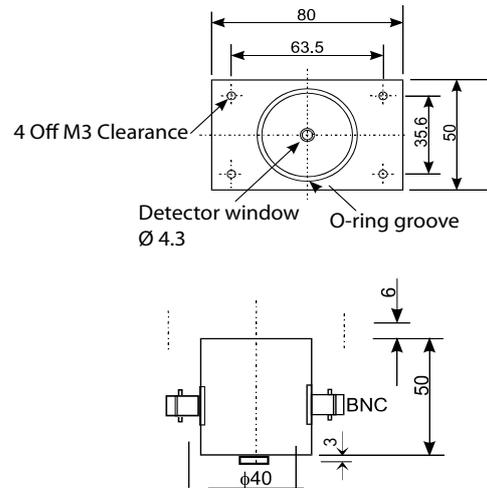


# B-DH-PbS-Te lead sulphide detector head and B-DH-PbSe-Te lead selenide detector head



The B-DH-PbS-Te and B-DH-PbSe-Te are large area (3 x 3 mm) thermo-electrically cooled detectors. They are particularly suitable for accurate spectroradiometry and general spectrometry applications over the 1  $\mu\text{m}$  to 5  $\mu\text{m}$  range.

These devices require a.c. coupled detection electronics, typically comprising optical chopper and lock-in such as the Bentham 218 and 225, and a bias power supply such as the 215.

Sandwich detectors or 'two-colour detectors' are also available. An infrared transmitting silicon detector is mounted in front of either a PbS or PbSe detector extending the wavelength covered by a single package down to less than 250 nm.

B-DH-PbS-Te/B-DH-PbSe-Te dimensions (mm)

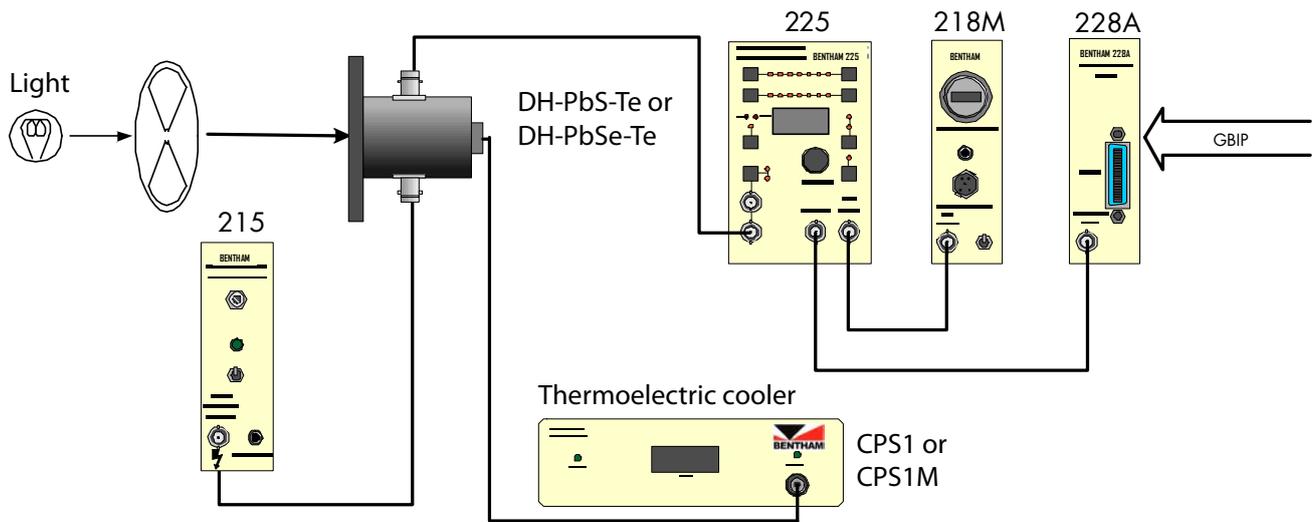
Specifications								
Detector type	Wavelength peak $\lambda_p$ ( $\mu\text{m}$ )	$D^*$ ( $\lambda_p, 750, 1$ ) ( $\text{cmHz}^{1/2}\text{W}^{-1}$ )	Blackbody $D^*$ (500 K, 750, 1) ( $\text{cmHz}^{1/2}\text{W}^{-1}$ )	Responsivity @ $\lambda_p$ (V/W)	Resistance ( $\text{M}\Omega$ )	Time constant ( $\mu\text{sec}$ )	Operating temperature (K)	Recommended range
B-DH-PbS-Te	2.7	$\geq 3.00\text{E}11$	$\geq 1.8\text{E}9$	$\geq 3.0\text{E}4$	2-25	2500-3500	208	1 $\mu\text{m}$ -2.8 $\mu\text{m}$
B-DH-PbSe-Te	4.3-4.5	$\geq 7.0\text{E}9$	$\geq 9.3\text{E}8$	$\geq 4000$	0.2-5.0	3-10	253	1 $\mu\text{m}$ -5 $\mu\text{m}$

Both units require B-CPS1 or B-CPS1M cooler controller



B-CPS1 cooler controller

# B-DH-PbS-Te lead sulphide detector head and B-DH-PbSe-Te lead selenide detector head



Typical detection electronics configuration for B-DH-PbS-Te/B-DH-PbSe-Te

Ordering information	
B-DH-PbS-Te	Lead sulphide device in standard cooled housing
B-DH-PbSe-Te	Lead selenide device in standard cooled housing
B-DH-Si/PbS-Te *	Silicon/lead sulphide sandwich device in standard cooled housing
B-CPS1	Free-standing cooler controller for B-DH-x-Te detectors
B-CPS1M	Modular cooler controller for use in 217-bin
* Other sandwich detector combinations available on request	