

## DH\_IGA-EX\_TE Photodiode (900-1900/2550nm)



### Overview

The DH\_IGA-EX\_TE indium gallium arsenide photodiode extends the high responsivity and excellent performance of the DH\_IGA InGaAs further into the infrared to 2500nm. Housing a 3mm diameter active area extended InGaAs photodiode (900-1900/2500nm), the DH\_IGA 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. The mounting flange supplied with the DH\_IGA-EX\_TE is compatible with the entire range of Bentham monochromators and accessories. A quick-change variant is also available. Options include extended variants and a lens solution to maximise coupling from monochromator.

<u>Core benefits</u>	<u>Features</u>
<ul style="list-style-type: none"><li>✓ Takes the excellent performance of InGaAs to longer wavelengths</li><li>✓ Spectral coverage 900-1900/2500nm</li><li>✓ High responsivity</li><li>✓ Excellent linearity</li></ul>	<ul style="list-style-type: none"><li>◆ Housed extended InGaAs photodiode</li><li>◆ 3mm diameter active area</li><li>◆ Operated in AC mode</li><li>◆ Compatible with Bentham's entire range of monochromators and accessories</li><li>◆ Suitable for free standing applications</li><li>◆ Recommended for use with 400 series detection electronics</li></ul>

## DH IGA-EX TE Specifications

### Electro-optical

Material	Indium Gallium Arsenide
Active area	3mm diameter
Spectral response range	800-1700nm (800-1650nm for DH_IGA_3_TE)
Operating mode	Photovoltaic
Dark current (typ.)	<1pA
Shunt resistance (typ.)	5M $\Omega$
Peak wavelength (typ.)	1.57 $\mu$ m
Peak responsivity (typ.)	1.07 A.W-1
NEP	7 x 10-14 W.Hz-1/2
Max. photocurrent	2mA
Max. operating temperature	-20 to +60°C

### Mechanical

Connector	BNC
Compatibility	4 x M3 clearance holes (Bentham slit pattern)
Dimensions	

## Wavelength vs Spectral Responsivity

