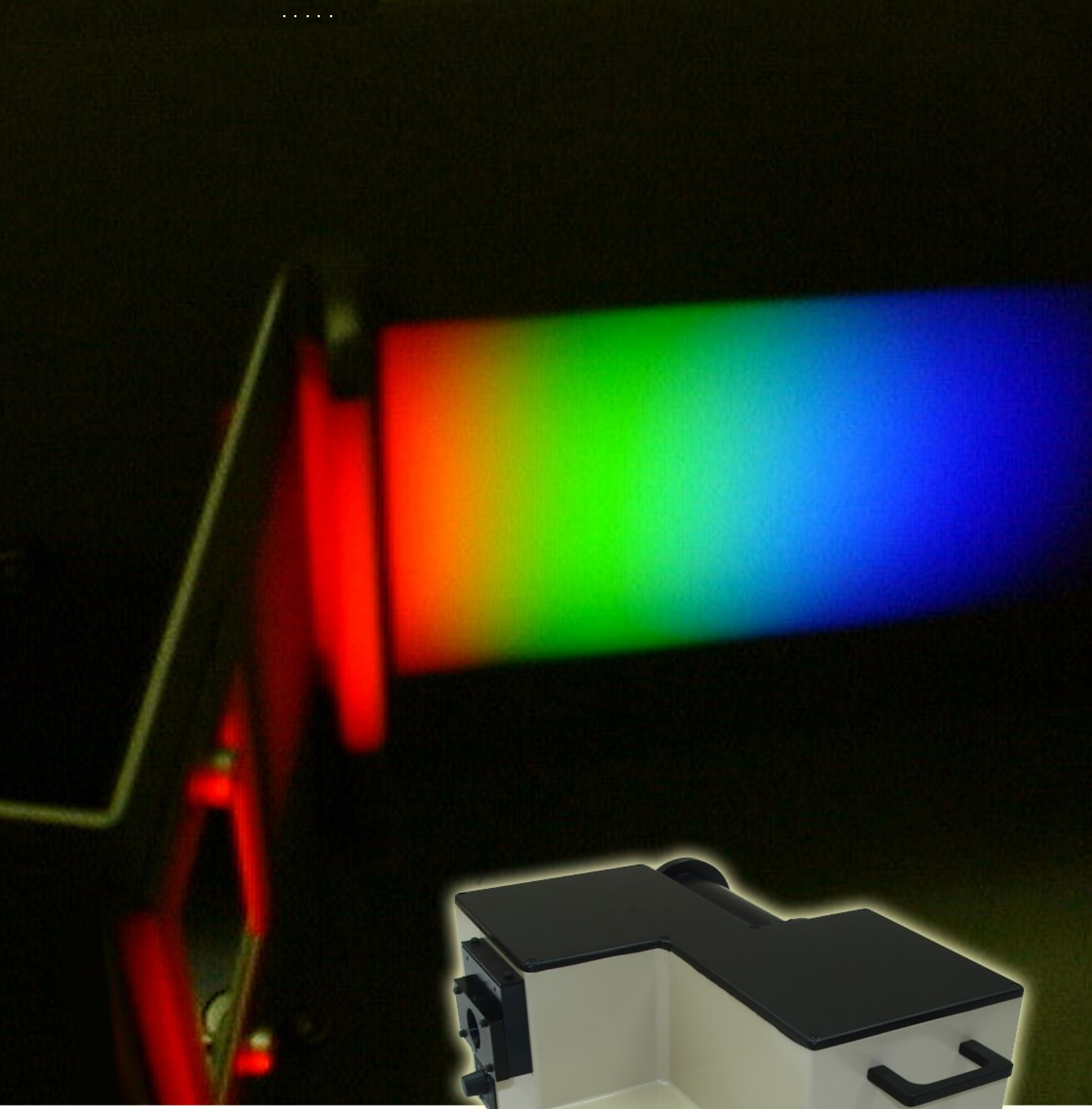


BENTHAM

DMc150
Double Monochromator

DMc150 Compact Double Monochromator

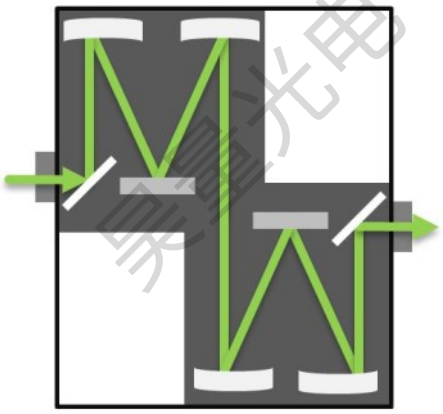
Designed for use in applications in which scattered light must be kept to a minimum, the highly successful DMc150 double monochromator provides excellent optical performance in a small footprint.

Compatible with the full range of sources, detectors and accessories of the Bentham portfolio, the DMc150 monochromator is at the heart of many of our light measurement solutions particularly in the UV, visible and NIR, notably used in the measurement of UV sources, solar irradiance, solar simulators and in the verification of NVIS compatibility.

Key features:

- Double monochromator composed of two 150mm focal length monochromators in Czerny -Turner configuration arranged for additive dispersion
- Accommodates single pair of kinematically mounted diffraction gratings
- Up to two entrance and/or exit ports with automated mirror-based port selection for use of multiple input/ output/ detector configurations
- Fully automated through USB 2.0 interface

Configuration (typical)



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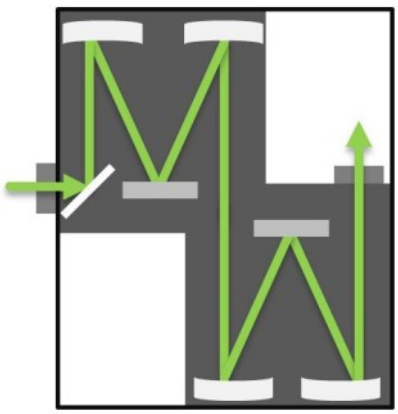

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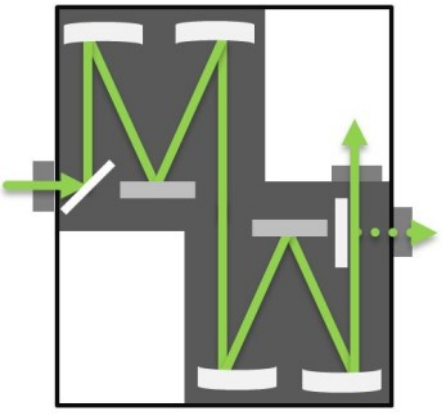


D
fitted with exit SAM

Specification

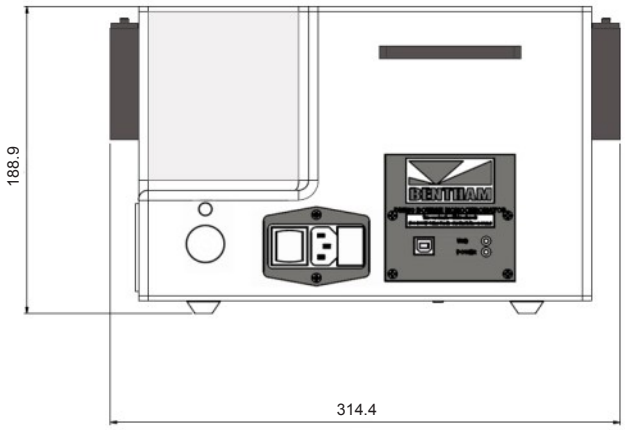
Optical Layout	
Configuration	Pair symmetrical Czerny Turner monochromators arranged for additive dispersion
Focal length	Total focal length: 300mm Individual Units: 150mm
Grating mount	Kinematic mount
Number of gratings	1 pair see separate Diffraction Gratings datasheet for full range)
Grating size	33x 33mm
Aperture ratio	f/4 (at all grating angles)
Number of entrance/exit ports	1/2 or 2/1
Opto-Mechanical	
Mechanical resolution drive	0.000072°/step
Slit type	Fixed, micrometer or motorised variable
Slit width & height	10µm-8mm (W) x 20mm (H)
Filter size	25mm diameter
Optical Performance (quoted for 1200 g/mm gratings)	
Spectral range	Within range 200nm-2500nm
Linear dispersion	2.7nm/mm
Wavelength accuracy	± 0.3nm, ± 0.05nm with software correction
Wavelength reproducibility	± 0.05nm
Resolution full/reduced slit height	0.5/0.1nm
Stray light rejection at 2.5 FWHM	10^{-8}
Wavelength acquisition speed	30nm/s
Automation	
Computer interface	USB
Software Control	BenWin+/SDK
Electrical/ Mechanical	
Overall dimensions	314w x 440d x 188.9h mm
Optical height	128.9mm
Construction	Single machined casting
Weight	12 kg
Power supply	Mains input 110/220V 50/60Hz

Options

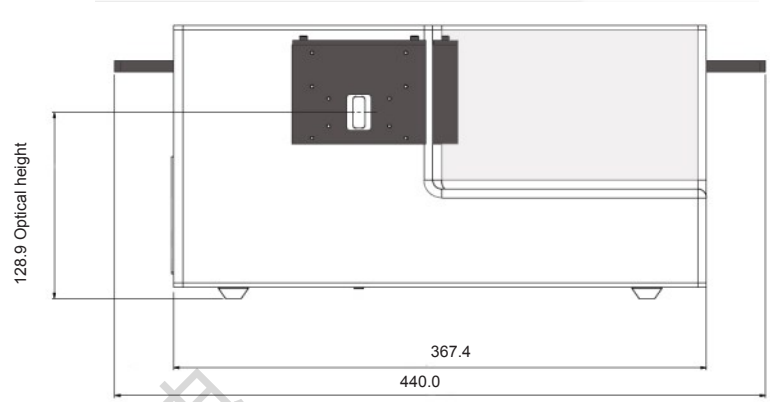
Diffraction gratings	See separate Diffraction Gratings datasheet
Order sorting filters	See separate Order Sorting Filters datasheet
Filter wheel	252-8 (8-position filter wheel, includes shutter)

DMc150
Dimensions (mm)

Front view



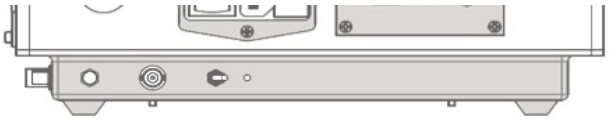
Side view



IDR150 Detection Electronics

Portable spectroradiometer solution

The IDR150 features the DMC150's best-in-class optical performance within a small footprint, however benefits from the inclusion of integrated detection electronics, built into a deep baseplate fitted to the monochromator:



Specification	
Amplifier	Dual input transimpedance
Gain ranges	10^5-10^{10} V/A
ADC	4 $^1/_2$ digit BCD (0-19999) i.e. >14 bit resolution
HV power supply	-350V to -1500V, 1.5mA max
Monochromator overall height	216.7 mm
Optical height	150.7 mm

Contact Us

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