

S150 and S150-II compact spectrometers

SPECIFICATIONS

Specifications are subject to change without notice

SPECTROMETER	S150-200	S150-300	S150-400	S150-600	S150-1200	S150-1800	S150-1800(II)	S150-1800(III)
SPECTROGRAPH								
Optical scheme	Cherny-Turner							
Focal Length, mm	150							
F/Number	12							
Entrance slit width, mm height, mm	no more than 0.018 3							
Diffraction grating, lines/mm	200	300	400	600	1200	1800	1800 II order	1800 III order
Reciprocal linear dispersion (average), nm/mm	33.15	21.5	16.2	10.5	4.7	3.0	1.3	0.8
Spectral Resolution (average), nm ¹⁾	0.66	0.44	0.32	0.21	0.1	0.06	0.025	0.015
Width of the concurrently measured spectral interval (average), nm	920	620	460	300	135	85	38	23
Detectable range, nm	200-1100	200-1100	200-1100	200-1100	200-1100	200-800	200-450	200-300
Computer Interface	Full-Speed USB interface							
Optical Input	UV Optical Fiber dia 0.6 (0.4) mm, 1m long, SMA-905 connector							
Overall Size, mm	155 x 200 x 105							
Weight, kg	2.5							

1) spectral resolution and width of the concurrently measured spectral interval are indicated for the case of using the detection system based on the TCD 1304AP linear image sensor. In case of using detectors based on other linear image sensors, either indicated in the table below or alternative, the specifications should be preliminarily stipulated with the manufacturer.

DETECTION SYSTEM			
Linear image sensor	TCD 1304AP	TCD 1205D	S8378-1024
Pixel quantity	3648	2048	1024
Pixel width, mm	0.008	0.014	0.025
Pixel height, mm	0.2	0.2	0.5
Min. exposure time, msec	7.3	4.1	2.0
Max. exposure time, sec ¹⁾	0.3	2.0	5.0
Max. S/N for 1 Scan	400:1	400 : 1	1000 : 1
Antiblooming ²⁾	no	yes	yes
Dynamic Range	900 : 1	1000 : 1	3500 : 1
Photo sensitivity, V/lux*sec ³⁾	160	80	22 (HS) 4.4 (LS)
Root-mean-square reading noise, ADC counts	18	14	16 (HS) ³⁾ 4.4 (LS)
ADC Resolution	12 bit, 4096 counts		14 bit, 16384 counts
Synchronization	internal, external		

1) max. exposure time is the time when the dark signal constitutes 5% of the dynamic range at +25°C ambient.

2) antiblooming is a sensor feature eliminating charge overflow from exposed pixels to surrounding pixels

3) the S8378-512Q linear image sensor provides possibility of control over sensitivity mode: high (HS) or low (LS).

SOLAR Laser Systems • 4 Stebenev lane, Minsk 220024 • BELARUS •
fax: 375 (17) 2019596 • phone: 375 (17) 2019590 • e-mail: solarls@infonet.by • www.solarlaser.com

ISO 9001 certified

