

HTS Lens Spectrograph



The Princeton Instruments / Acton Research HTS Lens Spectrograph is an f/1.8 imaging spectrograph optimized for fiberoptic light collection. The HTS provides superior imaging performance in a compact, rugged package that includes an internal shutter, manually controlled wavelength adjustment, and a manually adjustable bilateral entrance slit. Two interchangeable gratings are available, allowing operation over a range of approximately 400 nm to 850 nm. A set of wavelength calibration tables is provided with each system, facilitating simple integration into your experimental setup. This spectrograph is supported by the industry-standard SpectraSense® and WinSpec software packages. The HTS can be integrated easily with a wide range of accessories, several of which include a notch filter chamber or fiberoptic input adapter.

Applications: Raman, luminescence, multistripe emission spectroscopy

Features	Benefits
Superior spatial imaging	Well suited for multiple-input measurements
Fast f/1.8 optical spectrograph	Ideally matched for fiberoptic input
Compact, rugged design	Simple integration into applications where space is at a premium
Interchangeable grating turret	Allows you to optimize for the best dispersion
Less than 100- μ m astigmatism	Image height remains constant across the tangential focal plane
Tunable center wavelengths	Usable range from 400 nm to 850 nm
Renowned WinSpec and SpectraSense® software	Offers easy, yet sophisticated Windows® GUI controls Automates data acquisition, analysis, and display
PICAM for VB, C, C++, and Scientific Toolkit for LabVIEW™	Respected application programming interface provides a universal interface for all Princeton Instruments / Acton Research hardware
Wide range of accessories available	Includes fiber adapters, sample chambers, and notch filters

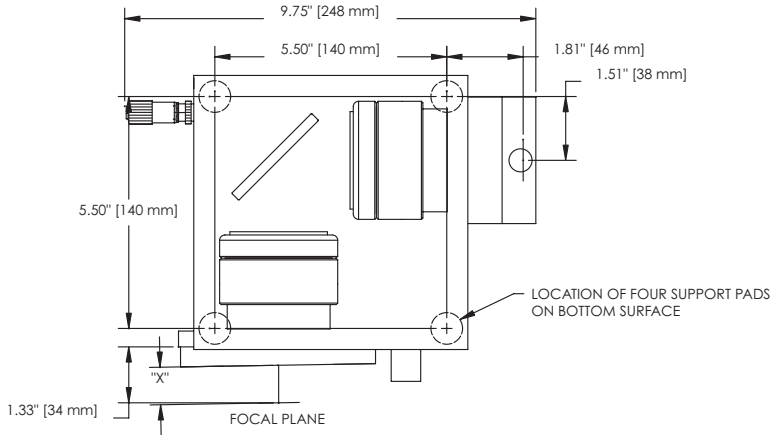
HTS Lens Spectrograph Specifications

Focal length	85 mm
Aperture ratio	f/1.8
Nominal dispersion 600 g/mm 830 g/mm	10 nm/mm 6 nm/mm
Spectral resolution (10-μm slit) 600 g/mm 830 g/mm	1.0 nm 0.5 nm
Spatial performance (astigmatism)	<100 μ m
Focal plane size	28 mm x 8 mm
Grating size	32 mm x 32 mm
Grating mount	Interchangeable grating holder
Wavelength adjustment	Micrometer controlled, manual

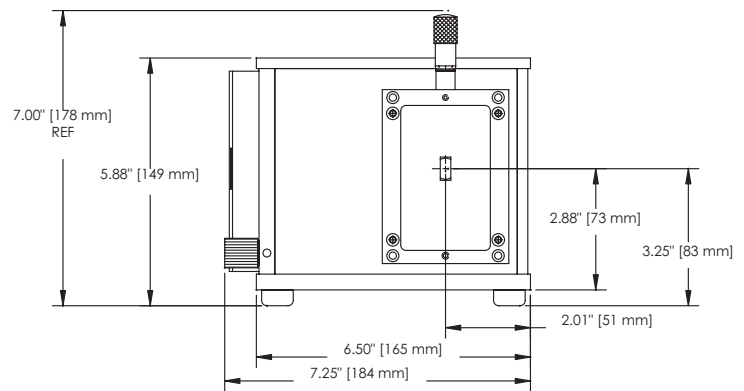
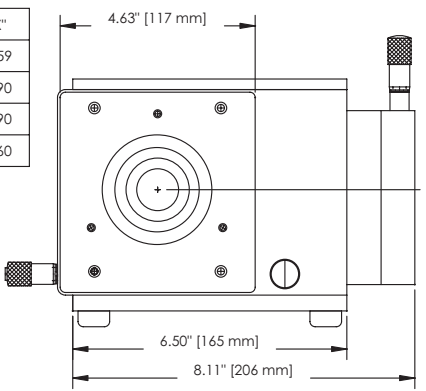
All specifications are subject to change without notice.

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Outline Drawings



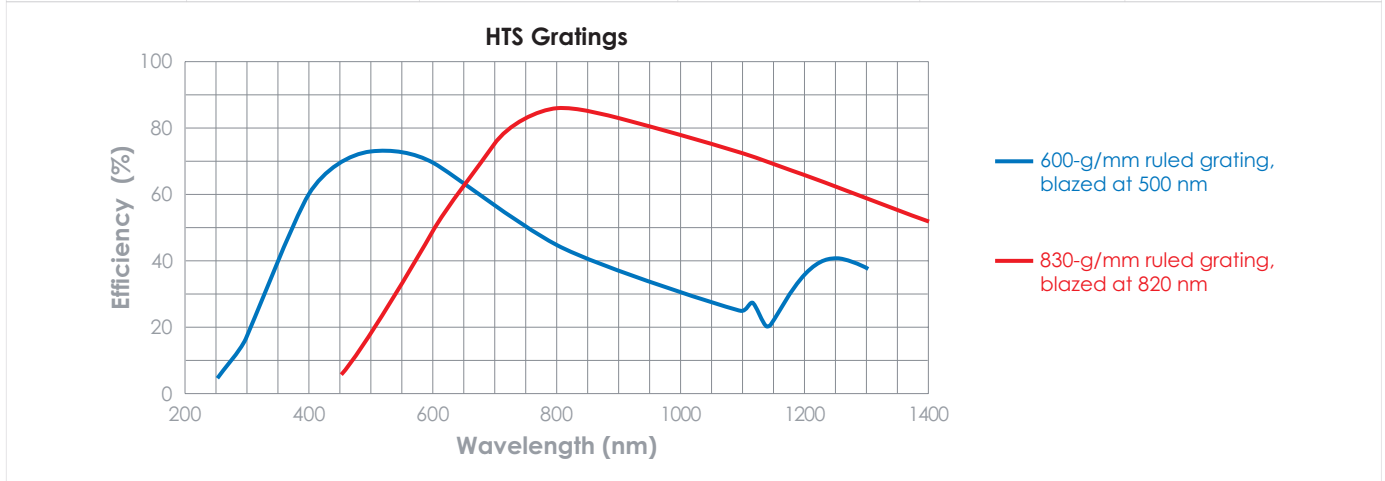
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SPEC-10 [®]	.559
PIXIS [™]	.590
PI-MAX [®]	.890
PHOTONMAX [™]	.660



ALL DIMENSIONS APPROXIMATE
DO NOT SCALE DRAWING

Diffraction Gratings

Part number	Groove density	Blaze wavelength	Range of operation	Dispersion	Wavelength coverage (1-inch focal plane)
HTS1-060-VIS	600 g/mm	500 nm	350 – 750 nm	10 nm/mm	254 nm
HTS1-083-VIS	830 g/mm	820 nm	500 – 900 nm	6 nm/mm	152 nm



Accessories

	Part number	Description
Raman notch filter chamber	NFC-446-040	Raman notch filter assembly, dual lens, slit mount (requires notch filter)

Type	Part number	Wavelength	Laser attenuation (optical density)	Spectral bandwidth @ 50% transmission
Notch	NFH-N-514.5	514.5 nm	>4.0	700 nm (20 cm ⁻¹)
	NFH-N-532	532 nm		
	NFH-N-632.8	632.8 nm		
	NFH-N-785	785 nm		
Notch Plus	NFH-NP-514.5	514.5 nm	>6.0	700 nm (20 cm ⁻¹)
	NFH-NP-532	532 nm		
	NFH-NP-632.8	632.8 nm		
	NFH-NP-785	785 nm		
Super Notch	NFH-SN-514.5	514.5 nm	>4.0	350 nm (10 cm ⁻¹)
	NFH-SN-532	532 nm		
	NFH-SN-632.8	632.8 nm		
	NFH-SN-785	785 nm		
Super Notch Plus	NFH-SNP-514.5	514.5 nm	>6.0	350 nm (10 cm ⁻¹)
	NFH-SNP-532	532 nm		
	NFH-SNP-632.8	632.8 nm		
	NFH-SNP-785	785 nm		

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