

# UMA 400

## The FTIR Microscope designed for the way you work today — and for the way you want to work tomorrow.

You can now have a superior entry into research FTIR microspectroscopy at a price associated with less powerful and sophisticated systems. The UMA 400 microscope accessory from Digilab® offers a feature set that grows as your needs and capabilities grow. With its infinity corrected optics and advanced optical design, the UMA 400 gives you the flexibility to do single point analysis today and infrared spectrochemical imaging tomorrow.

### Advanced. Unique. Successful.

The technology behind the UMA 600 and 400 is backed up by several patents.

- Imaging ATR Spectrometer E. Michael Burka, U.S. Patent 6,141,100 -October 31, 2000
- Sample-masking using wavelength-selective material David C. Brown, U.S. Patent 5,295,017 -March 15, 1994
- Optical instrument providing combined infrared and Raman analysis of samples Ronald Y. Sostek, U.S. Patent 5,841,139 -November 24, 1998

### Features

Advanced optical design eliminates stray light and the need for redundant aperturing.

Matched cassegrain condenser, objective and detector optics for diffraction limited performance.

High sensitivity, wide spectral range detector for analysis of samples in the entire mid-infrared range.

Infinity-corrected, all-reflecting optics, provides the ultimate in detectability and throughput without the need for dichroics.

Upgrade to a motorized aperture and computer control of the microscope.

### UMA 400 Specifications System Type

Universal infrared microscope with infinity-corrected, all-reflecting optics that can operate in either transmission or reflection mode.

Designed to meet imaging standards, the user-friendly microscope can be mounted on either the right or the left side of an Excalibur spectrometer.

### Main Objective

15x all-reflecting on-axis Schwarzschild objective with a high numerical aperture for both IR analysis and viewing.

### Binocular and Eyepieces

Binocular viewer with 10x eyepieces is standard.

### Condenser

On-axis all-reflecting Schwarzschild objective with independent vertical motion to compensate for sample thickness.

### Detectors

The standard, single detector plate can accommodate any single point detector. Included is a 250 micrometer square wide band MCT detector with on-axis Schwarzschild objective for optimal IR performance. The UMA 400 can also be field-upgraded to infrared focal plane array (FPA) detectors to suit the experiment.

### Aperture

The UMA 400 is available with a four blade rectangular aperture which can be controlled with micron precision, and can be rotated to any angle to match precisely to a sample.

### Maximizing Your investment.

**Upgradability** — All the revolutionary advantages of the UMA FTIR 600 are easily available to you, once you decide you're ready to upgrade.



**Sensitivity** — analyze samples in the entire mid-infrared range.

**High-quality results** — The data you collect is optimal.

**Time savings** — Dual detector capability makes detector changes much faster, and optical zoom increases flexibility without physically having to change the objective.

**Simplicity** — Minimum operator training is required to achieve high quality spectra.

**Convenience** — Exclusive spreadsheet integration of spectral data and images enables easy recall and meets SOP, GLP and ISO-9000 requirements.





### Digilab® Service Feature — Field Upgradability

All the revolutionary advantages of the UMA FTIR 600 are easily available to you, once you decide you're ready to upgrade — and all upgrades can be completed in the field, minimizing your downtime. Examples of field-upgradability options include:

- Video camera
- Computer control
- ATR.

After those three options, the UMA 400 can be upgraded as a package to a UMA 600 and then up to autofocus and imaging.



## UMA 400/600

The FTIR Microscope Family

Digilab®

# Digilab®

Digilab is an ISO 9001 registered manufacturing, service and engineering facility. The UMA 400 is CE marked. We adhere to these procedures to maintain the highest standards in the design, support and manufacture of our products, to assure you the highest levels of customer satisfaction.

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