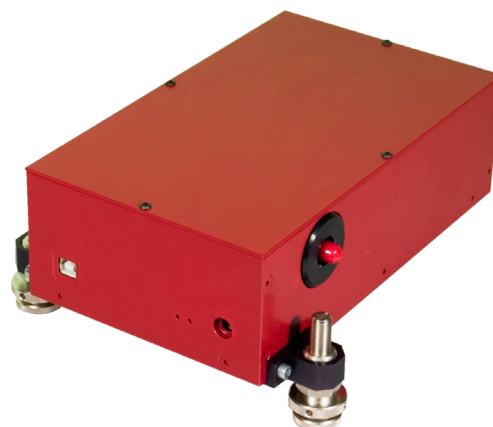




ASP-IR. Scanning IR Spectrometer

- IR spectral measurements as far as 3.5 μm
- Small footprint
- Down to 0.5 nm resolution
- USB connection
- Cost-effective
- Free-space and fiber-coupled SMA 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 convenient pulsed laser measurement.

The spectrometer has a special fiber input, allowing measurement of either free-space or fiber signals without any re-alignment.

ASP-IR technical specifications

	ASP-IR-1.7	ASP-IR-2.6	ASP-IR-3.5
Spectral range, nm	500-1700	900-2600	1200-3450
Grating, grooves/mm	600	400	400
Scanning speed, nm/s	up to 300	up to 400	up to 400
Spectral resolution, nm (free-space)	0.5	0.8	1.2
Spectral resolution*, nm (given for 400 μm fiber core)	0.7	1.0	1.5
Optical scheme	Czerny-Turner		
Input type⁽¹⁾	free-space and SMA905 fiber socket (FC socket or fiber patch-cord on request)		
Focal length, mm	150		
Input slit, μm	15		
Output slit, μm	20		
Relative aperture	1:13		
Photodetector	InGaAs photodiode		InAs PV cooled detector
Source pulse repetition rate, kHz	any ⁽²⁾		
Detector active area height, mm	1		
NEP [NEE]*^(2...4), nW [pJ]	0.6 [0.15]	42 [2.5]	145 [7]
Relative dynamic range*⁽³⁾	3 [1.5] x10 ⁵	7 [1] x10 ⁵	6 [1.5] x10 ⁴
ADC	16 bit, 65536 counts		
PC connection	USB		
Dimensions (L x W x H), mm	225x136x81		295x136x81
Weight, kg	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 μm , ASP-IR-2.6 – 2.3 μm , ASP-IR-3.5 – 3.25 μm)
* - typical values.



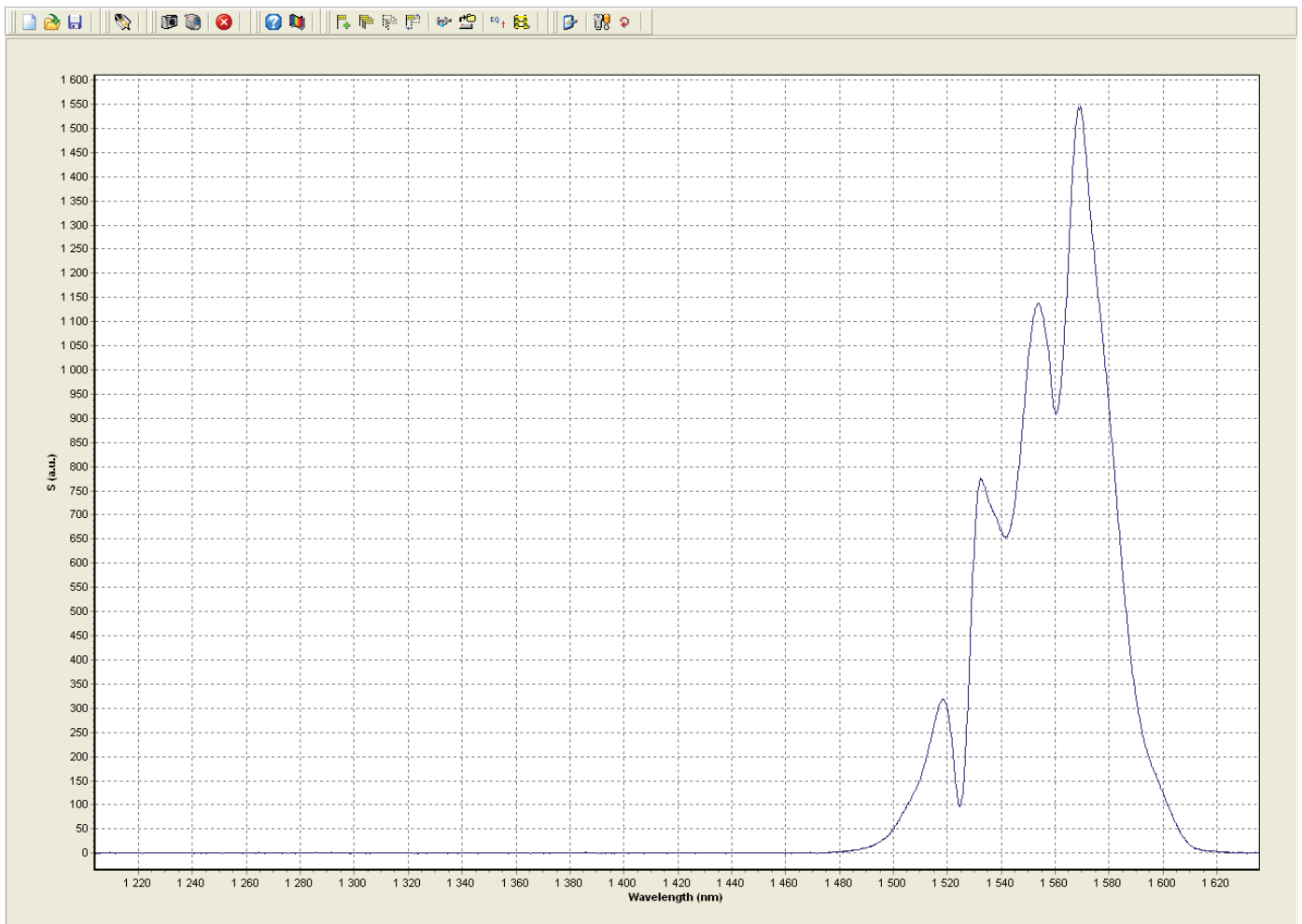
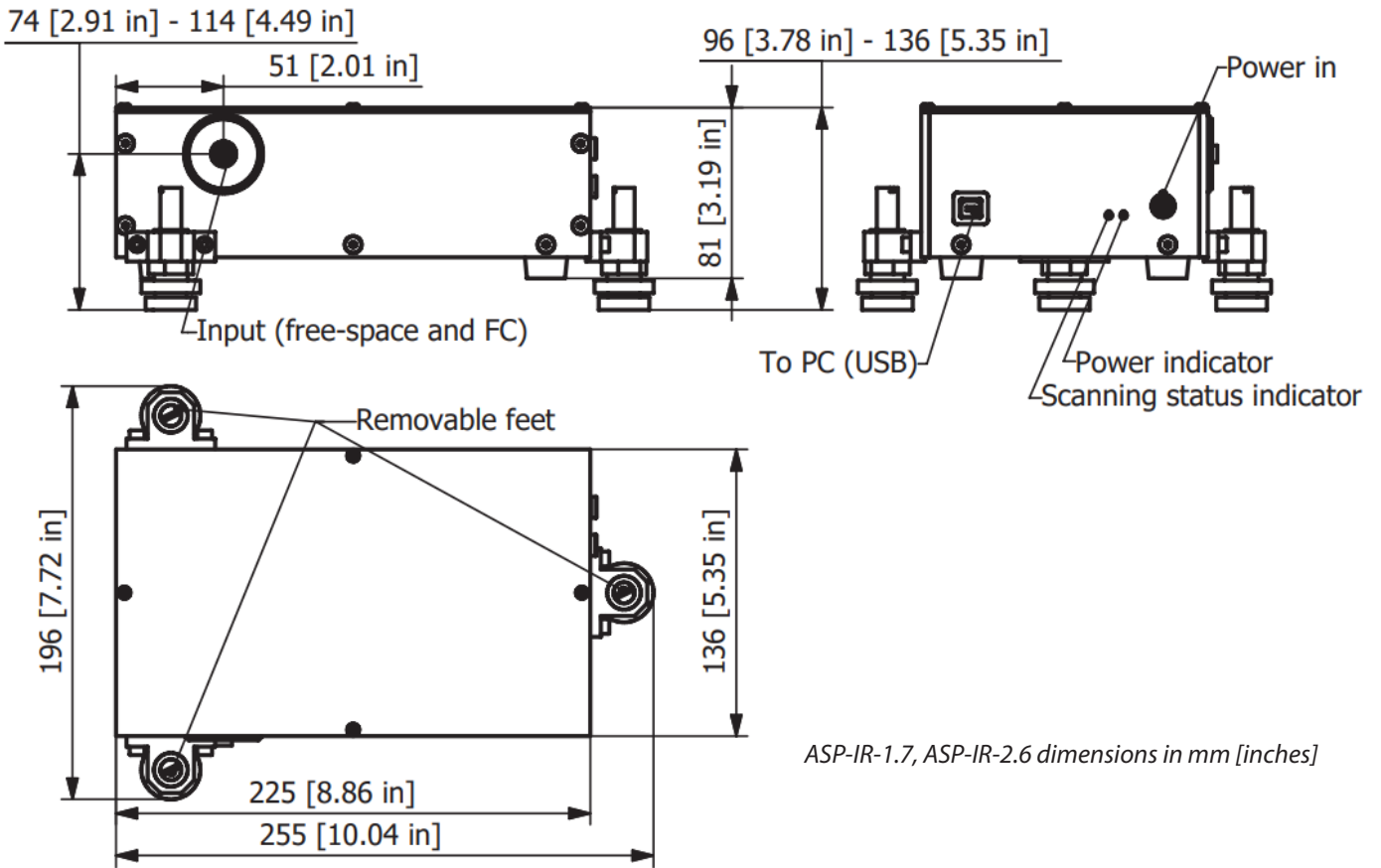
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Er fiber laser spectrum registered by the ASP-IR