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Find the *Spectral Products / CVI DK240* at our website: *Click HERE*

Digikröm DK240

1/4 Meter Computer-Controlled Monochromator/Spectrograph

- *Connects to any computer via RS232 or IEEE-488.*
- *Motorized slits.*
- *Triple-grating turret allows high efficiency scanning across a broad spectral range.*
- *May be factory configured as a monochromator or spectrograph.*
- *Scans in both directions and with Constant Spectral Resolution (CSR).*
- *Integrates with SP filter wheel for automatic filter switching.*
- *Suitable for fluorescence and absorption studies, detector characterization, thin film measurements, etc.*



The Workhorse: Direct Digital Drive/Constant Spectral Resolution

The Digikrom DK240 is a complete computer integrated solution. Easy to use commands control the triple grating turret, motorized slits, and optional motorized filter wheel for quick and easy sorting. Instrument mode can be set for constant spectral resolution (CSR), where the slit width is automatically modified to compensate in the change in dispersion with wavelength to maintain constant spectral bandpass.

Rugged cast construction, A-thermal design, and SP direct grating drive make this unit the most repeatable and reliable in its class. Each instrument is calibrated and certified prior to delivery.

For DK240 models, for a ful list of gratings see Appendix A

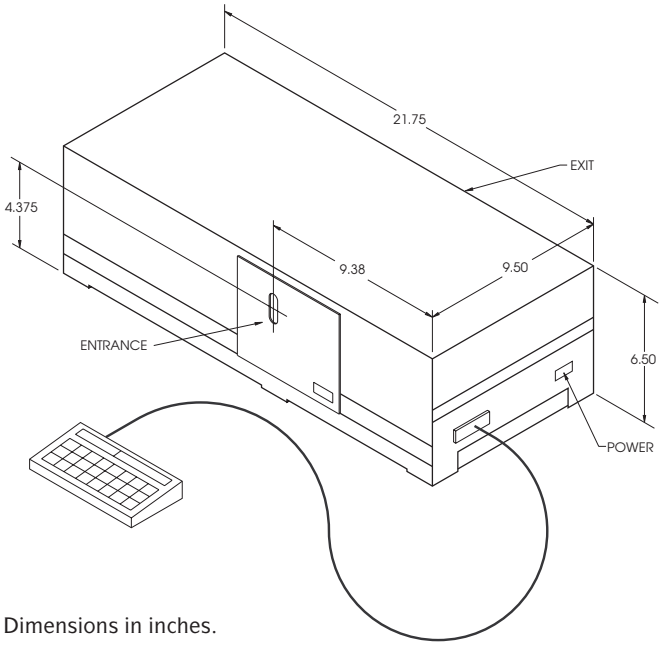
Grating groove/mm	Wavelength (nm)	Dispersion nm/mm	Resolution* (nm)/slit 0.01mm	0.125mm
1200	200	3.5	0.1	0.5
	800	3.3	0.1	0.4
	1500	1.9	< 0.1	0.2
600	200	6.9	0.2	0.9
	1500	6.6	0.2	0.9
	3000	3.8	0.1	0.5
150	200	27.5	0.8	4
	5000	27.1	0.7	4
	10000	21.2	0.6	3

* approximately equivalent to bandpass

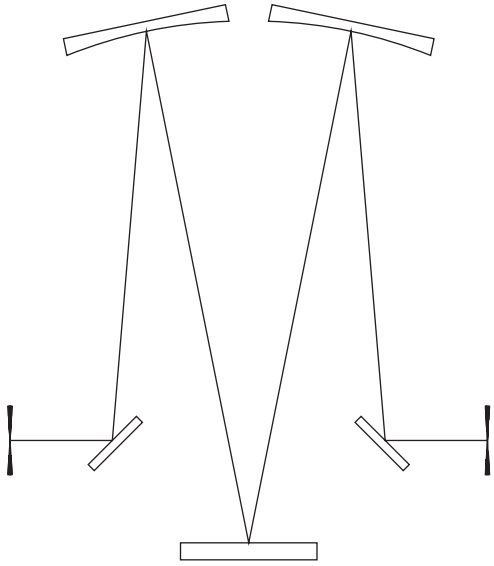
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Dimensions in inches.



Optical Path

Specifications:

Design: Czerny-Turner.
Triple-grating turret standard.
Focal Length: 240mm
f/#: 3.9
Wavelength Drive: Worm and wheel with computer control. Bidirectional.
Wavelength Precision and Reproducibility: 0.01nm (with 1200 g/mm grating)
Wavelength Accuracy: ± 0.30nm standard (with 1200 g/mm grating)
Scan Speed: 1 to 1200nm/minute (with 1200 g/mm grating)
Stray Light: < 0.01% at 220nm (NaI)
Slits: Unilateral, computer controlled, curved entrance and straight exit standard.
Width - 10µ m to 3000µ m
Height - 2µ m to 20µ m
Reciprocal Dispersion: 3.2nm/mm (with 1200 g/mm grating)
Max Resolution: 0.06nm (with 1200 g/mm grating)
Gratings: One to three gratings (68 x 68mm standard, 68 x 84mm optional) must be purchased. See Appendix A for options.

Software: Demonstration control program and LabView driver included.
Power: 100 - 240V, 50/60Hz, 60W
Interface: RS232 standard (DK24AT)
Weight: 35 lbs.
Warranty: One year
Options:

- DKBS - Bi-lateral slits
- DKGPIB - IEEE-488 communication interface (internal)
- DK2400 - Hand-held controller for local control
- IR240 - Gold optics

See options and accessories

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

DK240	1/4 meter Monochromator
DKSP240	1/4 meter Spectrograph w/flat field and fine focus adjustment
DKSP240I	Imaging 1/4 meter Spectrograph

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Standard Ruled Gratings
for installation in Digikröm DK series Monochromators/Spectrographs

Standard Ruled Gratings Size = 68 x 68 mm

SP Part #	Ruling (g/mm)	Peak (nm)	Range (nm) @ > 30% T	Peak %T
AG2400-00240-686	2400	240	180 - 680	70
AG1800-00500-686	1800	500	300-625	82
AG1200-00200-686	1200	200	180 - 450	65
AG1200-00250-686	1200	250	180 - 460	70
AG1200-00300-686	1200	300	200 - 750	70
AG1200-00500-686	1200	500	330 - 1500	82
AG1200-00600-686	1200	600	400 - 1500	80
AG1200-00750-686	1200	750	480 - 1500	85
AG1200-01000-686	1200	1000	550 - 1500	75
AG0600-00500-686	600	500	350 - 1300	80
AG0600-01250-686	600	1250	800 - 3000	85
AG0600-01600-686	600	1600	950 - 3000	93
AG0300-00500-686	300	500	310 - 1100	80
AG0300-02000-686	300	2000	1200 - 4000	88
AG0300-02500-686	300	2500	1500 - 4500	88
AG0300-03000-686	300	3000	1800 - 6000	80
AG0150-00500-686	150	500	320 - 980	72
AG0150-04000-686	150	4000	2500 - 9000	93
AG0150-06000-686	150	6000	3400-7800	86
AG0100-00800-686	100	800	500-2500	81
AG0075-08000-686	75	8000	5000 - 15000	82
AG0050-00600-686	50	600	400 - 1200	78
AG0050-12000-686	50	12000	7500 - 20000	82

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. Wide gratings (68 x 84mm) are available at 40% above list price, add "W" at the end of the part number.
Response curves also available on request.

AG-686-KIT

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

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DK Series Options and Accessories

DKBS

Bi-lateral slit option for DK240/242/480. Both sides of slits are automatically controlled for maintaining image centering when wider slits are necessary (tolerance ± 10µm).

DKGPIB

Internal IEEE-488/GPIB communication interface option for DK240/242/480. Separate output connector from Monochromator.

IR240

For use with DK240. Infrared (gold) coatings on optics for DK240. Enhances transmission by up to 40% between 600 -1100nm.
Not suitable for work below 600nm.

IR240SP

Same as above, for use with DKSP240.

IR242

For use with DK242. Infrared (gold) coatings on optics for DK242. Enhances transmission by up to 80% between 600 - 1100nm.

IR242SP

Same as above, for use with DKSP242.

IR480

For use with DK480. Infrared (gold) coatings on optics for DK480. Enhances transmission by up to 40% between 600 -1100nm.

IR480SP

Same as above, for use with DKSP480.

DKPURGE

Purge port provided with standard MPT socket fitting for easy connect/disconnect.

DK2400

Hand-held monochromator controller for DK240/242/480. Allows local control of monochromator when computer is not available or in series with a computer.

DK24AT

RS232 Cable assembly for AT style computer. Standard with all Digikroms.

DK24PS

RS232 Cable assembly for PS/2 style computer.

DK24MA

RS232 Cable assembly for MAC style computer.

DK24IC

IEEE-488/GPIB universal cable assembly.

AB300-T

Six position, 1" diameter automatic filter wheel assembly that bolts directly to DK entrance or exit slits. Recieves power and commands directly through DK unit. See page 85 for more information.

DKSP-TO-DK

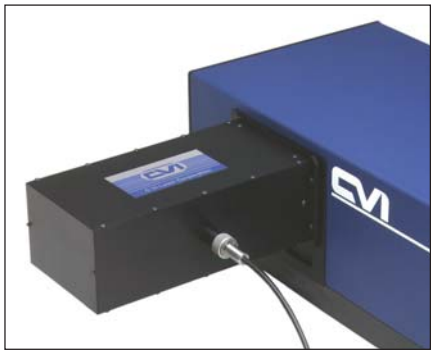
Attachment to allow DKSP Spectrograph to operate as a monochrometor. It includes CM standard 6-fixed slit set (page 20).

AB200

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



DKFIA240 Fiber Imaging Adapter



DKFIA480 Fiber Imaging Adapter

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