

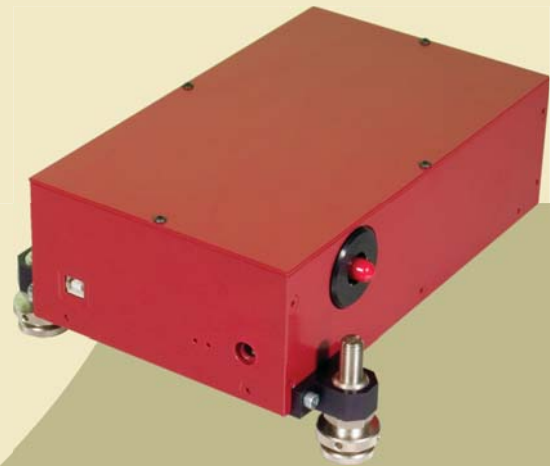


Diagnostics



Spectrometer ASP-IR

- Broad IR spectral range
- Compact
- Resolution 0.35 nm
- USB interface
- Model ASP-IRF has an FC fiber input



Spectrometer ASP-IR

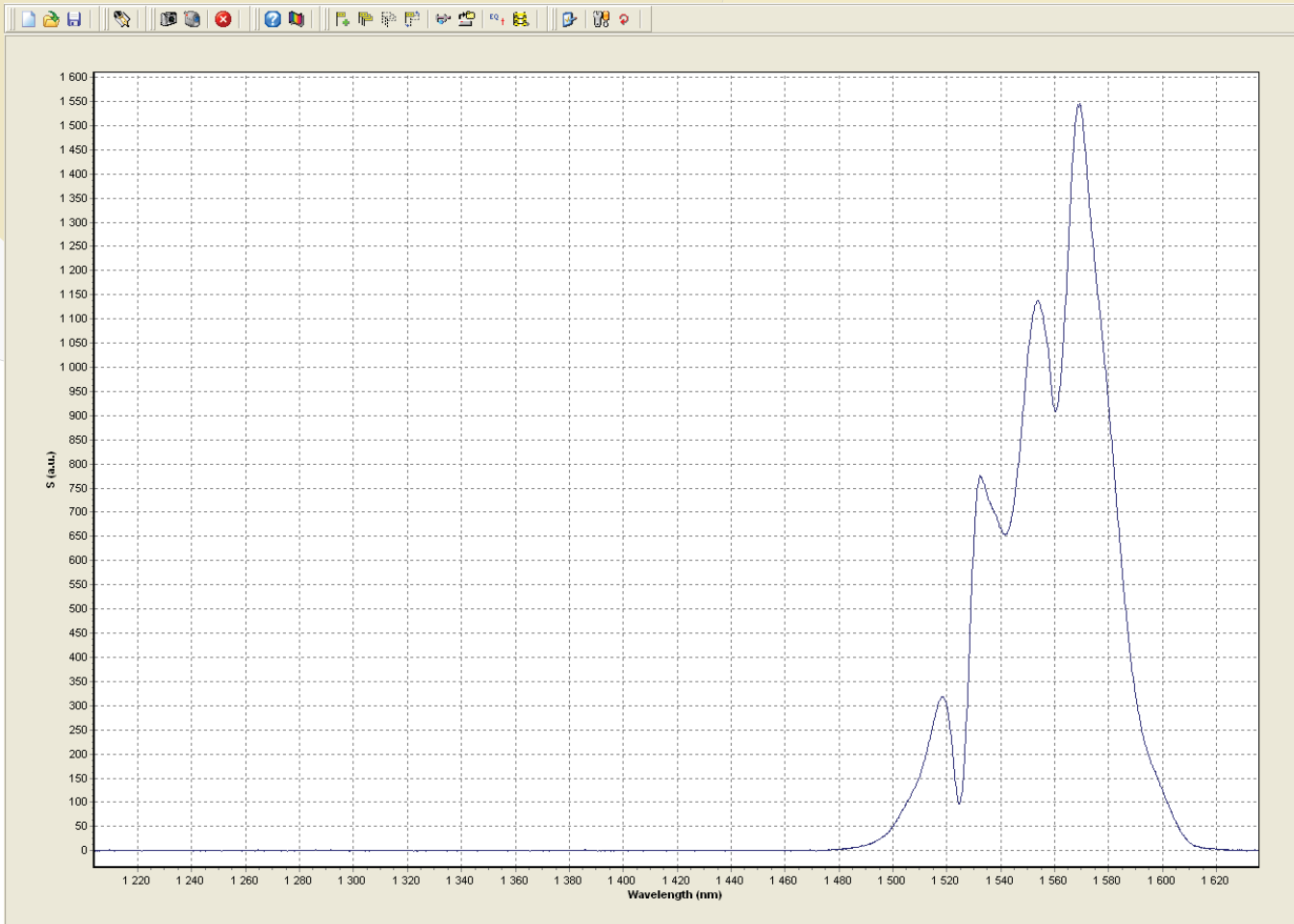
Product overview

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 0.35 nm.

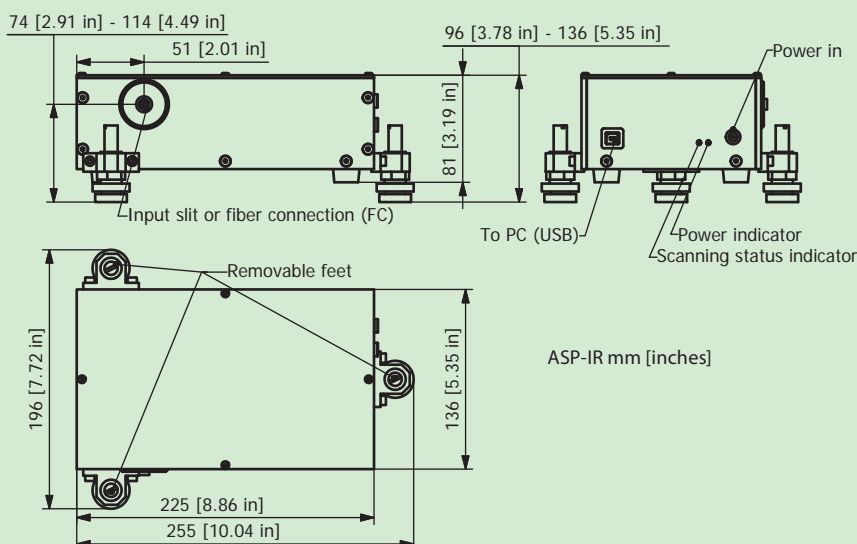
The ASP-IRF has a special fiber input, allowing measurement of either free-space or fiber signals without any realignment.

Wavelength range up to 3800 nm is also available upon custom orders.

ASP-IR technical specifications



Er fiber laser spectrum registered by ASP-IR



ASP-IR mm [inches]

	ASP-IR	ASP-IRS	ASP-IRHS
Optical scheme	Cherny-Turner		
Spectral range, nm	800-1680	500-1700	1200-2600 ⁽¹⁾
Grating, grooves/mm	600		400
Scanning speed, nm/s	up to 350		up to 500
Spectral resolution, nm (models with input slit)	0.35		0.6
Spectral resolution, nm (models with fiber input)	0.6		0.8 ⁽¹⁾
Registration system	InGaAs photodiode		
Input slit, μm	15		
Focal length, mm	150		
Output slit, μm	20		
Relative aperture	1:13		
Detector active area height, mm	0.5	1	0.5
Source pulse repetition rate, kHz	>30	any ⁽²⁾	any ⁽²⁾
Sensitivity threshold ^{*(2...4)} , nW (pJ)	90	2 (0.3)	90 (5)
Relative dynamic range ^{*(2, 3)}	10 ³	3 (1.6) x 10 ⁵	2.5 (0.4) x 10 ⁵
ADC	12 bit, 4096 counts	16 bit, 65536 counts	16 bit, 65536 counts
Fiber input ⁽⁵⁾	FC with 400 μm UV fiber cable (1 m)		
PC connection	USB		
Dimensions (L x W x H), mm	225x136x81		
Weight, kg	2.5		

1 – the ASP-IRHSF model with fiber input has spectral range of 1200-2200 nm

2 – ASP-IRS and ASP-IRHS two operational regimes: CW (repetition rate from CW down to 6 kHz) and pulsed (from single-shot to 10 kHz); the pulsed regime has external sync feature

3 – dynamic range for pulsed mode given in brackets

4 – sensitivity threshold (NEP) is given at input beam diameter ≈ 2 mm at peak sensitivity wavelength (ASP-IR/IRS – 1.5 μm, ASP-IRHS – 2.3 μm)

5 – models ASP-IRF/IRSF and ASP-IRHSF

* - typical values