

Si-CAL
Spectral Responsivity Standard 200-1100nm

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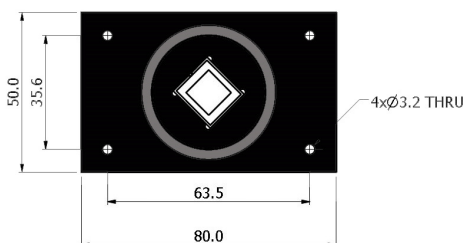
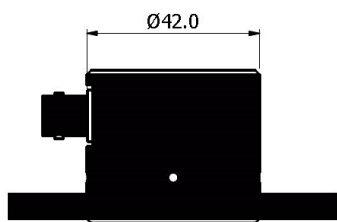
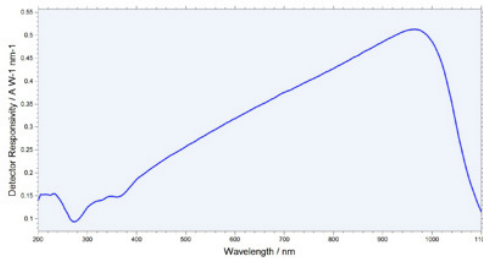
The Si-CAL is a silicon photodiode spectral responsivity standard, supplied with an NMI traceable calibration.

The Si-CAL houses a 10x 10mm active area silicon photodiode, which may either be mounted to the exit slit of any Bentham monochromator or spectroradiometer, or used free-standing.

The calibration of this device was performed under short circuit

conditions. Generated photocurrent should be measured with a trans-impedance amplifier such the Bentham 487 or 477, or a transformer, such as the Bentham 474.

The spectral responsivity calibration is performed with respect to the Physikalisch-Technische Bundesanstalt (PTB), providing traceability to a National Measurement Institute (NMI). Direct PTB calibration can be provided.



Mechanical	
Material	Silicon
Active area	10 x 10mm
Window Material	Quartz
Max. Operating Temperature	-20 to +60°C
Connector	BNC
Compatibility	Four M3 clearance holes (Bentham slit pattern)
Dimensions, LxWxH	80 x 50 x 42 mm
Electro-optical	
Spectral response range	200-1100nm
Operating mode	Photovoltaic
Dark Current (typ.)	<1pA
Shunt Resistance (typ.)	0.2GΩ
Peak Wavelength (typ.)	960nm
Peak Responsivity (typ.)	0.52 A.W ⁻¹
NEP	1.8 x 10 ⁻¹⁴ W.Hz ^{-1/2}
Temperature dependence of responsivity	Up to 1%/ °C (λ > 950nm)
Maximum photocurrent	2mA
Calibration	
Measurement Type	Short-circuit spectral responsivity
Wavelength Range	200-1100nm
Wavelength Interval	5nm
Temperature at Calibration	20°C
Traceability	Physicalish Technische Bundesanstalt (PTB, Germany)
Recommended Calibration Frequency	Three year recommended
Options	
Calibration Ranges	UV Extension 200-300nm