DH_PBS_TE Cooled Photodiode (1-3µm) Brochure




Overview

The DH_PBS_TE cooled lead sulphide photodiode offers high responsivity to 3µm and the convenience of thermo-electric cooling.

Housing a 3x3mm active area lead sulphide photodiode, the DH_PBS_TE is operated in the photoconductive mode with the 215-voltage supply whilst temperature control is ensured by the CPS1M. 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.

Core benefits	Features
✓ Extends beyond the range of InGaAs detectors ✓ Convenience of thermo-electric cooling ✓ Spectral coverage 1-3µm	◆ Houses lead selenide photodiode ◆ 3x3mm diameter active area ◆ 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

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DH_PBS_TE Cooled Photodiode (1-3μm) Specifications

Electro-optical

Material	Lead Sulphide
Active area	3x3 mm
Spectral response range	1000-3000nm
Operating mode	Photoconductive
Shunt resistance (typ.)	0.7MΩ
Peak wavelength (typ.)	2600nm
Peak responsivity (typ.)	2 x 105 V.W-1
NEP	<1 x 10-14 W.H-1/2
Maximum cooler current	1.25A
Recommended chopping frequency	175/ 225 Hz
Operating temperature	-10°C
Max. operating Temperature	-20 to +60°C

Mechanical

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

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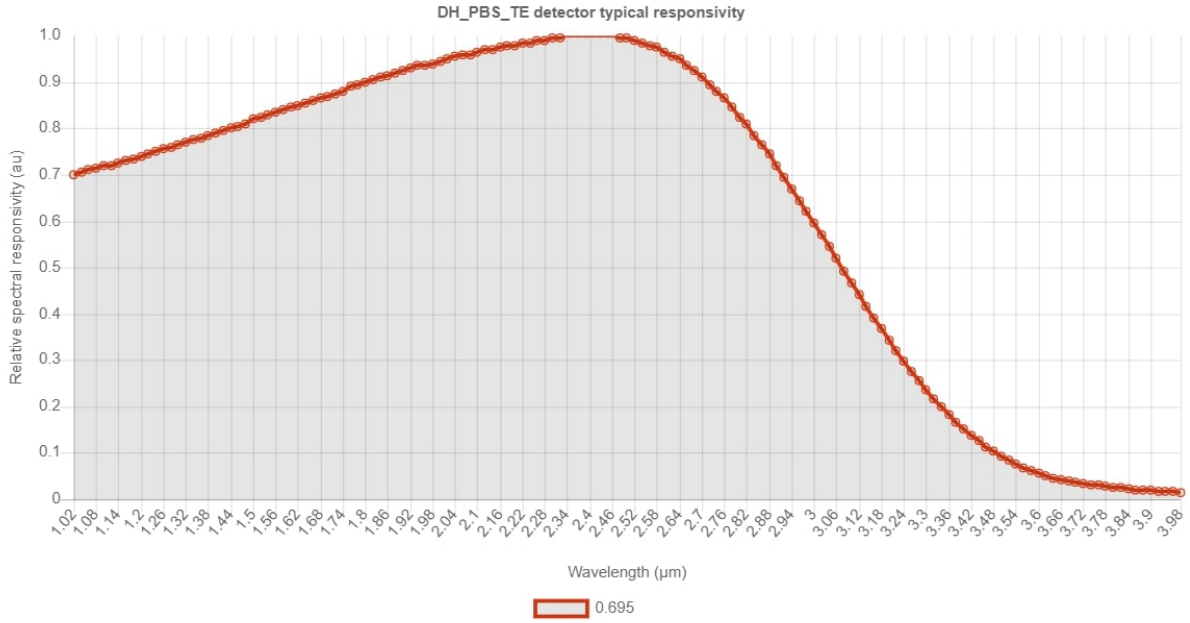
Configuration Options

DH_PBS_TE	Thermo-electrically cooled lead sulphide photodiode
DH_PBS_TE_QC	Thermo-electrically cooled lead sulphide photodiode, quick change interface

Wavelength vs Relative Spectral Responsivity



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