DH_INSB Dewar-Cooled Photodiode (1-5.5µm) Brochure

Overview

The DH_INSB cryogenically cooled indium antimonide detector offers the best performance to 5.5µm. Housing a 3mm active area indium antimonide photodiode (1-5.5µm), the DH_INSB is operated in the photovoltaic mode. Using an optically chopped input, the signal generated by this detector is best measured in using the 477 trans-impedance pre-amplifiers followed by the 496 DSP lock-in amplifier.

Operation in the cryogenic mode offers ultimate sensitivity and low noise performance. The mounting flange supplied with the DH_INSB is compatible with the entire range of Bentham monochromators and accessories.

Core benefits	Features
✓ Excellent SWIR-MWIR performance ✓ Spectral coverage 1-5.5µm ✓ High responsivity ✓ Low noise	◆ Dewar-cooled, Indium Antimonide detector ◆ 3mm diameter active area ◆ 8-hour Dewar hold time ◆ Operated in AC mode ◆ Compatible with Bentham's entire range of monochromators and accessories ◆ Suitable for free standing applications ◆ Recommended for use with 400 series detection electronics

DH INSB Dewar-Cooled Photodiode (1-5.5µm) Specifications

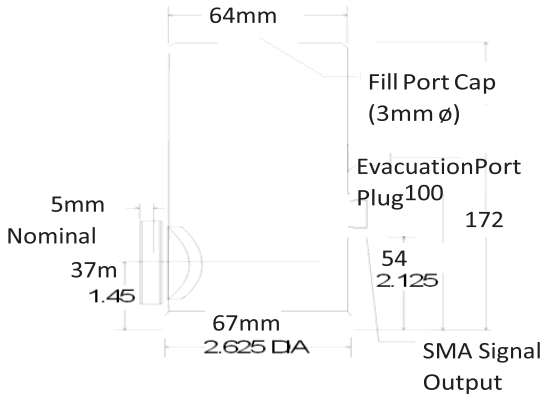
Electro-Optical

Material	Indium antimonide
Active area	3mm diameter
Spectral response range	1-5.5µm
Operating mode	Photovoltaic
Shunt resistance (typ.)	>200kΩ
Peak wavelength (typ.)	3.8µm
NEP	5.3 x 10-13W.Hz-1/2
Field of view	60°

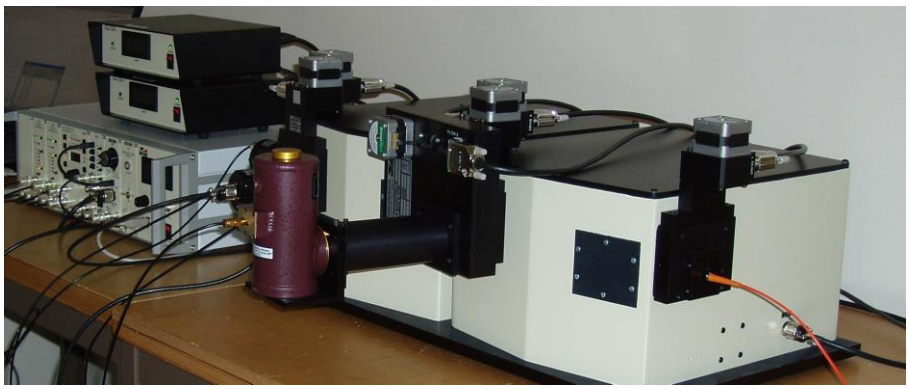
Mechanical

Connector	SMA
Compatibility	Interface plate with 4 x M3 clearance holes (Bentham slit pattern)
Dimensions	64L x 64W x 133H (mm)
Dewar hold time (hours)	> 8 (with liquid Nitrogen)

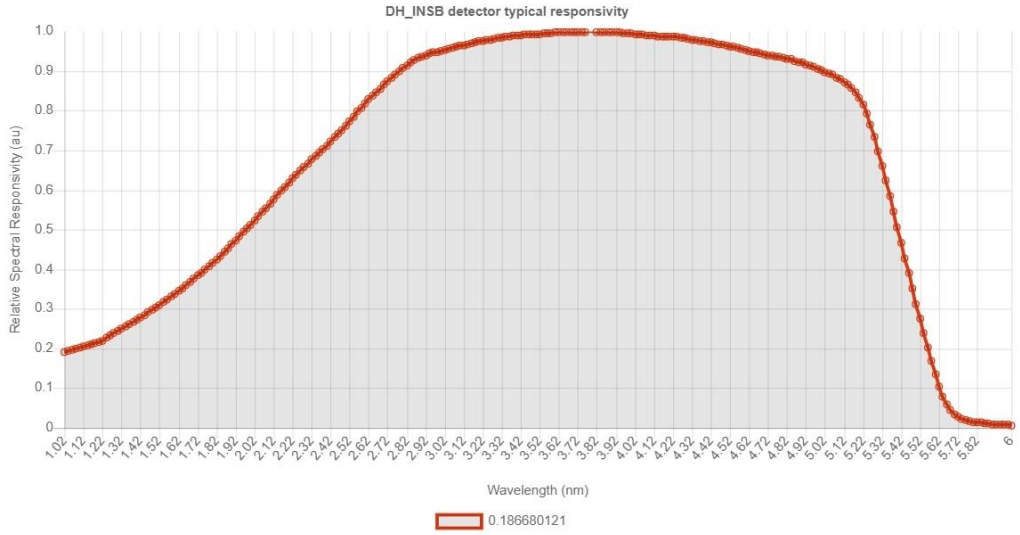
DH-InSb Dimensions (8-hour hold-time Dewar)



Example Application—IR Characterisation of photonic Crystal Fibres



Wavelength vs Relative Spectral Responsivity



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