

VeeMAX II – The Ultimate Specular Reflectance Accessory!

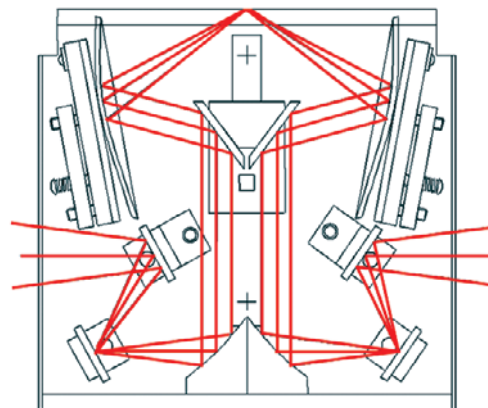


FEATURES OF THE VEEMAX II

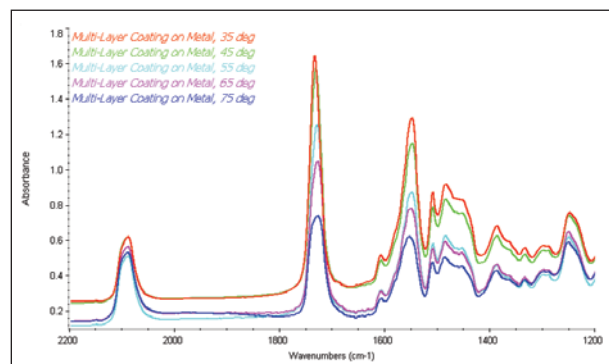
- Selectable angle of incidence – from 30 to 85 degrees in one degree increments
- Measurement of thin films and monolayers to relatively thick films
- Optimize specular reflectance results with selectable angle of incidence
- Integrated position for IR polarization – essential for monolayer analysis and study of sample orientation
- Optional single reflection ATR crystals – see ATR section
- Motorized version option with electronic control module and AutoPRO software for automated, high-precision experiments
- Sealed and purgeable optical design to eliminate water vapor and carbon dioxide interferences

The PIKE Technologies VeeMAX™ II is a high performance and highly versatile specular reflectance accessory designed to analyze a wide range of samples. From monolayers to relatively thick films, the VeeMAX II with variable angle of incidence can be optimized for all specular applications. The unique optical design of this product (U.S. Patent No. 5,106,196) enables the accessory to be in alignment for all angles of incidence. The angle may be varied continuously from thirty to eighty five degrees by the rotation of a single control. The sample is placed face down on the sampling surface. Because of the unrestricted access to the sampling area, large samples may be readily analyzed. To suit different sampling geometries, masks with 2", 5/8", 3/8" and 1/8" apertures are provided. Thanks to the optical design of this accessory, excellent throughput is available even at high angles of incidence. The VeeMAX II has a built-in polarizer mount to permit selection of polarization angle without disturbing purge.

An optional motorized version of the accessory is available. It features a stepper motor with complementary electronics, Motion Control Unit, and PIKE Technologies AutoPRO software. In this combination, operation of the VeeMAX II can be integrated with the spectrometer software, which allows the operator to precisely and reliably control a wide range of angles of incidence and data collection simultaneously from the computer keyboard.



Proprietary beam path within the VeeMax II Specular Reflectance accessory



Optimization of the analysis of a multi-layered coating on metal substrate using the VeeMAX II

ORDERING INFORMATION

VeeMAX II Accessory

PART NUMBER	DESCRIPTION
013-10XX	VeeMAX II – Variable Angle Specular Reflectance Accessory Includes sample masks (2", 5/8", 3/8" & 1/8"), gold substrate alignment mirror, FTIR base mount, and purge tubes.

Notes: Please see the FTIR instrument code sheet.

VeeMax II Sampling Options

PART NUMBER	DESCRIPTION
013-2800	Motorized Upgrade for VeeMax II
090-1000	Manual Polarizer, ZnSe
090-2000	Automated Polarizer, ZnSe

Notes: Motorized Option includes PIKE Technologies AutoPRO software and controller. Other polarizer options are found in the polarizer section of this catalog.

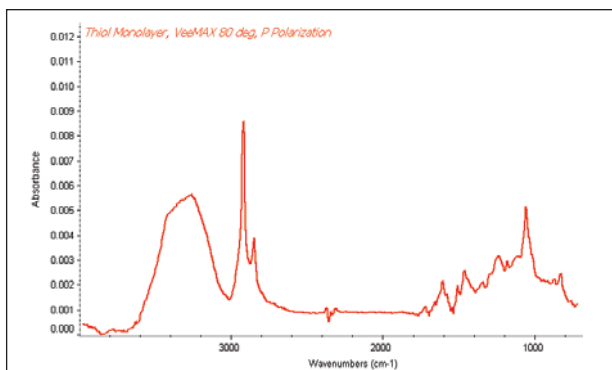
VeeMax II Replacement Parts

PART NUMBER	DESCRIPTION
013-4010	VeeMax II sample masks (2", 5/8", 3/8" & 1/8")
300-0002	Gold Substrate Alignment Mirror (1.25" x 3.0")

Notes: Please contact PIKE Technologies for items not described in this list.

Changing the angle of incidence with the VeeMAX II is very easy. With this research grade specular reflectance accessory, one can measure film thickness ranging from relatively thick to relatively thin, including monolayers, by selecting the optimal angle of incidence for the measurement.

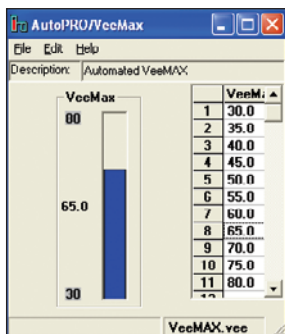
The variable angle of incidence can be controlled manually or with an optional motorized attachment for the VeeMax II. Multiple specular measurements at different angles of incidence can be fully automated with the motorized version and PIKE Technologies AutoPRO software. Automation streamlines the collection of spectra from multiple angles of incidence. With the automated VeeMax II accessory, the entire experiment can be pre-programmed and executed by the computer.



FTIR spectrum of thiol monolayer measured using the VeeMAX II specular reflectance accessory set at 80 degrees angle of incidence, ZnSe polarizer and MCT detector.

Advantages of the automated VeeMax II system include:

- Computer controlled precision, accuracy and repeatability
- Synchronization of mirror position changes with collection of sample spectra
- Full integration of the PIKE Technologies AutoPRO software with FTIR spectrometer programs
- Tailor made, predefined experiments
- "Hands-free" operation



AutoPRO Software control of VeeMax II angle of incidence for automated specular reflectance studies – automated polarizer available