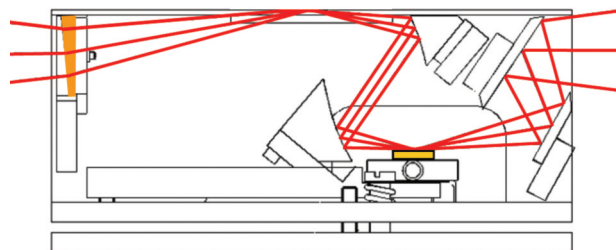
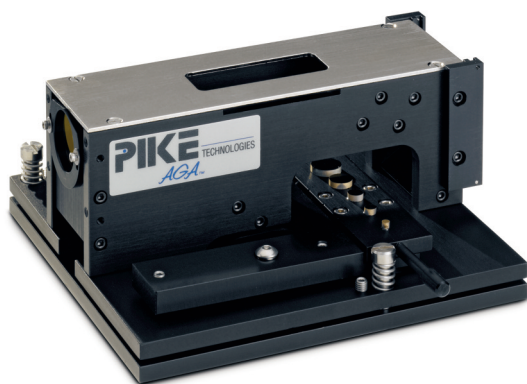


AGA – Advanced Grazing Angle Specular Reflectance for Thin Films with Precise Spot Control



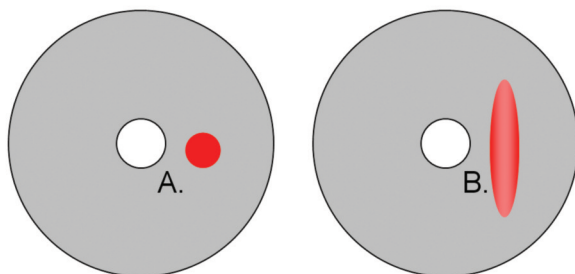
Beam path within the AGA – Grazing Angle Specular Reflectance accessory

The beam from the spectrometer is focused onto the pin mirror. The angle of incidence is equal to 80 degrees. The portion of the beam that is reflected from this mirror is imaged at unit magnification onto the sample, striking it at the same 80 degrees. Thus, the beam at the sample position is uniform and circular in dimension – providing excellent quantitative results for the defined sample area.

FEATURES OF THE AGA

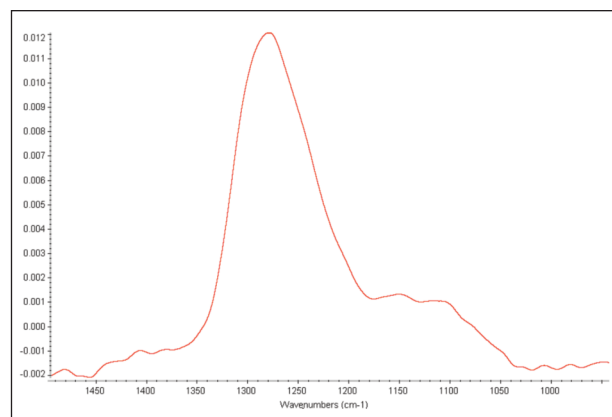
- Quantitative measurement of small areas of thin films and mono-molecular layers
- Fixed 80 degree angle of incidence
- Measurement of lubricants on hard disks
- Sampling dimensions selectable from 1/8", 3/16", 1/4", 3/8" and 1/2" sizes
- Polarizer mount for optional polarizer
- Baseplate mount design for stable operation and collection of high quality spectra – fits all FTIR spectrometers
- Spectral range 10,000–500 cm^{-1}

The PIKE Technologies AGA – Advanced Grazing Angle specular reflectance accessory is a novel instrument designed for quantitative measurement of spatially defined areas of thin films on reflective substrates. Traditional grazing angle accessories produce a sampling area which is elliptical in shape and non-uniformly illuminates the sample area. This large asymmetrical sampling area causes problems when quantitative analysis are to be performed on small sample areas.



Sampling image on a hard disk surface produced by (A) the spatially resolved AGA and (B) a traditional grazing angle accessory

The Advanced Grazing Angle (AGA) accessory has been designed to overcome this deficiency. The size and shape of the illuminated spot on the sample is defined by the optics contained in the accessory. The AGA optical design uses primary imaging from one of 5 user defined, slide-mounted pin mirrors selectable from 1/8" to 1/2".



FTIR spectrum of an 18 angstrom thick lubricant on hard disk measured in 15 seconds using a MCT detector

ORDERING INFORMATION

AGA Accessory

PART NUMBER DESCRIPTION

015-10XX	AGA – Grazing Angle Specular Reflectance Accessory Includes: 5 selectable spot sizes of (1/8", 3/16" 1/4", 3/8" and 1/2"), gold substrate alignment mirror, polarizer mount and FTIR base mount.
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Notes: Select FTIR XX code from the last page of this catalog.

AGA Replacement Parts and Sampling Options

PART NUMBER DESCRIPTION

300-0002	Gold Substrate Alignment Mirror (1.25" x 3.0")
090-1000	Manual Polarizer, ZnSe
090-1200	Manual Polarizer, KRS-5

Notes: For other polarizer options see PIKE Technologies polarizer section of this catalog.