

FT/IR-8X

Fourier Transform Infrared Spectrometer



Specifications

[Hardware]

Measurement wavenumber range: 7800 to 350 cm^{-1}

Measurement wavenumber extended range ^{*1} (optional): 25000 to 20 cm^{-1}

Resolution: 0.07, 0.25, 0.5, 1.0, 2, 4, 8, 16 cm^{-1}

Signal-to-noise ratio ^{*2}: 55000 : 1

Detector:

Standard: DLATGS (with peltier temperature control)

Optional: MCT-N, MCT-M, MCT-W, MCT-PV, Si photodiode (visible, near IR), InSb, InGaAs, DLATGS (PE window), Broad band DLATGS, Si bolometer, DLATGS (for micro measurement)

Up to 2 detectors can be mounted inside the main unit, and the external detector unit should be applied if more than 3 detectors are used (PC switching). There are some limited detectors for mounting inside the main unit, and up to 2 detectors can be mounted to external detector unit.

Beam splitter:

Standard: Ge/KBr

Optional: Broad band Quartz, Si/CaF₂, Broad band KBr, Mylar (5/12/25/50 μm , broad band), Mid-far IR broad band, (exchangeable, optional automatic beam splitter changer is available)

Light source:

Standard: High-intensity ceramic source

Optional: Halogen lamp (PC switching)

Interferometer:

28 degrees Michelson interferometer with corner-cube mirror, sealed structure (KRS-5 window, optional window is also available), auto-alignment mechanism, DSP control, gold mirror coating

Sampling signal laser

He-Ne laser

Sealing

Vacuum (optional)

Purging:

Interferometer, sample/detector compartment

A/D converter:

24 bit A/D converter

Drive method:

Mechanical bearing, electromagnetic drive

Drive speed:

0.125, 0.25, 0.5, 1, 2, 3, 4, 5, 6, 7, 8 mm/sec
Rapid scan: 32 mm/sec.

Rapid scan ^{*3} (optional):

40 spectra/sec. (16 cm^{-1} resolution)

Step scan ^{*4} (optional)

Time-resolved spectroscopy (TRS): 5 μsec .
(10 nsec. step scan option is also available.)

Vibration-proof:

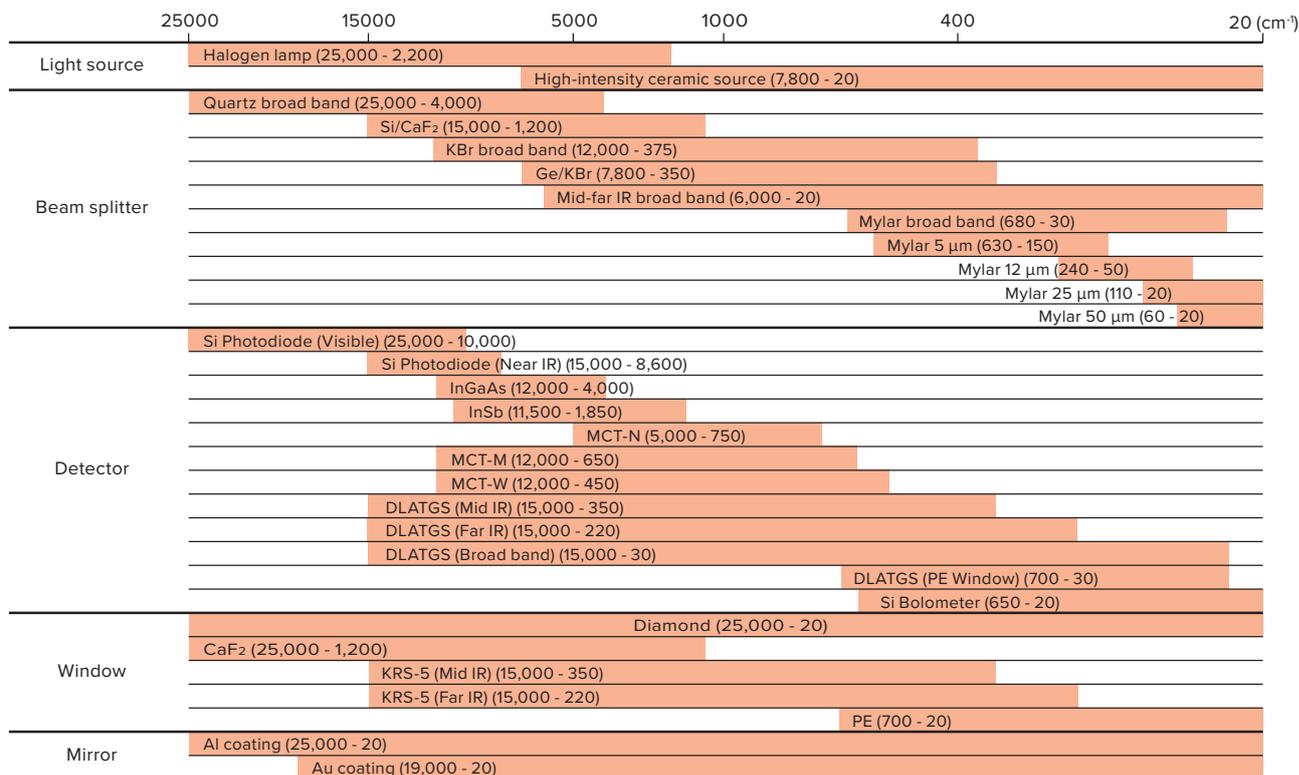
Vibration-proof design mounting

Dimensions and weight	FT/IR-8X purge model: 600 (W) × 690 (D) × 315 (H) mm, 56 kg FT/IR-8X V Interferometer vacuum model model: 600 (W) × 690 (D) × 315 (H) mm, 58 kg FT/IR-8X FV full vacuum model: 600 (W) × 700 (D) × 355 (H) mm, 70 kg Power supply unit: 85 (W) × 260 (D) × 197 (H) mm, 4.7 kg
Required power	AC 100 to 240 V, 50/60 Hz, maximum 180 VA
Operation environment	Temperature: 17 to 27 °C / humidity: less than 70 %

[Data processing]

Software:	JASCO Spectra Manager Ver.2.5 *5
Operating system:	Windows 10 Pro (64-bit)

- *1 Aluminum coating mirror is used.
- *2 Measurement condition: 4 cm⁻¹ resolution, 1 minute accumulation, near 2200 cm⁻¹, P-P
- *3 Performance of rapid scan function was evaluated when installing Ge/KBr beam splitter. MCT detector is also required.
- *4 MCT detector is required.
- *5 JASCO can provide Spectra Manager Ver.2.5 CFR which is compliant with FDA 21 CFR PART 11.



Available range of optical elements (FT/IR-8X)

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