



# Leeds Forensic Imaging Product Line



LCF3



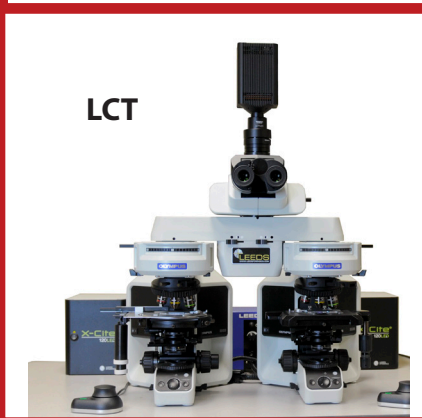
LCF2



Discovery



Discovery-Z



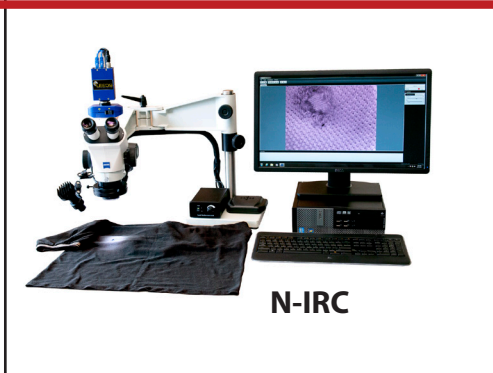
LCT



Trace-Z



LSV2



N-IRC

Leeds Forensic Systems manufactures and distributes **forensic comparison microscopes and imaging systems** for laboratories and educational institutions.

Leeds imaging line includes:

**Firearms comparison microscopes based on Olympus optics:**

- LCF3
- LCF2

**and firearms comparison microscopes with Zeiss optics**

- Discovery
- Discovery-Z, with motorized stages

Leeds offers **two trace evidence comparison microscopes**

- LCT built with Olympus components
- Trace-Z built with Zeiss components.

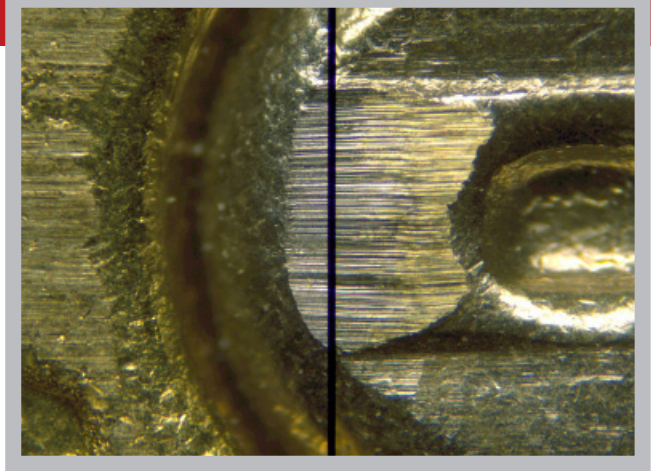
Leeds **imaging systems** include:

- LSV2, a multi-wavelength system for imaging large scale pieces of evidence
- N-IRC, a near-infrared imaging system with camera and software built around the Zeiss stereo microscope.

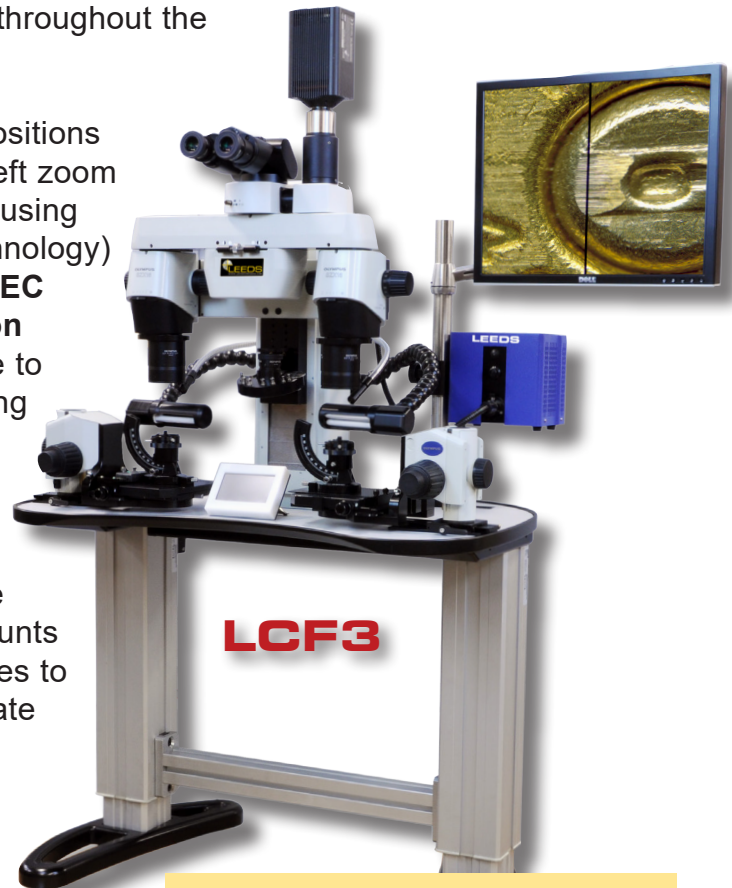
**Leeds also sells 'free-standing' microscopes -- not part of a comparison scope system.**

Get the full story on all our products at [www.leedsmicro.com](http://www.leedsmicro.com).

# Firearms & Tool Marks Comparison Microscopes with **Olympus Optics**



- The LCF3 firearms & tool marks comparison microscope is built with **Olympus** apochromatically-corrected optics, providing crisp, aberration-free, high-resolution images. The macro bodies, with a 16:1 zoom ratio and built-in aperture diaphragms, provide the examiner with 14-matched magnification positions. The optics are parcentric and parfocal throughout the zoom range.
- Leeds' technicians align all 14 of the click-stop positions to assure that the magnification of the right and left zoom bodies are matched. This matching is completed using N.I.S.T. (National Institute of Standards and Technology) traceable standards and Leeds provides an **ISO/IEC 17025:2017 accredited Certificate of Calibration** with each LCF3. Optional objectives are available to provide alternate magnification ranges and working distances.
- **ERGONOMIC:** Low-profile stages help maintain an ergonomic viewing position. The mechanical stages and focus units are positioned to minimize repetitive hand-over-wrist motions. The stage mounts are placed on adjustable posts, allowing the stages to be removed from the work surface to accommodate large samples.
- The LCF3 optical bridge produces an erect, un-reversed image with a large 22mm field of view. Compared images can be viewed as 100% right, 100% left, and divided or overlapped into any ratio.
- The Leeds mask adjuster allows the examiner to intuitively manipulate the percentage of the right or left image being reviewed by sliding the adjuster right to left.



Designed for the cost-conscious forensic lab, the **LCF2** is a powerful comparison microscope with a 10:1 zoom ratio, built-in aperture diaphragms, and a 26" x 35.5" wood laminated table with motorized height control.



# Firearms & Tool Marks Comparison Microscopes with **Zeiss Optics**

**Leeds Discovery** is built with **Zeiss** high resolution, apochromatically-corrected optics. The Discovery zoom optics have a 20:1 ratio, with a primary magnification range from approximately 7.3x to 146x (with the 1.0x objective) -- an unparalleled feature in zoom comparison microscopes.

The system's motorized, zoom bodies ensure the highest degree of magnification reproducibility with over 900 matched-magnification set points (with the 1.0x objective) providing high-contrast, in-focus images throughout the entire zoom range.

The Discovery has 15 pre-programmed magnification set points and ten additional user-programmable magnification set points.

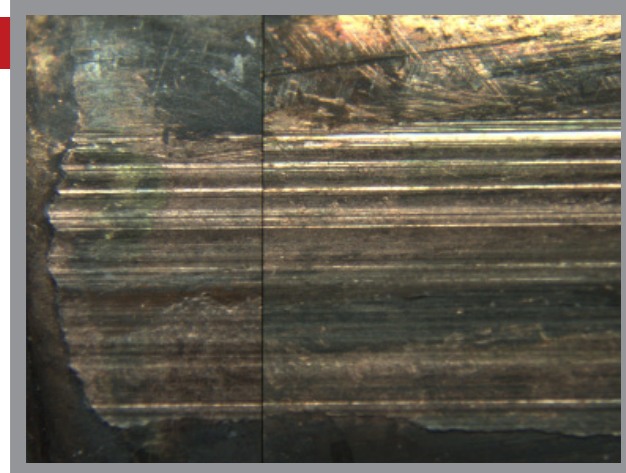
Producing an erect, un-reversed image with a 23mm Field Number (FN) eyepiece, the Discovery and Discovery-Z have the largest FN available on a firearms comparison microscope in today's marketplace. This magnification is 9.3% larger than a 22mm FN eyepiece.

## The Discovery-Z is a *motorized* firearms and toolmarks comparison microscope.

The **motorized stages** of the Discovery-Z directly interface with the Zeiss Zen software, allowing examiners automated control of Z-stack, stitched and panoramic image capabilities.

Designed with real-time, tactile controls, the Discovery-Z motorized stage controls provide a feeling similar to controlling a non-motorized stage. Positionable magnetic controls can be adjusted for the most comfortable and ergonomic position on the work station.

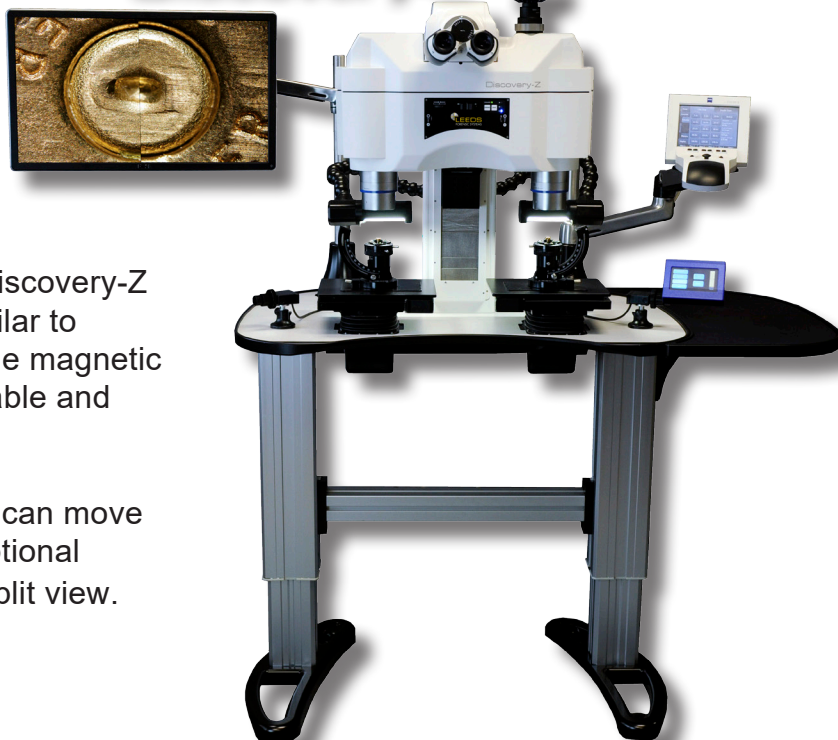
With the push of a button, Discovery-Z stages can move either simultaneously or independently. An optional Camera Port offers 70%/30% ratio of optical split view.



**Discovery**

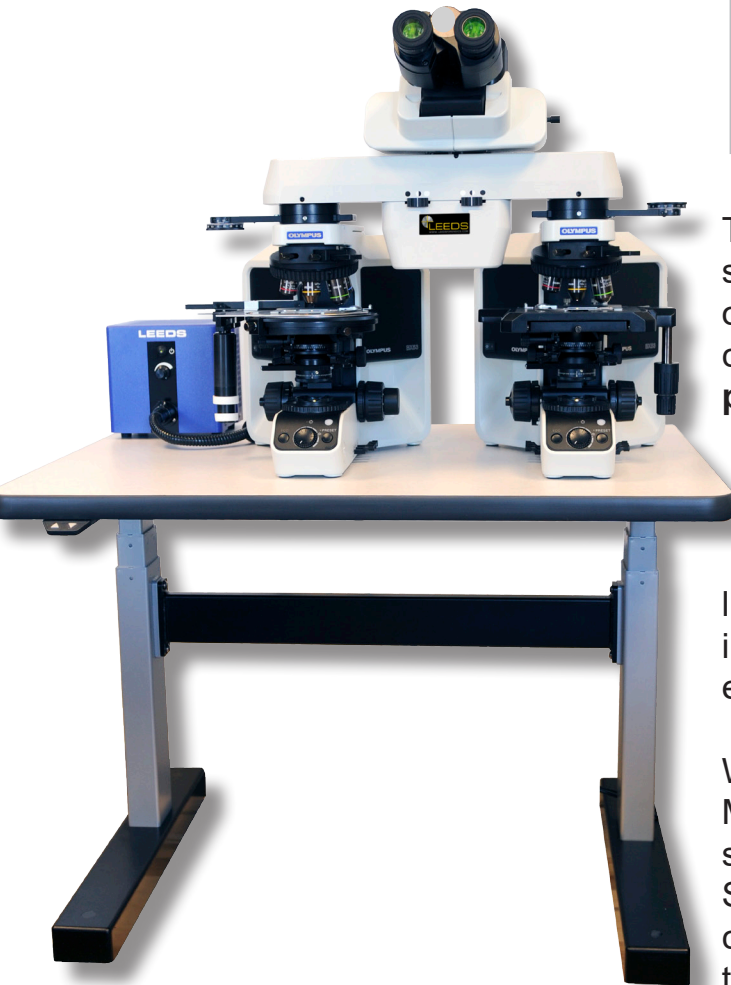
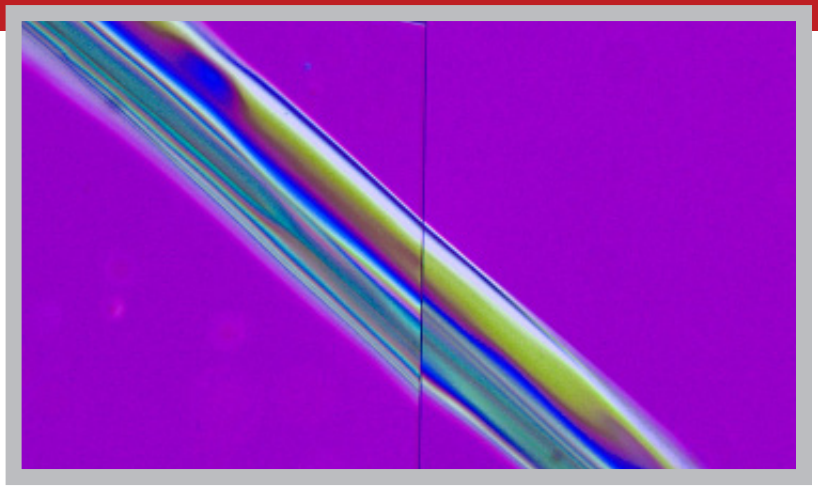


**Discovery-Z**



# LCT

## Trace Evidence Comparison Microscope with **Olympus Optics**

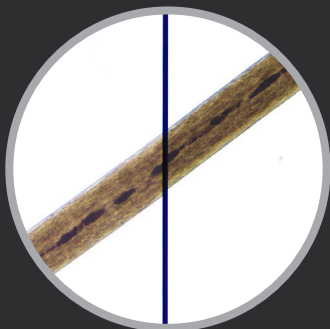


The Leeds Trace Evidence Comparison Microscope (LCT) is designed for forensic science and other science disciplines that analyze the critical comparison of **specimens such as hair, fibers, paint chips, plant matter and soil.**

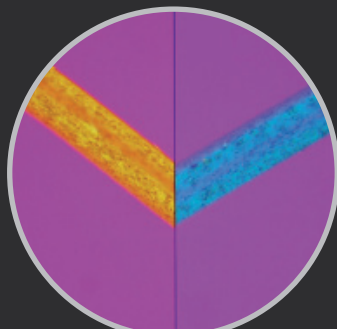
The LCT's high-quality optical system provides superior color and intensity balance requiring no adjustment by the operator. Providing a large 22mm field of view, and an erect, unreversed image, the LCT allows the operator to quickly and easily manipulate specimens for examination.

With the Leeds Trace Evidence Comparison Microscope, two specimens can be viewed as split-field, superimposed, or individual images. Separate, bridge-marked, slide controls allow for continuous adjustment from 100% of the left image to 100% of the right image, or any position in between.

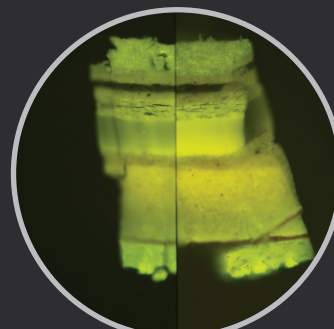
Visit [www.leedsmicro.com](http://www.leedsmicro.com) to learn about optional imaging configurations for the LCT.



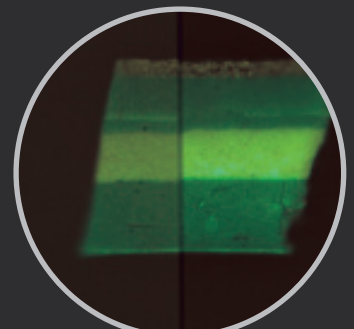
Brightfield image



Polarized light image



Fluorescence light paint section samples



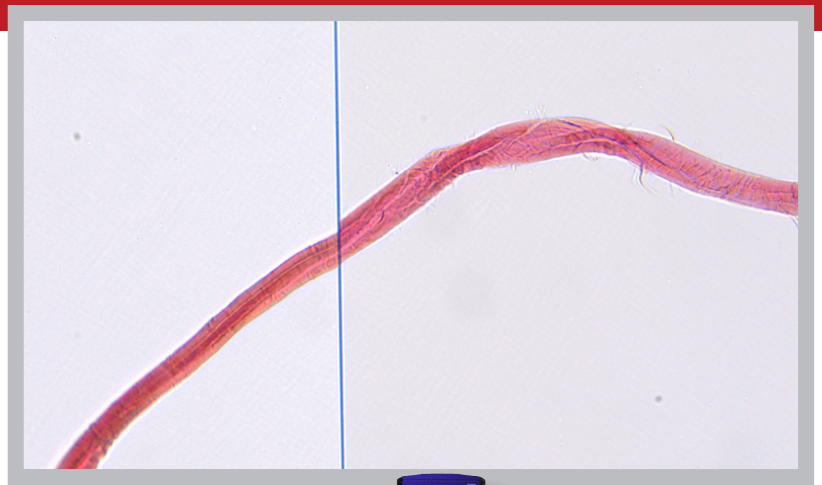
Polarized light image

# Trace-Z Evidence Comparison Microscope with **Zeiss Optics**

Leeds Trace-Z is a trace evidence comparison microscope using Zeiss optics. The Trace-Z offers superior color and intensity balanced images, and can be configured based on an examiner's needs. The Trace-Z includes an industry-leading **23mm field of view** and images can be viewed as 100% right, 100% left, divided, or overlapped, in any ratio the examiner needs.

## Additional features include:

- **Built-in phototube Camera port**, allowing images to be viewed by the observation head, the camera, or both observation head and camera simultaneously.
- **Optional Dual-View microscope configuration** with illuminated LED arrow to aid in indicating specimen features.
- **A motorized, sweeping mask adjustor** allows the examiner to single-handedly control the image dividing line and overlay.



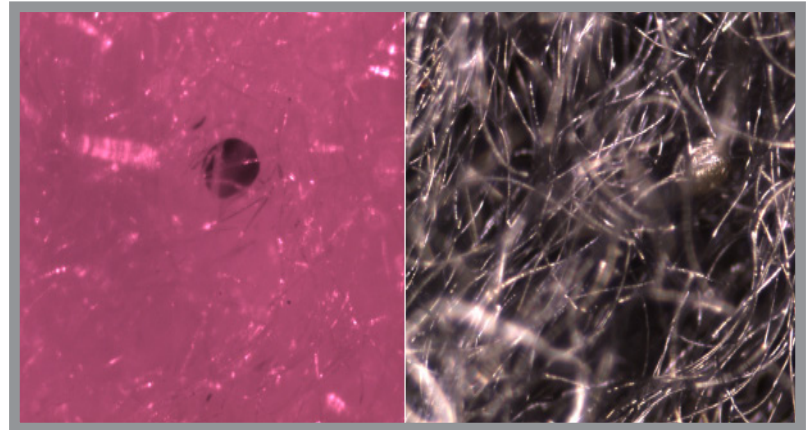
# Leeds N-IRC

## Near-Infrared Stereo Microscope with color **Camera & Software Kit**

Our N-IRC near-infrared (n-IR) and white light imaging kit provides a single CCD color camera yielding real time, high contrast, visible light (color) and n-IR images.

Leeds N-IRC kit is ideal for forensic examiners using IR imaging for the location, analysis, and documentation of blood spatter and gun shot residue.

The **Leeds N-IRC kit includes** the camera and the Leeds Vision and Annotation Software and is designed for the Zeiss Stemi 2000 stereo microscope.



All Software measurements include an **ISO/IEC 17025:2017** accredited certificate of calibration traceable to N.I.S.T. (National Institute of Standards and Technology) standards.



# LSV2

## Alternate Light Source Imaging Tool

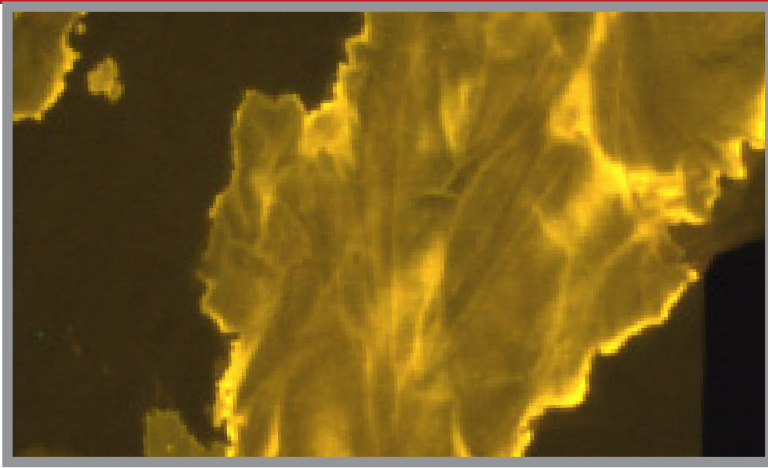
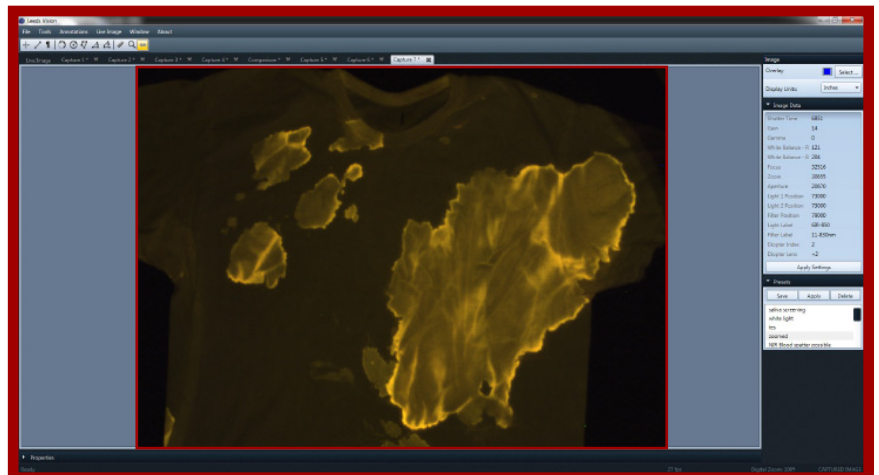
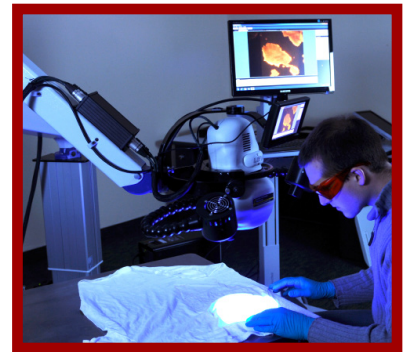
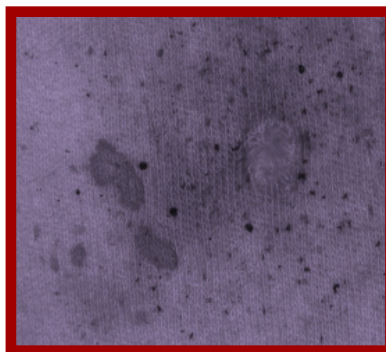


The Leeds Spectral Vision System is a multi-wavelength viewing and imaging device used to highlight bodily fluids, victim bruises, bite marks, trace evidence, accelerants, explosives, and gunshot residue on various types of samples. LSV2 provides more functionality to the forensic laboratory than ever before.

**The LSV2 Advantage:** With its freely-rotating gimble system, providing over 59" of horizontal reach and 46" of vertical height adjustment, the LSV2 has a massive reach and spread allowing it to easily cover evidence tables.

### LSV2 Software Capabilities:

- Gamma, gain, white balance and exposure settings include lens and light control.
- Standard measurement functions include
  - 3-point circle, point-to-point,
  - 2-point circle, and angles
- Saves to standard formats (JPEG, TIFF, PNG, BMP) for both single, and comparison images.
- Metadata for all camera settings and software functions included with captured images.



# Zeiss Free-Standing Microscopes

Leeds is a proud dealer of Zeiss microscopes in forensic laboratories throughout the United States.



We make it visible.

Zeiss Axio A1 microscope



Zeiss Discovery V12 microscope



## Stereo Microscopes with Unitron, Accu-Scope or Zeiss

Leeds also offers modular stereo systems -- built using **your choice** of microscope:

- **Unitron 645**
- **Zeiss Stemi 508**
- **Accu-Scope**

The long 24.5" reach of the Leeds articulated and jointed boom arm enables you to extend your optics out over a large sample. Then, the system easily folds out of the way when not in use.

The arm is supported with our large **16" x 28" base** with a 15" or 24" mounting post, providing stability and versatility for even your most challenging samples. The post can be positioned in 3 different locations on the bread board. Lighting and contrast are provided by a

high intensity **dual row LED ring light, with quadrant and intensity control.** Completing the package are an 11" monitor, along with a **6mp camera** to record images to an SD card. The camera is supplied with software to allow integration with a PC, if desired.





# Tagarno Digital Microscopes

When you want/need portability, 'plug and play' convenience, or to see everything on a screen, (in a training or group situation) the digital microscope is the way to go!

TAGARNO's forensic microscopes are an excellent tool for forensics crime labs to exploit the **Locard's Exchange Principle** – regardless of the discipline in which the labs specialize.

When used in combination with near-infrared (used for GSR Gun Shot Residue) and white ring lights, a TAGARNO microscope is easy, convenient, and has auto-focus.

**\* ZIP** -- Magnification between 1.7x and 53x. Very portable, the ZIP weighs only 4.4 lbs with USB 3.0 connectivity. Folds & fits into a briefcase or backpack. Can capture photos when connected to an external computer.

**\* TREND** -- Large working area with long-arm camera. No external computer needed to capture photos or run software. Field of view from 0.16" up to 16.10".



**\* MOVE** -- Flex arm allows easy repositioning. No external computer needed to capture photos or run software. Field of view from 0.16" up to 16.10".

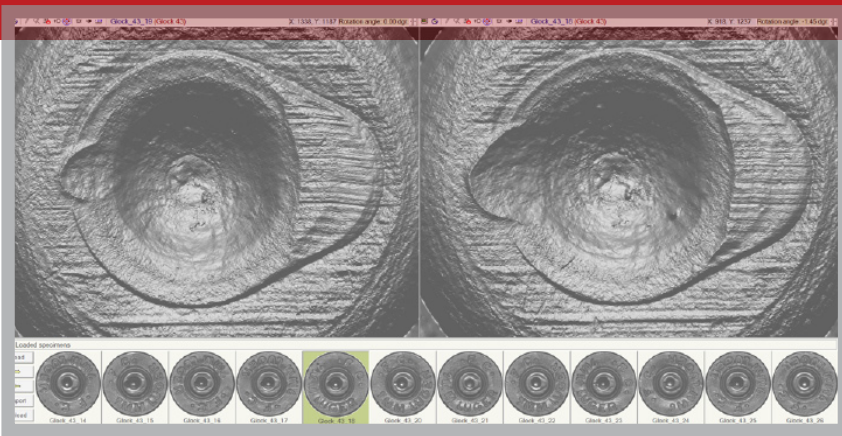


**\*T50** -- Displays a truly live, near-zero latency image with 4K/60 frames per second. T50 can detect if your sample is no longer in focus and will automatically readjust itself to the correct working height.



# EVOFINDER

Automated Ballistic Identification



Evofinder® Automated Ballistic Identification system is a scanning device that **generates digital images of bullets and cartridge cases** for examination, comparison, and correlative searches within existing databases.

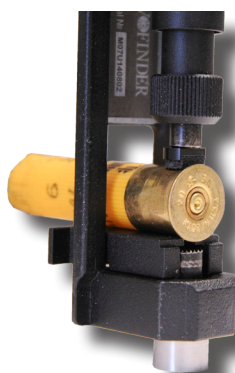
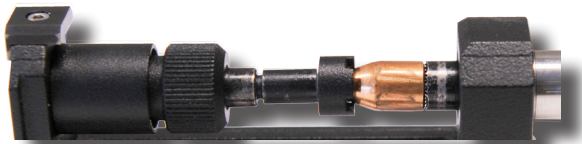
The Evofinder® 4-motor mechanics provide high-quality recording of bullets, even including heavily deformed ones, and allows the use of a universal cassette to mount and orient both types of samples in the scanning device. (shown below) The Evofinder® is a compact, light weight, and portable system.

The Evofinder® configuration is based on three main integral parts, which are network-connected:

1. Specimen Analysis System (SAS)
2. Data Acquisition Stations (DAS)
3. Expert Workstations (EWS)

Built with advanced manufacturing sciences and modern computer technologies the Evofinder® provides:

- High quality images.
- Fast imaging processing.
- Highly effective correlated searches.
- Ability to examine and compare images directly.
- Streamlined interface.
- Easy usage.
- Robust design.
- Compact size and lightweight for portability, in an easy-to-carry case.
- Reasonable price.



**Leeds is the exclusive North American distributor of Evofinder® Ballistic Identification System (BIS)**

# Moveed®

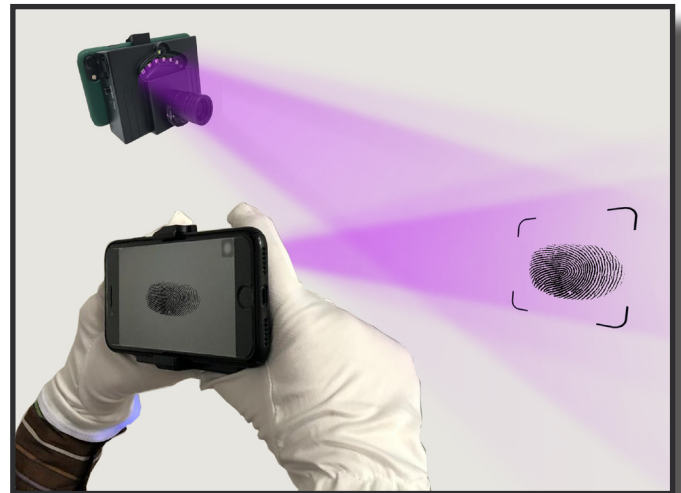
Portable  
Forensic Lights  
& Forensic Alternate Light Sources



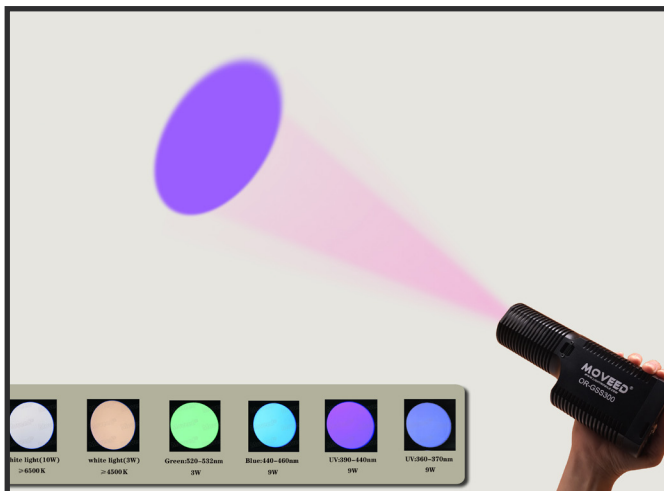
### Portable Laser



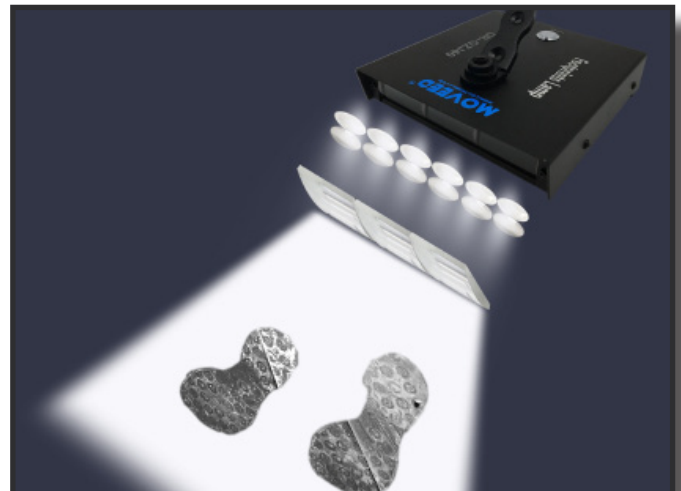
### Portable Imaging System



### 6-Band Light Source



### Wide Footprint Light



Leeds is the exclusive distributor Moveed Forensic Lighting Equipment in the USA.

Contact us to learn more: 763-546-8575 or [sales@leedsmicro.com](mailto:sales@leedsmicro.com)

# Call on Leeds to Keep Your Microscopes in Perfect Working Order

Microscopes are precision instruments, requiring regular maintenance. Leeds highly experienced service staff provides quality repair, preventative maintenance, and service of microscopes. **Leeds provides services for all makes and models of microscopes nationwide.**

Leeds has been certified by Perry Johnson Laboratory Accreditation, Inc. (PJLA) and meets the requirements of international standard ISO/IEC 17025:2017.

**Leeds services include inspection and adjustment for:**

- Illumination system
- Electrical system
- Mechanical functions and adjustments
- All lubrication points
- Alignment of optical path
- Cleaning of internal optics as required
- Cleaning of all external surfaces

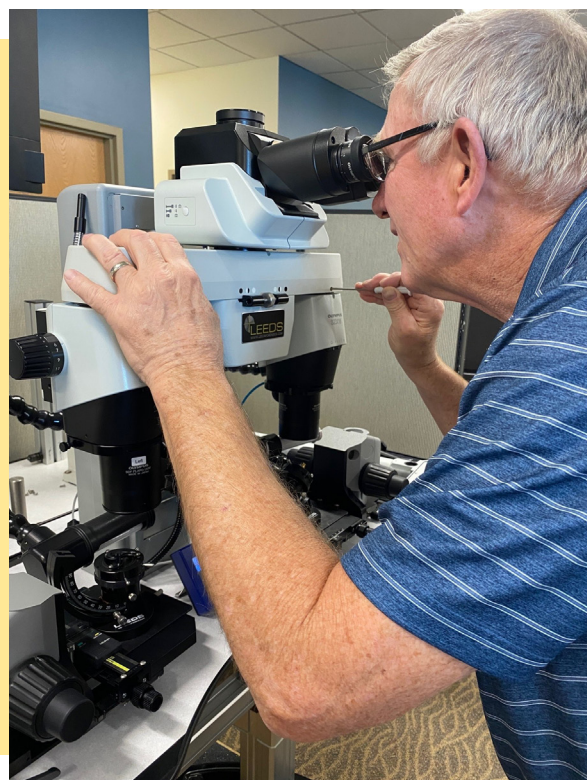


**Trained & certified technicians**

**Annual and multi-year service packages**

**On-site training & support**

**Equipment Relocation services**



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