range in the mid-wave IR region. The advanced unipolar barrier architecture reduces dark current, thereby improving signal-to-noise ratio. The use of III-V compound semiconductor materials leverages mature and stable fabrication processes for superior manufacturability.

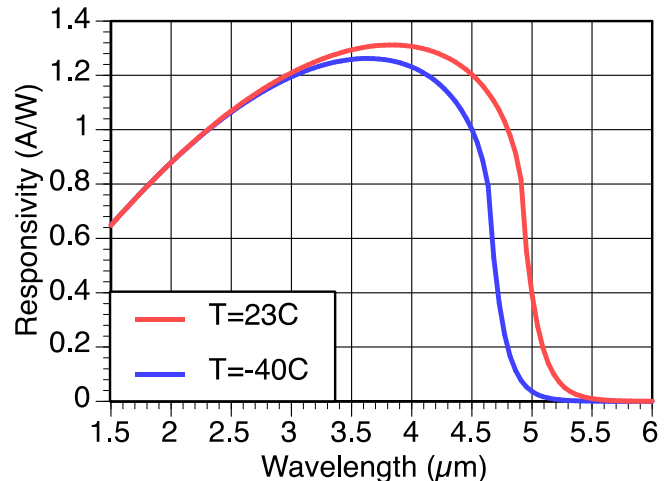
Detectors are available in TO-39 and TO-8 packages with a range of active areas. The operating temperature is optionally controllable by thermoelectric cooling.



1/4-20 TAPPED HOLE (ON THE BOTTOM) M6-TAPPED HOLE

### Specifications

Parameter	Value
Detector element	InAsSb
Detectivity D* (peak) (cmHz <sup>1/2</sup> W <sup>-1</sup> )	2.4 × 10 <sup>9</sup> @ 24°C 1.6 × 10 <sup>10</sup> @ -45°C
Time Constant (μsec)	< 1
Amplifier Gain (V/A)	25,000
Bandwidth (MHz)	1
Active area (mm × mm)	¼ × ¼, ½ × ½, 1 × 1



For large scale orders, we can also provide custom designed detectors. Please contact us for further information.