

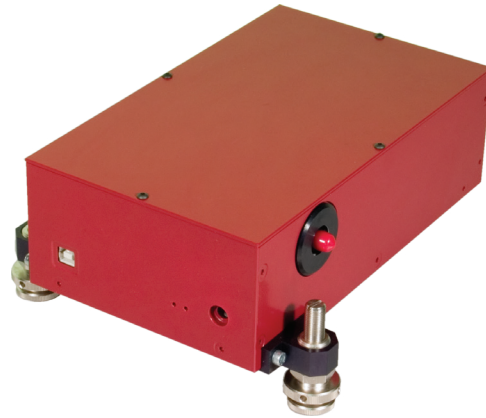


Diagnostics



# Spectrometer ASP-IR

- Broad IR spectral range
- Small footprint
- Resolution down to 0.5 nm
- USB interface
- Free-space and FC fiber input



Spectrometer ASP-IR-2.6

## Product overview

The ASP-IR boasts a scanning mechanism that allows measurements in IR range without using an expensive CCD array. This makes the spectrometer very attractive in terms of price in the market of IR spectrometers. The ASP-IR has impressive characteristics that provide precise laser emission analysis along the whole registered range with resolution of down to 0.5 nm. The unit also features a trigger signal input for pulsed laser measurement.

The unit has a special fiber input, allowing measurement of either free-space or fiber signals without any realignment.

	ASP-IR-1.7	ASP-IR-2.6	ASP-IR-3.5
<b>Spectral range, nm</b>	500-1700	900-2600	1200-3450
<b>Grating, grooves/mm</b>	600	400	400
<b>Scanning speed, nm/s</b>	up to 300	up to 400	up to 400
<b>Spectral resolution, nm (free-space)</b>	0.5	0.8	1.2
<b>Spectral resolution*, nm (given for 400 um fiber core)</b>	0.7	1.0	1.5
<b>Optical scheme</b>	Czerny-Turner		
<b>Input type<sup>(1)</sup></b>	free-space and SMA905 fiber socket (FC socket or fiber patch-cord on request)		
<b>Focal length, mm</b>	150		
<b>Input slit, um</b>	15		
<b>Output slit, um</b>	20		
<b>Relative aperture</b>	1:13		
<b>Photodetector</b>	InGaAs photodiode		InAs PV cooled detector
<b>Source pulse repetition rate, kHz</b>	any <sup>(2)</sup>		
<b>Detector active area height, mm</b>	1		
<b>NEP [NEE]*<sup>(2...4)</sup>, nW [pJ]</b>	0.6 [0.15]	42 [2.5]	145 [7]
<b>Relative dynamic range*<sup>(3)</sup></b>	3 [1.5] x10 <sup>5</sup>	7 [1] x10 <sup>5</sup>	6 [1.5] x10 <sup>4</sup>
<b>ADC</b>	16 bit, 65536 counts		
<b>PC connection</b>	USB		
<b>Dimensions (L x W x H), mm</b>	225x136x81		295x136x81
<b>Weight, kg</b>	2.9		3.6

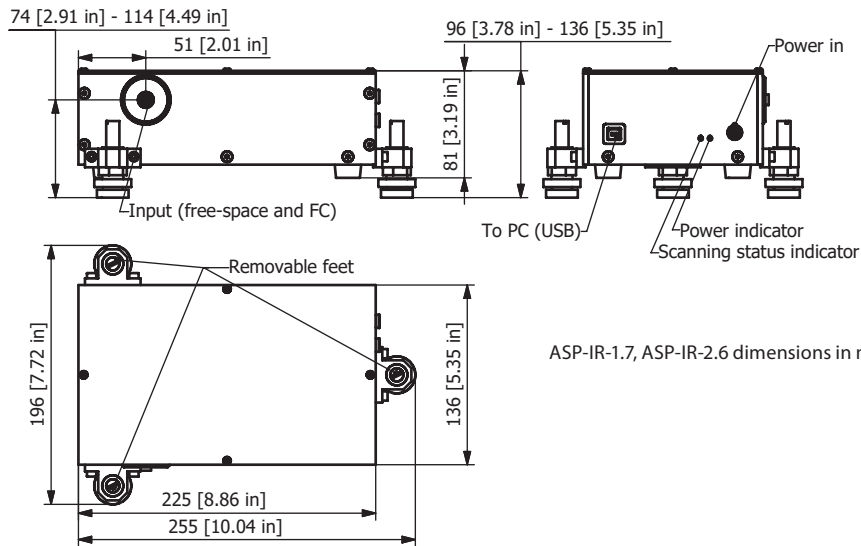
(1) – each spectrometer is equipped with a fiber socket and allows measurement of either free-space or fiber signals without any realignment

(2) – all spectrometers have two operational modes: CW (repetition rate from CW down to 6 kHz) and pulsed (up to 8 kHz for ASP-IR-1.7 and up to 25 kHz for ASP-IR-2.6 and ASP-IR-3.5); the pulsed mode has external trigger feature

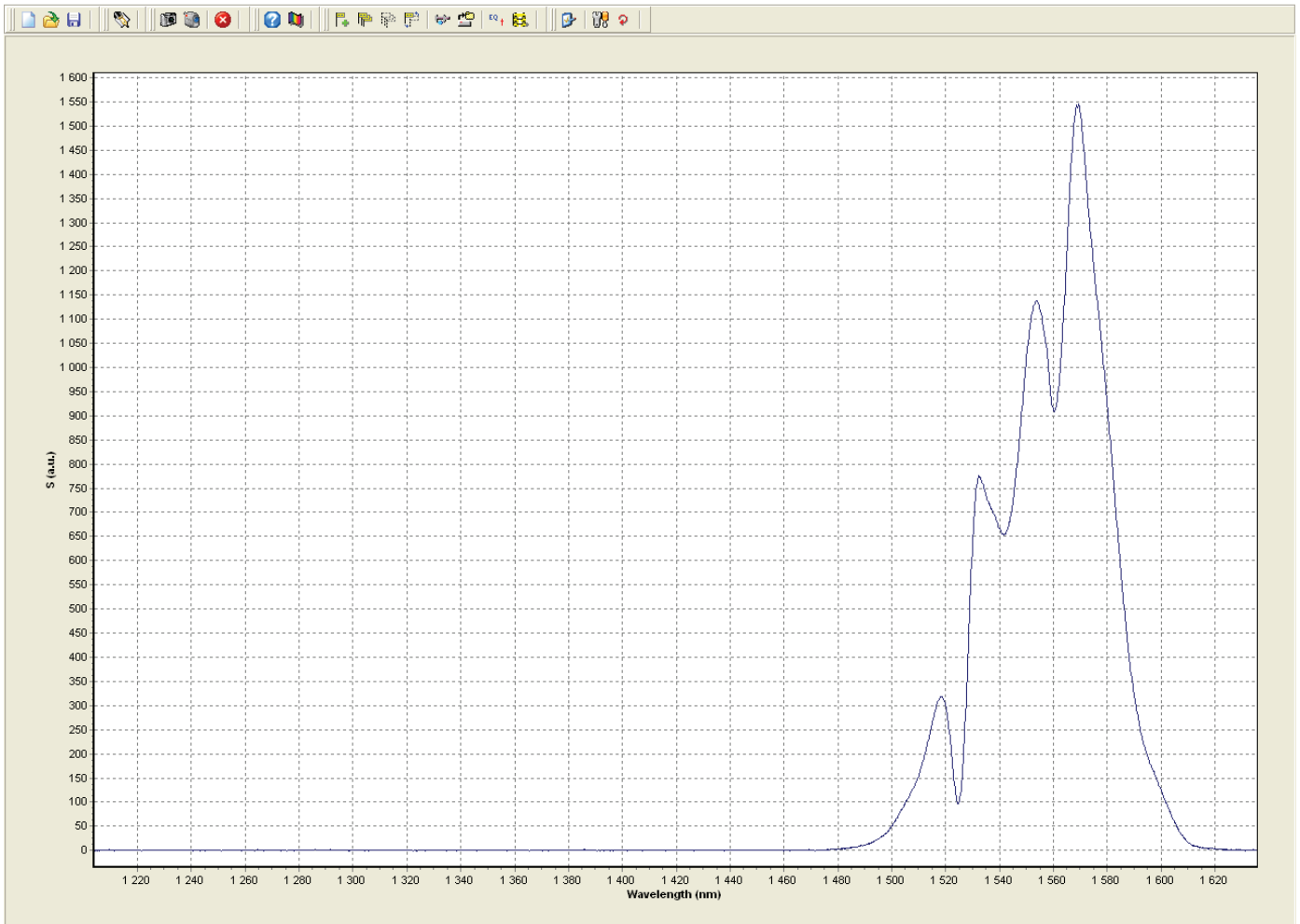
(3) – dynamic range for pulsed mode given in brackets

(4) – NEP - noise equivalent power and NEE - noise equivalent energy are given at input beam diameter ~ 2 mm at peak sensitivity wavelength (ASP-IR-1.7 – 1.5 um, ASP-IR-2.6 – 2.3 um, ASP-IR-3.5 – 3.25 um)

\* - typical values.



ASP-IR-1.7, ASP-IR-2.6 dimensions in mm [inches]



Er fiber laser spectrum registered by the ASP-IR