TELEDYNE
PRINCETON INSTRUMENTS
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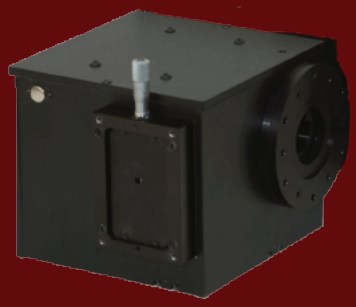
Part of the Teledyne Imaging Group



SpectraPro® 2150 Monochromators and Spectrographs

SpectraPro 2150 150 mm imaging spectrographs and monochromators are the industry standard for researchers who demand the highest quality data. Acton monochromators and spectrographs feature a rugged yet flexible design that can be configured for a wide range of applications.

FEATURE	BENEFITS
Positrak™ grating stabilization	Quickly change gratings to accurately center on your desired wavelength
Image corrected optics	Offers the best spatial resolution for multi-stripe spectroscopy. Toroidal mirrors provide excellent imaging quality and enhanced spatial and spectral resolution.
High efficiency optical coatings	Acton #1900 Al + MgF_2 coating delivers the highest throughput in the industry, guaranteeing 85% reflectance from 200 - 700 nm. Optional protected silver, gold or dielectric coatings are available. See page 4.
Accessories	Including fiber adapters, filter wheels, sample chambers, shutters and light sources
Optional: LightField® software (for Windows 10/8/7, 64-bit)	Flexible software packages for data acquisition, display and analysis; LightField offers intuitive, cutting edge user interface, IntelliCal® , easy LabVIEW® and MATLAB integration, and more.
Optional Scientific Toolkit (SITK)™ for LabVIEW®	Expert tool kit for programming Labview to control Acton Series spectrometers

Exit Configurations - SpectraPro Series

SP 2150 Models	Exit Configurations
SP 2155	Front exit slit
SP 2156	Front exit camera port

Powered by LightField®

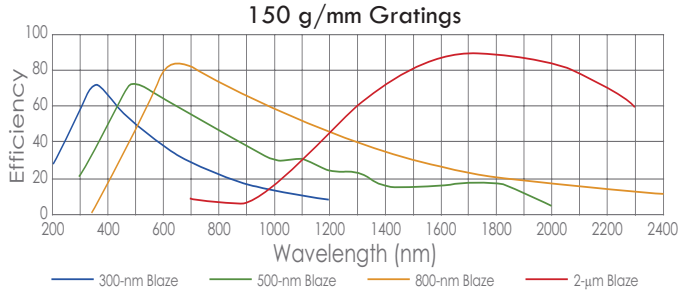
Applications:
Raman, LIBS, Transmission, Reflectance, Luminescence, Absorption

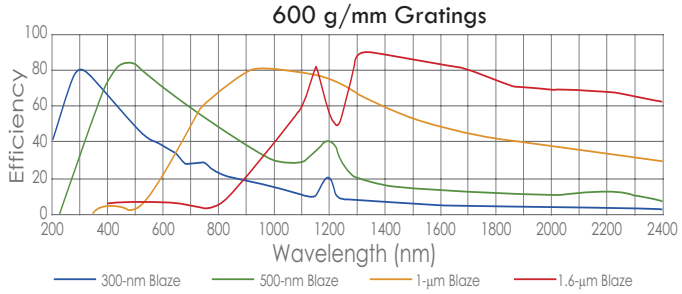
SpectraPro Series Specifications

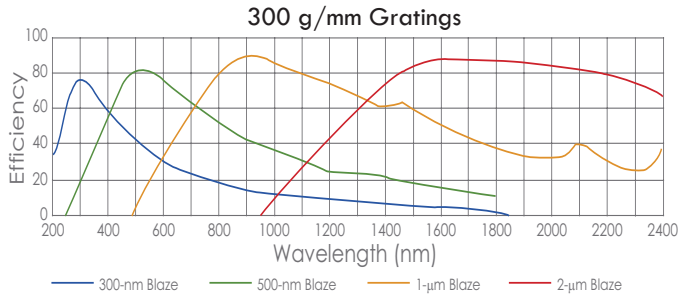
	SP2150
Focal length	150 mm
Aperture ratio	f/4.0
Scan range (with 1200 G/mm grating)	0 - 1400 nm mechanical range
Linear dispersion * (@ 435.833 nm)	4.17 nm/mm
CCD resolution ** (20 µm pixel, 20 µm slit width)	0.4 nm
PMT resolution * (10 µm slit width)	0.4 nm
Wavelength coverage (across 26.8 mm CCD)	111 nm
Grating size	32 x 32 mm
Grating mount	Interchangeable dual grating turret
Focal plane size (front exit port)	25 mm wide x 10 mm high
Astigmatism (at focal plane edges)	690 µm
Standard Series manual slits (micrometer adjustable)	10 µm to 3mm manual
Wavelength accuracy	± 0.25 nm
Repeatability	± 0.05 nm
Drive step size	0.005 nm
Size	7 in (178 mm) long 7 in (178 mm) wide 6.5 in (165 mm) high
Optical axis height	4 in (102 mm)
Weight	10 lbs (4.5 kg)
Computer interface	USB and RS232

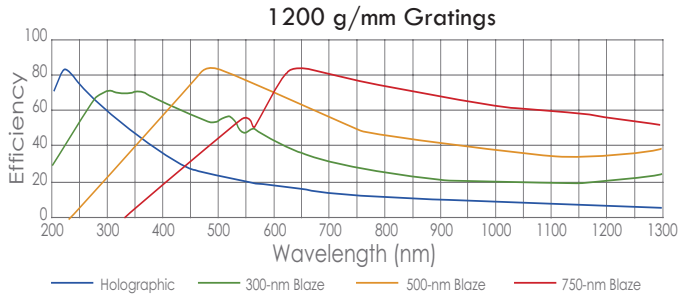
* Linear dispersion measured with a 1200 g/mm grating @ 435.8 nm.
PMT resolution measured with a 1200 g/mm grating @ 435.8 nm,10 µm slit width and 4 mm slit height.
** CCD resolution measured with a 1200 g/mm grating @ 435.8 nm, 20 µm slit width and 20 µm pixel.

Grating Curves







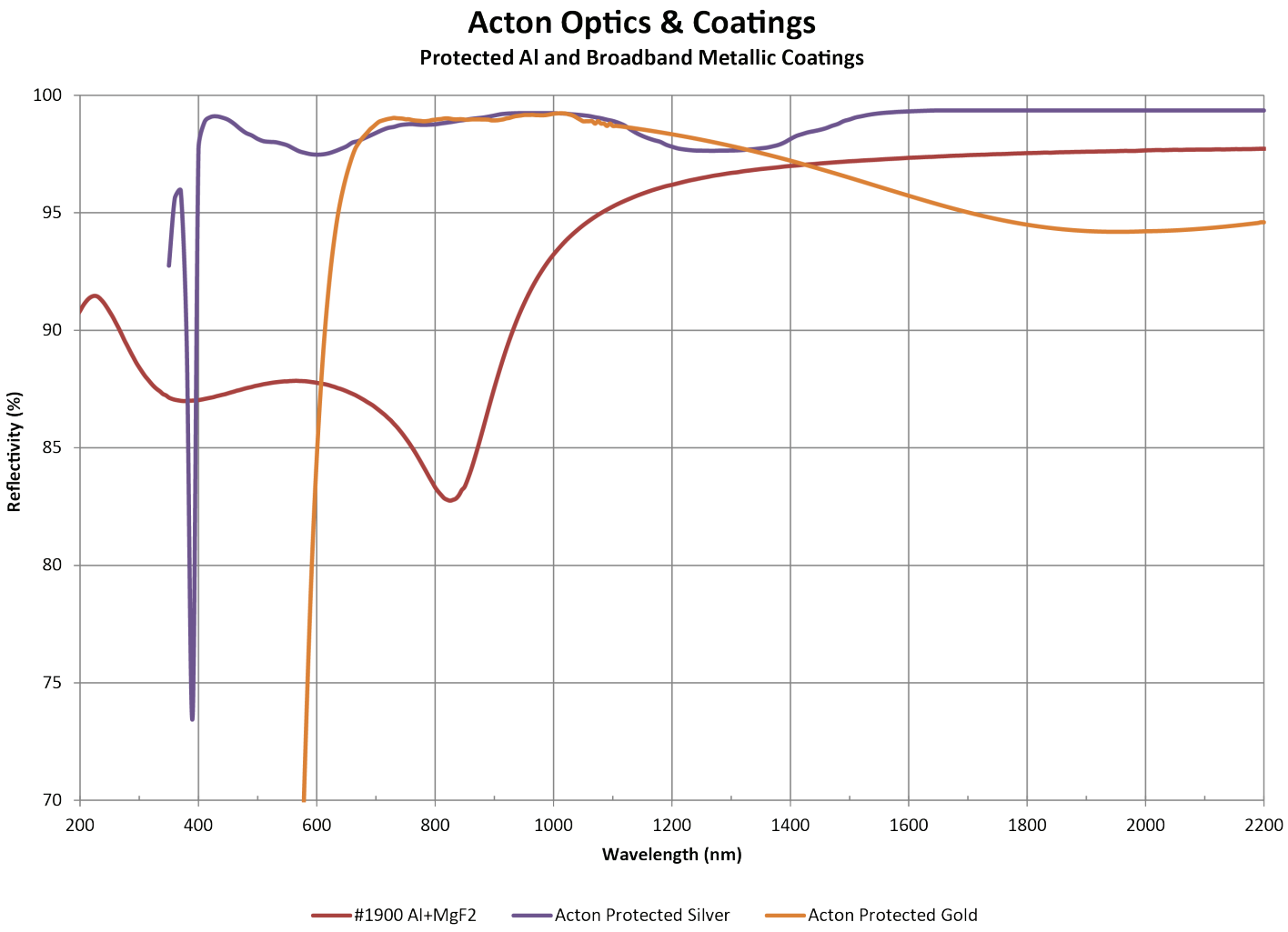


Dispersion and Wavelength Coverage (26.8 mm focal plane)

Model	150 g/mm	300 g/mm	600 g/mm	1200 g/mm	1800 g/mm	2400 g/mm	3600 g/mm*
SP-2150	39.7 nm/mm 1064 nm	19.5 nm/mm 522 nm	9.33 nm/mm 250 nm	4.17 nm/mm 111 nm	2.37 nm/mm 63 nm	1.4 nm/mm 37 nm	1.07 nm/mm 28.6 nm

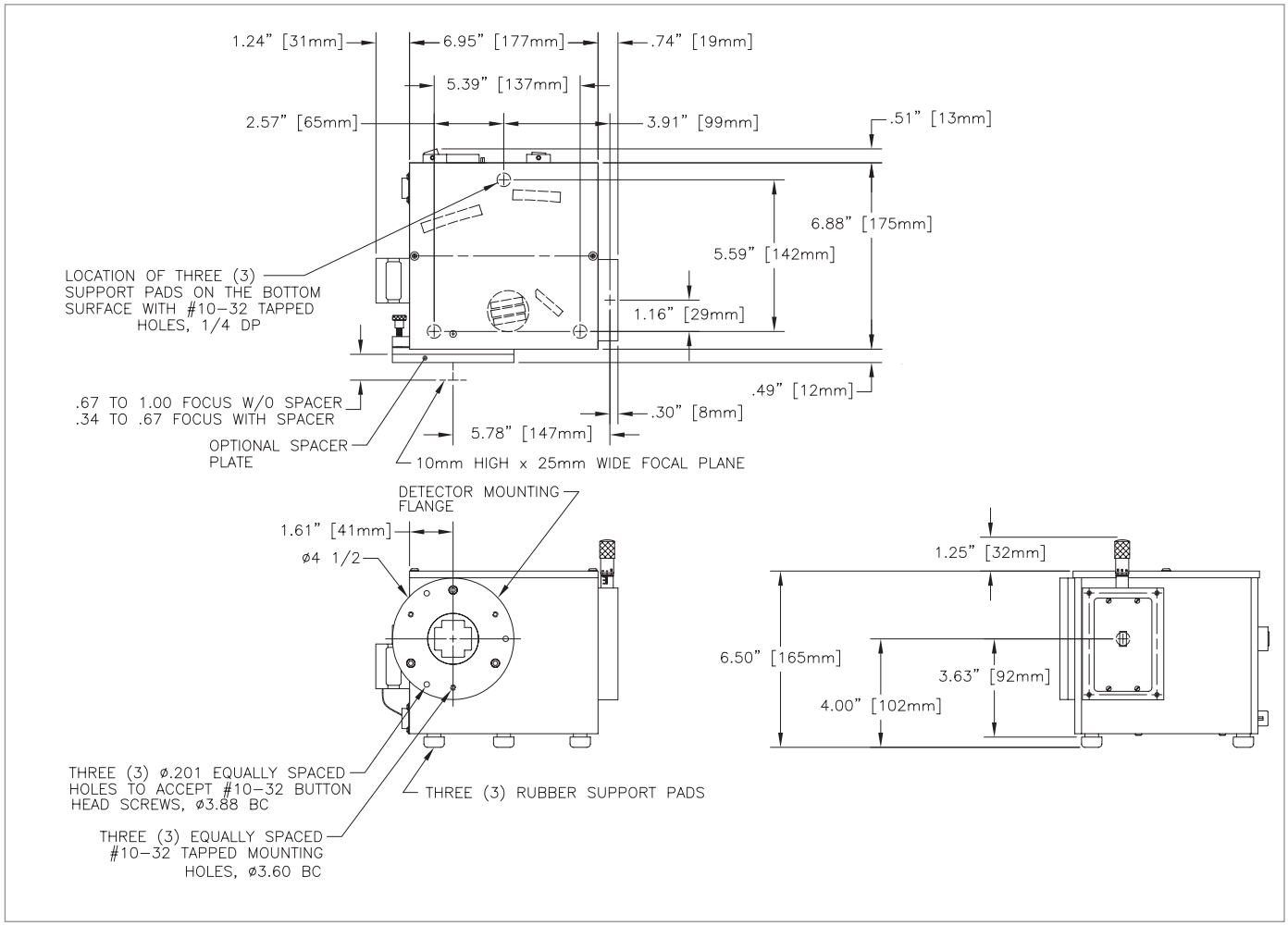
* Center wavelength of 253.65 nm used with 3600 g/mm grating. Center wavelength of 435.8 nm used with all other gratings.

Mirror Coatings: Reflectance Curves



NOTE: #1900 coating is standard on SpectraPro mirrors. Gold and silver coatings are offered as an option at an additional fee.

2150 Models (150 mm focal length)



Model	Function	Port Configuration	Optical Path
SP 2155	Monochromator	Side Entrance Slit/Front Exit Slit	90°
SP 2156	Spectrograph	Side Entrance Slit/Front CCD Port	90°

Optional motorized slits are available. Contact your sales rep for more information.