

## DH-3 Multi-Alkali Photomultiplier Detector (200-850nm) Brochure



For low light-level applications, such as the measurement of spectral irradiance, the photomultiplier is an indispensable spectroradiometer component. The DH-3 photomultiplier, consisting of a housed end-window multi alkali (S20 photocathode) is the detector of choice for such measurements over the UV-Visible region.

The DH-3 is supplied with interface plate for mounting to the entrance port of any Bentham monochromator. The housing also contains a PCB-based dynode chain for reliable operation and exceptional linearity. The tube is surrounded by a metal shield to mitigate the effect of external magnetic fields on the performance of the device.

The high voltage required to operate the device is derived from the Bentham 415 high voltage supply. The photocathode is maintained at negative high voltage such that the anode be a ground potential for adaption to any transimpedance current amplifier, such as the Bentham 487.

### Core benefits

- ✓ Detector of choice in the UV-vis
- ✓ High sensitivity and excellent linearity
- ✓ Spectral coverage 200-850nm
- ✓ Low noise

### Features

- ◆ Housed photomultiplier tube featuring mu-metal shield and PCB dynode chain
- ◆ Operated in either the DC or AC regimes
- ◆ Compatible with Bentham's entire range of monochromators and accessories
- ◆ Recommended for use with 400 series detection electronics

## DH-3 Specifications

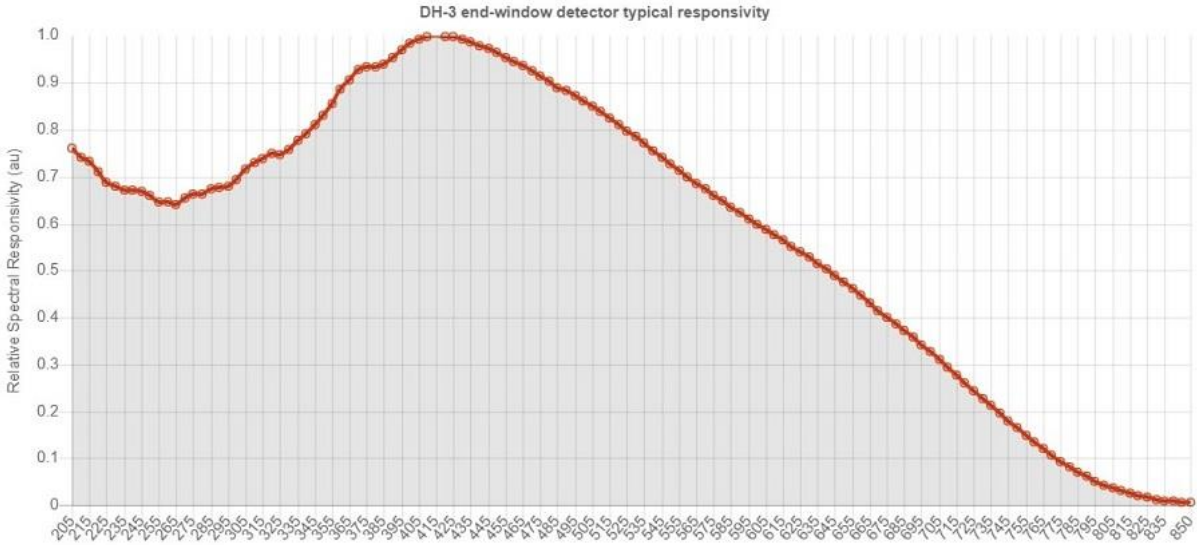
### Electro-optical

Type	End Window PMT housing
Photocathode	S20
Active area	20mm diameter
Window material	Fused silica
Number dynodes	10
Dynode chain resistance	Linear: 750 kΩ Pulse Counting: 3.92 MΩ
Operating mode	Photoemission
Spectral response range	200-850nm
Peak wavelength (typ.)	420 nm
Dark current (typ.)	500pA at 750V
NEP	$1 \times 10^{-16} \text{ W} \cdot \text{Hz}^{-1/2}$
Max. high voltage	1500V DC
Max. anode current	100μA
Max. operating Temperature	-80 to +50°C

### Mechanical

Connector	BNC/HV-BNC
Compatibility	Supplied with an interface plate, 4 x M3 clearance holes (Bentham slit pattern)
Dimensions	

# Wavelength vs Relative Spectral Responsivity



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