

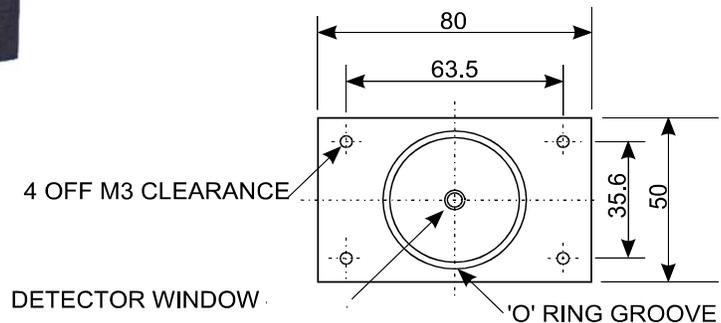
## DH-PbS-Te Lead Sulphide Detector Head and DH-PbSe-Te Lead Selenide Detector Head



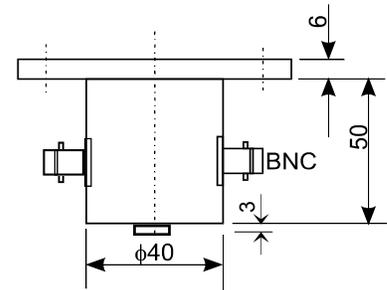
The DH-PbS-Te and DH-PbSe-Te are large area (3 x 3mm) thermo-electrically cooled detectors. They are particularly suitable for accurate spectroradiometry and general spectrometry applications over the 1 $\mu$ m to 5 $\mu$ m range.

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 250nm.



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



### Specifications

Detector Type	Wavelength Peak $\lambda_p$ ( $\mu$ m)	D* ( $\lambda_p, 750, 1$ ) ( $\text{cmHz}^{-1/2}\text{W}^{-1}$ )	Blackbody D* (500K, 750, 1) ( $\text{cmHz}^{-1/2}\text{W}^{-1}$ )	Responsivity @ $\lambda_p$ (V/W)	Resistance (M $\Omega$ )	Time Constant ( $\mu$ sec)	Operating Temperature (K)	Recommended range
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 $\mu$ m-2.8 $\mu$ m
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 $\mu$ m-5 $\mu$ m

Both units require CPS1 or CPS1M cooler controller

# DH-PbS-Te and DH-PbSe-Te

## Ordering Information

DH-PbS-Te	Lead sulphide device in standard cooled housing
DH-PbSe-Te	Lead selenide device in standard cooled housing
DH-Si/PbS-Te *	Silicon/Lead sulphide sandwich device in standard cooled housing
CPS1	Free-standing cooler controller for DH-x-Te detectors
CPS1M	Modular cooler controller for use in 217-bin

\* Other sandwich detector combinations available on request

### CPS1 controller



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

