

Headwall's miniature spectrographs are prealigned optical systems that easily integrate into OEM products to reduce development costs and time-to-market. They are available in single- and dual-beam versions for wavelength management and spectroscopic measurement

The MD5 dual-beam spectrograph offers superior, cost-effective performance with high-throughput (f/2) and low stray light (<math>10^{-3}</math>) combined with rugged construction and precisely machined parts that require no mechanical or optical adjustment. The MD5 miniature dual-beam spectrograph disperses sample and reference spectra onto a single 0.5" photodiode array, saving costs on electronics and detectors and providing a real-time reference channel to monitor source/lamp drift. The core technology is Headwall's aberration-corrected diffractive grating, which provides exceptionally low stray light, outstanding spectral and spatial resolution, and easy adjustment of wavelength and focus. Many standard and custom grating designs and configurations are available to meet a wide range of application requirements.

Headwall's MS10-HR single-beam and MD10 dual-beam optical modules are also based on aberration-corrected diffractive optics for high resolution, low stray light, high throughput, and excellent spatial imaging. They are cost-effective, versatile and easily customized for use with a variety of CCD or PDA detectors. As with the MD5, these spectrographs also offer easy adjustment of wavelength and focus and accept both standard and fiber optic input.



MD5

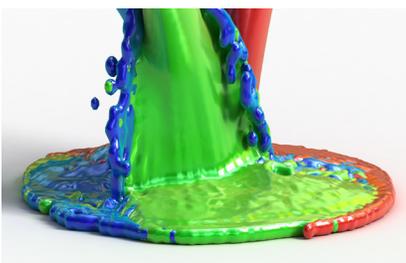


MS10-HR



MD10

Use Headwall's miniature spectrographs for....



Raman Spectroscopy



Color Measurement



Medical Diagnostics

Specifications	MS10-HR	MD10
Aperture	f/2.5	f/3.0
Resolution	< 1 nm (depending on grating and detector)	5 nm with 75 µm slit
Stray Light	< 10 <sup>-4</sup>	10 <sup>-3</sup>
Dispersion Length	Accommodates detectors up to 25.6 mm in length (depending on grating selected)	
Fiber Optic Adapters	SMA or Ferrule	Ferrule
Length in inches (mm)	5.0 (127mm)	5.31 (135mm)
Width in inches (mm)	3.0 (76.2mm)	3.23 (82mm)
Height in inches (mm)	2 (50.8mm)	2 (50.8mm)
Weight in ounces (g)	16 (454 g)	
Body Material	Anodized Aluminum	



MS10-HR



MD10

MS10-HR Available Slits	
Width (µm)	Height (mm)
25	5
50	
100	
150	
250	
500	
1000	

MD10 Available Slits	
Width (µm)	Height (mm)
25	5
50	
100	
150	
250	
500	
1000	

### MD5 Spectral Range & Resolution

Model Number	Wavelength Range	Spectral Resolution
MD5-UV	190-350 nm	3 nm
MD5-CL Clinical	340-630 nm	8-10 nm
MD5-CO Color	390-720 nm	8-10 nm
MD5-NIR	600-1100 nm	15 nm



MD5

MD5 Available Slits	
Width (µm)	Height (mm)
50	1.0
50	2.5
100	1.0
100	2.5
150	2.5

MD5 Dimensions	
Length	70 mm
Diameter	42 mm
Weight in ounces (g)	5 (142 g)
Body Material	Electroless Nickel-Plated Aluminum

**About Headwall Photonics:** Headwall is the leading designer and manufacturer of imaging spectrometers and spectral instrumentation for industrial, commercial, and government markets. Headwall's high performance spectrometers, spectral engines, and holographic diffraction gratings have been selected by OEM and end-user customers around the world for use in critical application environments. As a pioneer in advanced, patented optics technology, Headwall enjoys a market-leading position through the design and manufacture of spectral instrumentation that is customized for application-specific performance.

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