

Digikröm CM110

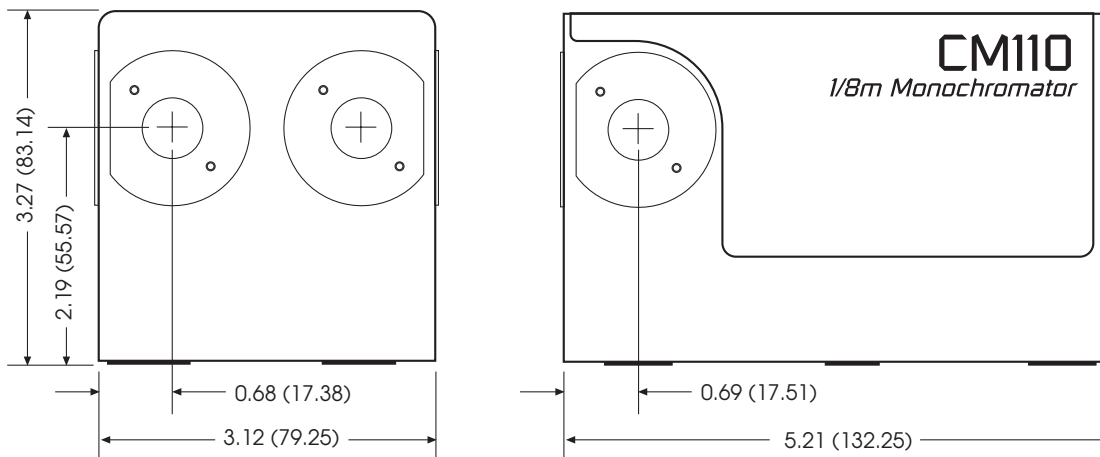
Compact 1/8 Meter Computer-Controlled Monochromator/Spectrograph

- *Compact size - Only*
5 1/4" x 3 1/4" x 3 1/4"
- *Connects to any computer via standard RS232 interface.*
- *Double grating turret allows for a broad spectral range coverage.*
- *May be factory configured as a monochromator or a spectrograph.*
- *Yields average efficiency TRIPLE that of a concave holographic grating monochromator/spectrograph.*
- *Scans in both directions and in nanometers, Ångstroms, microns, wave-numbers, or eV.*
- *Change slits on the fly.*
- *Monochromator may be factory configured for right angle or straight through beam path.*
- *Suitable for fluorescence, radiometry, process control, colorimetry, tunable filtering, Raman spectroscopy, among others.*



The Leader: Price, Performance, Versatility

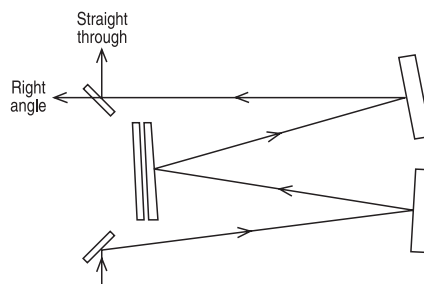
Single piece base construction, direct grating drive, and anti-backlash gearing ensure this unit is rugged and stable enough for demanding applications. Loaded with SP Optics and able to hold two high quality gratings, the CM110 is ideal for spectrometry in the UV to IR spectrums. Each instrument is calibrated and certified prior to delivery and comes with easy-to-use software.



Dimensions - inches (millimeters)

Front View

Side View



Optical Path

Specifications:

Design: Czerny-Turner, dual-grating turrets

Focal Length: 110mm

f/#: 3.9

Beam Path: Straight Through standard,
Right Angle provided on request.

Wavelength Drive: Worm and wheel with microprocessor control and anti-backlash gearing. Bi-directional. Usable in positive or negative grating orders.

Wavelength Precision: 0.2nm

Wavelength Accuracy: $\pm 0.6\text{nm}$ over grating
30% range

Slewing Speed: > 100nm/second

Stray Light: $< 10^{-5}$

Slits: Standard Set includes;
0.125mm, 0.15mm, 0.30mm, 0.6mm,
1.2mm and 2.4mm x 4.0mm.

For other sizes, consult SP.

Max Resolution: $< 1\text{nm}$ w/1200G/mm grating
and standard slits

Gratings: One to two gratings (30 x 30mm) must be purchased. See Appendix A for options.

Software: Demonstration control program and LabView driver included.

Power: UL listed 110/220V power pack

Interface: RS232 standard (DK12AT)

Warranty: One year

Options:

- Hand-held control module with function keys and display for local control
- IEEE-488 interface
- Gold optics

See options and accessories

Ordering Information: Please indicate product number plus description when ordering.

CM110 Dual Grating Turret,
1/8 meter Monochromator

CMSP110 Dual Grating Turret,
1/8 meter Spectrograph

Standard Ruled Gratings

for installation in Digikröm™ CM110/CM112 Monochromators/Spectrographs

Standard Ruled Gratings Size = 30 x 30 mm

SP Part #	Ruling (g/mm)	Peak (nm)	Range (nm) @ > 30% T	Peak %T
AG2400-00240-303	2400	240	180 - 680	70
AG1200-00200-303	1200	200	180 - 450	65
AG1200-00300-303	1200	300	200 - 750	72
AG1200-00500-303	1200	500	330-1500	82
AG1200-00600-303	1200	600	400 - 1500	80
AG1200-00750-303	1200	750	480 - 1500	85
AG0600-00500-303	600	500	350 - 1300	80
AG0600-01250-303	600	1250	800 - 3000	85
AG0300-00500-303	300	500	310 - 1100	80
AG0300-02500-303	300	2500	1500 - 6000	88
AG0150-00500-303	150	500	320 - 980	72
AG0150-04000-303	150	4000	2500 - 9000	93
AG0075-01700-303	75	1700	1200-2250	85
AG0075-08000-303	75	8000	5000 - 15000	82
AG0045-01750-303	45	1750	1200-2500	77

[See Appendix A for grating efficiency curves](#)

NOTE: Ruled gratings blazed at different wavelengths and Holographic gratings are available on request - call for prices and availability. Response curves also available upon request.

AG-303-KIT

Backplate mounting kit, required for user installation of CM gratings.

CM series Options and Accessories

DK1200

Hand-held control module, 2 line x 20 character LCD display. Allows local operation of CM110/112 monochromators and CMSP110/112 spectrographs.

CMGPIB

IEEE-488/GPIB option for parallel interface operation of CM110/112 monochromators and AB300 Series automatic filter wheels.

CMGPIB- 220V (220Vac input)

IEEE-488/GPIB option for parallel interface operation of CM110/112 monochromators and AB300 Series automatic filter wheels.

CMSP-TO-CM

Attachment to allow CMSP Spectrograph to operate as a monochromator.

AB200

Single filter carrier that mounts directly between CM unit and accessories.

IR110

For use with CM110. Infrared (gold) coatings on CM110 mirrors. Enhances transmission by up to 40% between 600 and 1100 nm. *Not suitable for work below 600nm.*

IR110SP

Same as above, for use with CMSP110.

IR112

For use with CM 112. Infrared (gold) coatings on CM112 mirrors. Enhances transmission by up to 80% between 600 and 1100 nm.

IR112SP

Same as above, for use with CMSP112.

DK12AT

RS232 Cable for AT style computer

DK12PS

RS232 Cable for PS2 style computer

DK12MA

RS232 Cable for MAC style computer

Special Slit Sizes

- DKFS010 Pair, 10µm slits
- DKFS020 Pair, 20µm slits
- DKFS025 Pair, 25µm slits
- DKFS050 Pair, 50µm slits



DK1200 controller