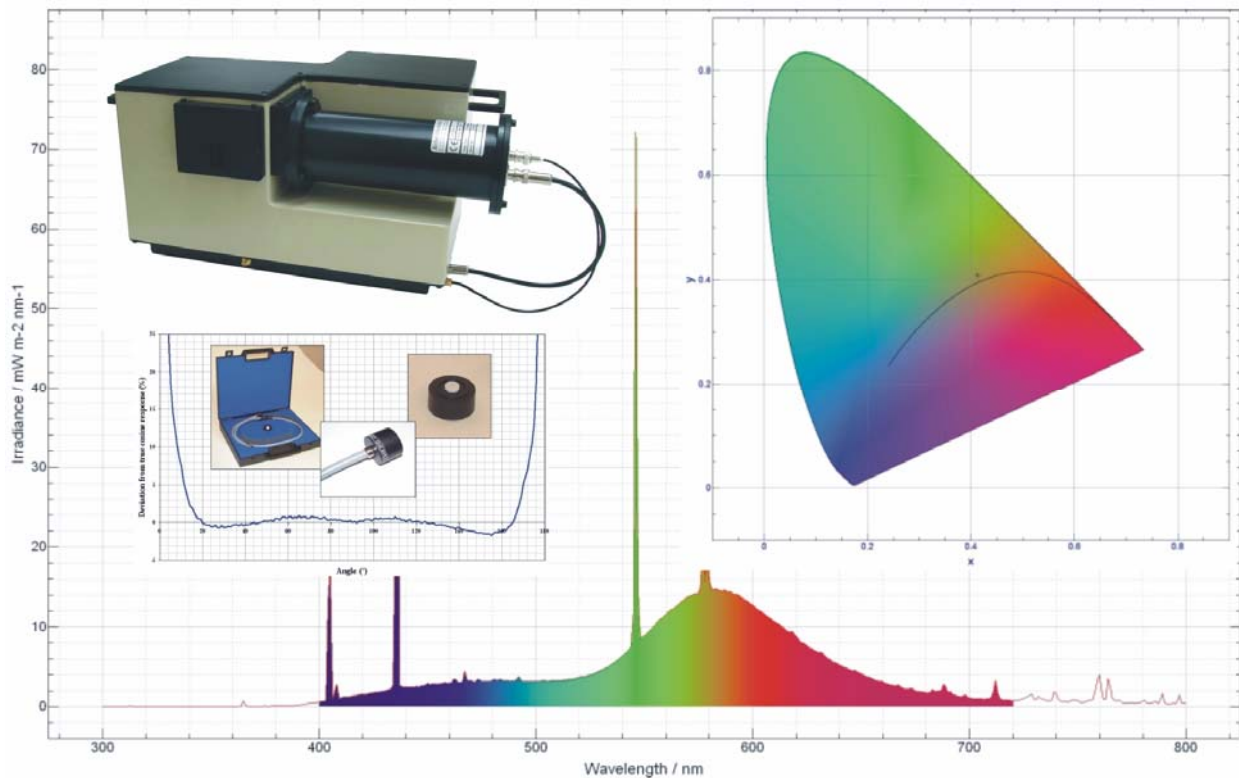


- Calibration of instruments for radiation measurements
- Measurement of radiation from UV to IR
- Software for special requirements

The Austrian  
Calibration Measurement Software Company

## THE NEXT GENERATION COMPACT & PORTABLE DOUBLE MONOCHROMATOR



**Precision** is  
our **business**

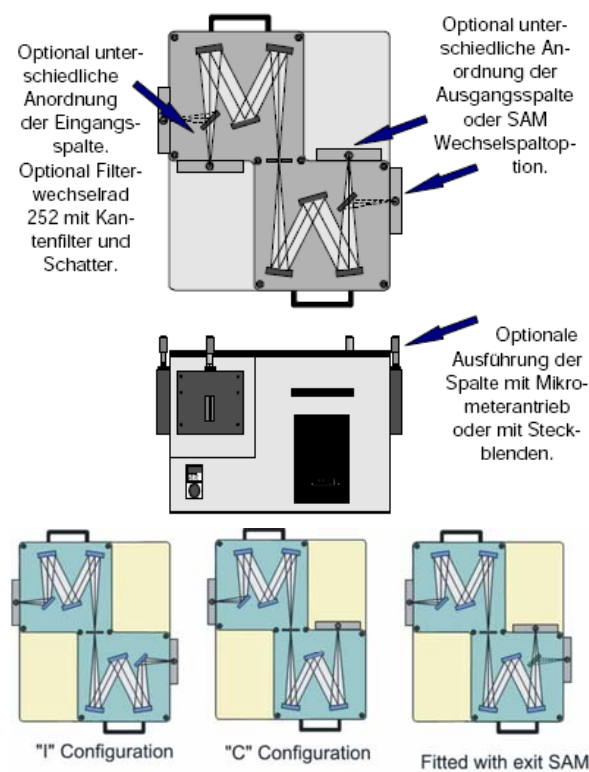
**CMS ING. DR. SCHREDER GmbH**  
Eggerstrasse 8, A-6322 Kirchbichl  
Tel: 0043 / (0)5332 / 77056  
Fax: 0043 / (0)5332 / 76692  
E-Mail: [info@schreder-cms.com](mailto:info@schreder-cms.com)  
Web: [www.schreder-cms.com](http://www.schreder-cms.com)

# DMc150, The Compact Double Monochromator

Compared to single monochromators, the main advantage of double monochromators is a highly reduced stray light level. The requirements for optical, mechanical and thermal stability are much more stringent accordingly, especially for portable devices. The use of a Czerny-Turner design within a solid aluminium casting allows a very compact and robust arrangement. The drive electronics for stepper motor, optional filter wheel and flip mirror for slit change is situated in the drive plane and can be programmed via USB interface from a computer. These advantages make the DMc150 an ideal module for any mobile spectrometer system.

Special features:

- Compact design
- High reliability
- Good efficiency
- Very low stray light
- High wavelength accuracy
- 200 nm – 30.000 nm
- UV, UV/VIS optimised system
- Up to 2 entrance exits
- Slit adjustable
- Entrance optics with highest quality
- High sensitive detectors



Technical Data	
Configuration:	Symmetric Czerny-Turner, coupled sine drive.
Focal length	300mm
Aperture	f / 4
Slits	width 0,05 - 8mm, Height 20mm.
Gratings	Two plane diffraction gratings, 34mmx34mm, available gratings.
Grating drive	Stepping motor. integrated control. IEEE488 / USB interface
Dispersion	2,7 nm/mm (1.200 L/mm)
Wavelength range	200nm to 27µm (dependent on grating)
Wavelength accuracy	± 0,15 nm absolute (2400 L/mm grating) <math>\pm 0,05 \text{ nm}</math> with software correction.
Resolution	0,25 nm (2.400 L/mm grating)
Stray light	<math><10^{-8}</math>
Max. Scan speed	30 nm/sec
Interface	USB, IEEE
Options	Filter wheel 252
	Order sorting filter OS
	slit – fix, variable, motorised
Entrance optics	I, C, second exit
Entrance optics	Diffuser ( $f_2 < 2\%$ )
	Integrating spheres (2 cm – 180 cm) Telescope
Light guide	Quartz, glass, mixed Monofiber Mixed fibre bundle up to 20 Meter Cross section converter
Software	All features for radiometry and spectroscopy, CIE colour diagram. Multiple spectra in 1 diagram. Direct export to MS Excel. Compatible to Windows 2000, XP, Vista
Dimension	300 mm x 400 mm 180 mm
Weight	12 kg
Power Supply	110/220 V 50/60 Hz

Ordering information	
<b>DMc150V</b>	Double monochromator, variable slits, 2-channel-stepping motor drive unit, power-supply and IEEE488 / USB interface.
<b>DMc150F</b>	Double monochromator, 3 fixed slit pairs FS, 2-channel-stepping motor drive unit, power-supply and IEEE488 / USB interface.
<b>-U</b>	Option USB interface
<b>-MDE150</b>	Option MDE150, Double monochromator with internal detection electronic.
<b>-UV</b>	Option Double monochromator optimised for UV measurements. 200-600nm. Sun bed testing, Health & safety.
<b>-UV/VIS</b>	Option Double monochromator optimised for UV/VIS measurements. 200-800nm Sun bed testing, solar simulator, Photometry, Photo biological Safety of Lamps CIE S 009