

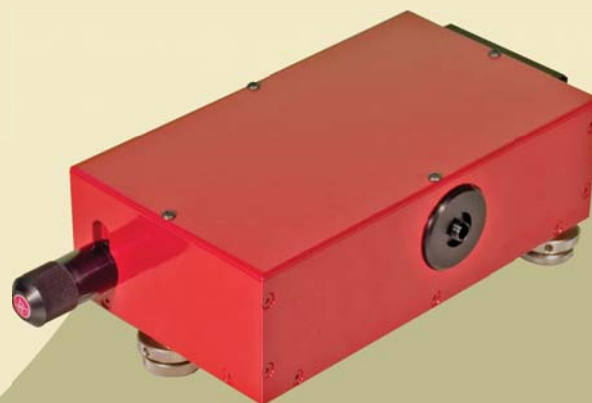


Diagnotics



Spectrometer ASP-150C (ASP-150T)

- Tunable
- Compact
- High resolution up to 0.017 nm
- USB interface
- No power supply unit
- Synchronization input/output



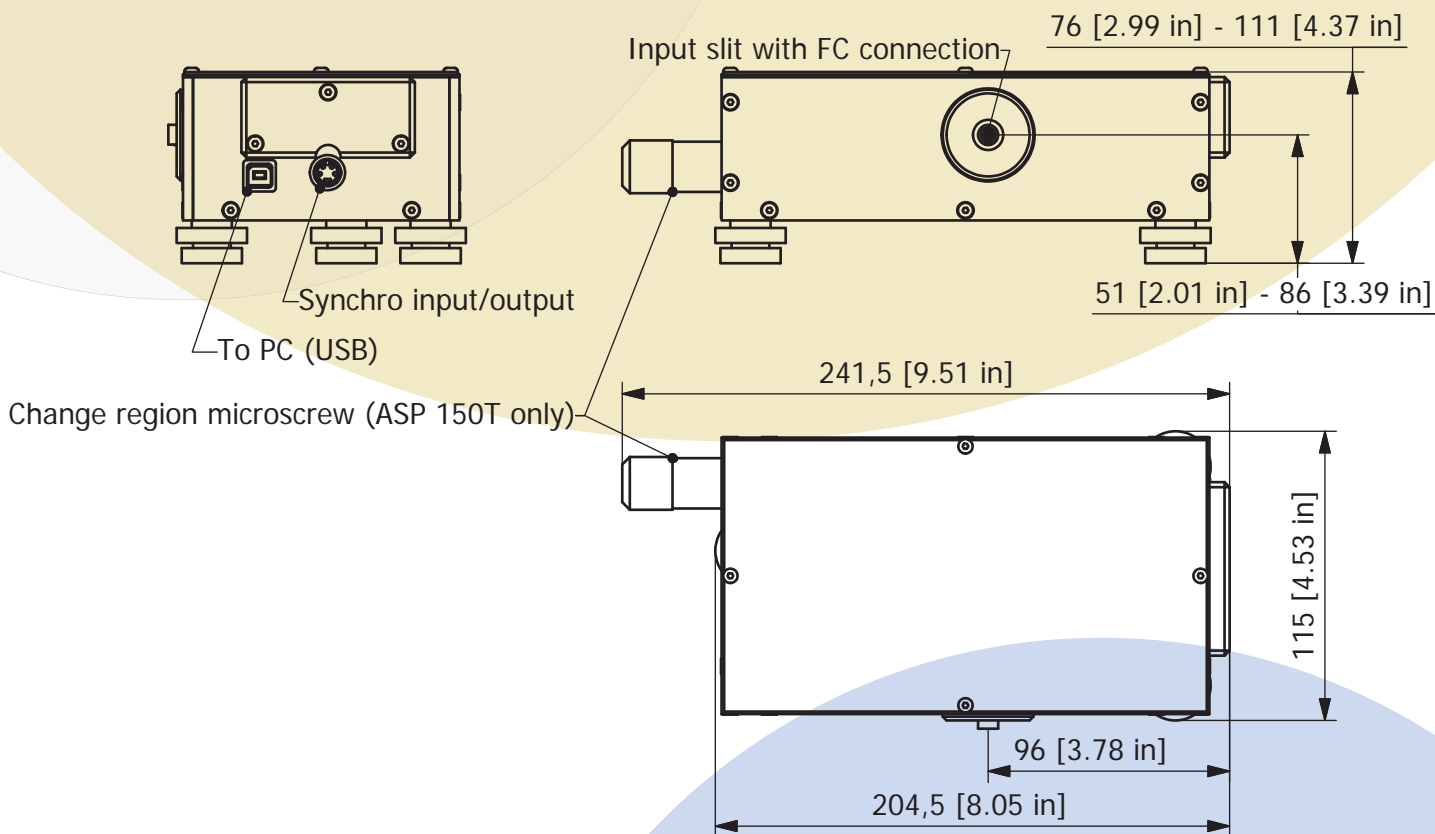
Spectrometer ASP-150T

Product overview

The ASP-150C spectrometer is an ideal choice for a wide variety of different optical applications with its flexible tuning and high resolution.

The ASP-150T model is able to carry out measurements in a wider spectral range without any losses in resolution, owing to a special rotating mechanism.

There is always a place for the ASP-150C on the optical table due to its small size, functionality and friendly interface. Models ASP-150CF and ASP-150TF have the special fiber input with a spectral slit, the size of which is conditioned with the detector. It allows measurement of either free-space or fiber signals without any realignment. However, it is not recommended to use fiber to measure spectrum of a femtosecond laser due to signal modulation and subsequent spectrum distortion.





ASP-150C(ASP-150T) technical specifications

	ASP-150C(ASP-150T)							
Optical scheme	Cherny-Turner							
Spectral range for choosing the registration domain, nm	190-1100	190-1100	190-1100	190-1100	190-1100	190-800	190-450	190-300
Grating, grooves/mm	200	300	400	600	1200	1800	1800 II order	1800 III order
Registered spectrum region width, nm ⁽¹⁾	950	640	480	315	145	90	40	25
Spectral resolution, nm	0.6	0.42	0.3	0.2	0.09	0.06	0.025	0.017
Dispersion, nm/mm	33.2	22.4	16.8	11.0	5.1	3.1	1.4	0.9
Input slit, μm	10							
Focal length, mm	150							
Focal length of the camera objective, mm	150							
Relative aperture	1:13							
Fiber input ⁽²⁾	FC, 400 μm UV fiber cable included (1 m.)							
Synchronization	external/internal							
PC connection	USB							
Dimensions, mm	242x115x76 (ASP-150T); 205x115x76 (ASP-150C)							
Weight, kg	1.6							

CCD array specification ⁽³⁾			
Model	Toshiba 1205D	Toshiba 1304AP	Hamamatsu S8378-1024Q
Number of cells	2048	3648	1024
Cell width, μm	14	8	24
Cell height, μm	200	200	500
Minimum exposure time, ms	7	7	2.1
Maximum exposure time, s	4	0.5	5
Sensitivity ⁽⁴⁾ , photons/count	80	20	650(3000) ⁽⁵⁾
Antiblooming ⁽⁶⁾	yes	no	yes
Meansquare noise of reading, counts of ADC	5.4	3.5	16(4.4) ⁽⁵⁾
ADC	14 bit, 16384 counts	14 bit, 16384 counts	14 bit, 16384 counts
Dynamic range	1000:1	1000:1	1000:1 (4000:1) ⁽⁵⁾

(1) - the necessary width and center of the registered range should be specified when placing an order. The ASP-150T has an operational range adjustment function.

(2) - for models ASP-150CF and ASP-150TF.

(3) - any array can be combined with any grating type.

(4) - sensitivity given at the wavelength of 550 nm.

(5) - the Hamamatsu arrays provide for sensitivity control via special driving signal, that can set either low (values in brackets) or high sensitivity mode.

(6) - the property of the CCD to prevent the charge flow from the neighboring overexposed pixels.