



Acton Standard Series of Monochromators and Spectrographs

The Acton Standard series of imaging spectrographs and monochromators from Princeton Instruments are the industry standard for researchers who demand the highest quality data. Acton monochromators and spectrographs feature a rugged yet flexible design that allows the research lab to configure the instrument for a wide range of applications.

FEATURE	BENEFITS
Positrak™ grating stabilization	Quickly change gratings to accurately center on your desired wavelength
Repeatability and excellent wavelength accuracy	Know that your results will be the same every time
Image corrected optics	Offers the best spatial resolution for multi-stripe spectroscopy
High efficiency optical coatings	Acton #2000 Al + MgF ₂ coating delivers the highest throughput in the industry, guaranteeing 88 - 90% reflectance from 200 - 400 nm
Use for multiple applications	Raman, Fluorescence, LIBS, Transmission, Absorption, Reflectance and Tunable Light Source
Multiple entrance and exit ports	Can accommodate multiple detectors and experiments
Accessories	Including fiber adapters, filter wheels, sample chambers, and light sources
Available in four focal lengths	150mm, 300mm, 500mm and 750mm to meet a variety of resolution requirements
Monochromator Software	Each system comes standard with monochromator control software and set of utilities
Optional WinSpec or SpectraSense software	Complete data acquisition software for both CCD and single point detectors
Scientific Toolkit (SITK)™ for LabVIEW®	Expert tool kit for programming Labview to control Acton Series spectrometers

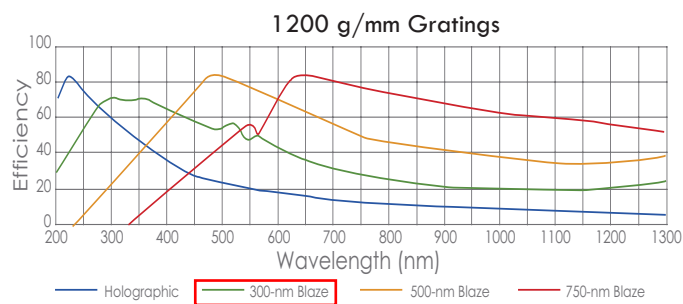
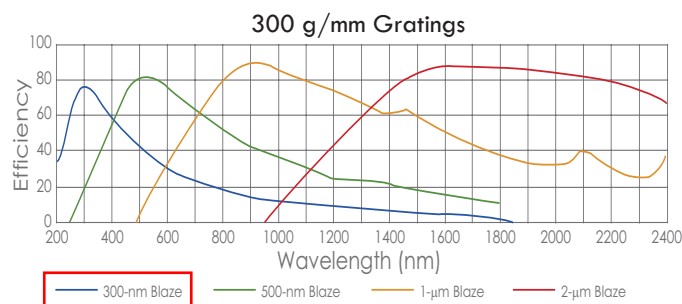
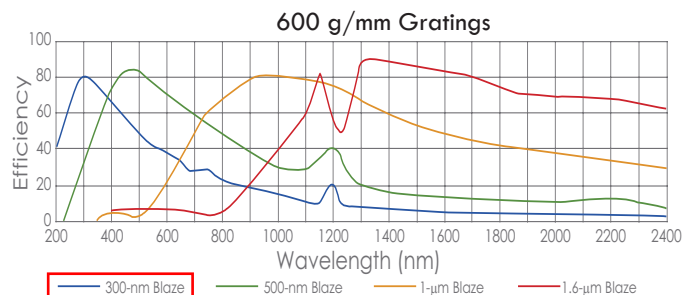
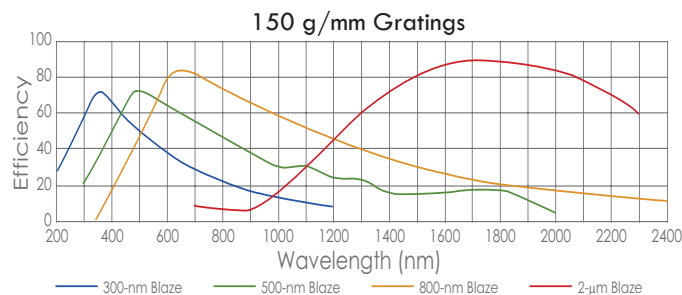
Applications:

Raman, LIBS, Transmission, Reflectance,
Absorption, Tunable Light Source

SPECIFICATIONS (with a 1200 groove grating)

	SP2150	SP2300	SP2500	SP2750
Focal length	150mm	300mm	500mm	750mm
Aperture Ratio	f/4.0	f/3.9	f/6.5	f/9.7
Scan Range (with 1200 G/mm grating)	0 - 1400nm mechanical range	0 - 1400nm mechanical range	0 - 1400nm mechanical range	0 - 1400nm mechanical range
Linear Dispersion (@ 435.833nm)	4.17nm/mm	2.38nm/mm	1.52nm/mm	1.02nm/mm
CCD Resolution (20μm pixel, 20μm slit width)	0.25nm	0.14nm	0.09nm	0.06nm
PMT Resolution (10μm slit width)	0.125nm	0.07nm	0.045nm	0.03nm
Wavelength coverage (across 26.8mm CCD)	111nm	64nm	41nm	27nm
Grating size	32 x 32mm	68 x 68mm 68 x 84 (optional)	68 x 68mm 68 x 84 (optional)	68 x 68mm
Grating mount	Dual grating turret	Triple grating turret	Triple grating turret	Triple grating turret
Grating turrets Standard Series	Manual	Manual	Manual	Manual
Focal plane size (front exit port)	25mm wide x 10mm high	27mm wide x 14mm high	27mm wide x 14mm high	25mm wide x 14mm high
Standard Series manual slits (micrometer adjustable)	10μm to 3mm manual	10μm to 3mm manual	10μm to 3mm manual	10μm to 3mm manual
Wavelength accuracy	± 0.25nm	± 0.2nm	± 0.2nm	± 0.1nm
Repeatability	± 0.05nm	± 0.05nm	± 0.05nm	± 0.05nm
Drive step size	0.005nm	0.005nm	0.005nm	0.005nm
Size	7 in (178mm) long 7 in (178mm) wide 6.5 in (165mm) high	13.2 in (337mm) long 10 in (254mm) wide 8 in (203mm) high	21 in (534mm) long 11 in (280mm) wide 8 in (203mm) high	30 in (762mm) long 11 in (280mm) wide 8 in (203mm) high
Optical axis height	4 in (102mm)	4.875 in (124mm)	4.875 in (124mm)	4.875 in (124mm)
Weight	10 lbs (4.5kg)	35 lbs (15.9kg)	40 lbs (18kg)	45 lbs (20.5kg)
Computer interface	USB and RS232	USB and RS232	USB and RS232	USB and RS232

Grating Curves



Dispersion and Wavelength Coverage (26.8mm focal plane)

Model	150 g/mm	300 g/mm	600 g/mm	1200 g/mm	1800 g/mm	2400 g/mm	3600 g/mm
SP-2150i	40nm/mm 1061nm	19nm/mm 519nm	9nm/mm 246nm	4nm/mm 107nm	2.2nm/mm 58nm	1.1nm/mm 30nm	0.4nm/mm 11nm
SP-2300i	21nm/mm 568nm	11nm/mm 281nm	5nm/mm 136nm	2.3nm/mm 62nm	1.4nm/mm 36nm	0.8nm/mm 22nm	0.7nm/mm 20nm
SP-2500i	13nm/mm 346nm	6.4nm/mm 171nm	3.1nm/mm 83nm	1.4nm/mm 39nm	0.9nm/mm 23nm	0.5nm/mm 14nm	0.46nm/mm 12nm
SP-2750	8.8nm/mm 235nm	4.4nm/mm 117nm	2.1nm/mm 57nm	1nm/mm 27nm	0.6nm/mm 17nm	0.4nm/mm 11nm	0.3nm/mm 9nm

PIXIS_1024Bの素子サイズは約13mmなので、上記のwavelength coverageの値は半分である。