

From Eye to Insight

*Leica*  
MICROSYSTEMS

# OPTIMIZE YOUR WORKFLOW IN INSPECTION & REWORK

S9 i, S9 D, and S9 E stereo microscopes





DEVELOPED TO  
BOOST EFFICIENCY



# OPTIMIZE YOUR WORKFLOW

## Work up to 20% faster with S9 series stereo microscopes\*

Continuously improving production, keeping defect rates low, and fulfilling customer requests in order to stay competitive can be very challenging. Leica has developed the S9 stereo microscope series to help you cope with these challenges.

The microscopes feature outstanding optical quality and FusionOptics technology for a three times greater depth of field. With a larger area in sharp focus, operators can immediately identify defects with fewer time-consuming microscope adjustments.

## Eliminate extra steps in your workflow ...

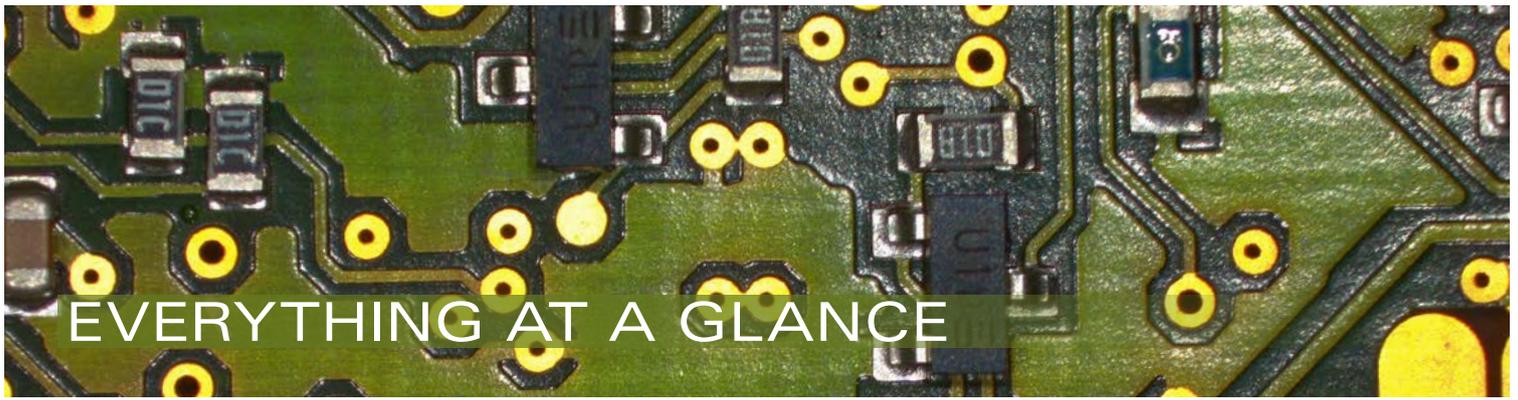


Example of a standard workflow in stereo microscope inspections\*

## ... boost efficiency with the S9 series and save up to 20% of your time\*



\* compared to the S6 standard industrial stereo microscope from Leica



### See details faster to locate issues

No refocusing is needed to see all details within a height of up to 12 mm sharply in focus. The unique FusionOptics technology from Leica overcomes optical limitations. Operators will experience a more natural viewing perception, allowing them to work more efficiently.

### Shift quickly from overview to detail

The S series offers high magnification of up to 55x in combination with a large 9:1 zoom range. This limits workflow interruptions from microscope adjustments and enables operators to inspect parts of different sizes more quickly.

### FusionOptics technology from Leica

Conventional stereo microscopes have two identical beam paths that reveal a spatial impression of the sample. FusionOptics technology takes advantage of a neurological phenomenon: the microscope's **left beam path shows** an image with **great depth of field**, while the **right beam path shows** an image with **high resolution**. The human **brain** then effortlessly **combines the information from both channels into one image**. This results in an image perception with high resolution and a great depth of field at the same time – an unparalleled Leica standard in stereo microscopy.

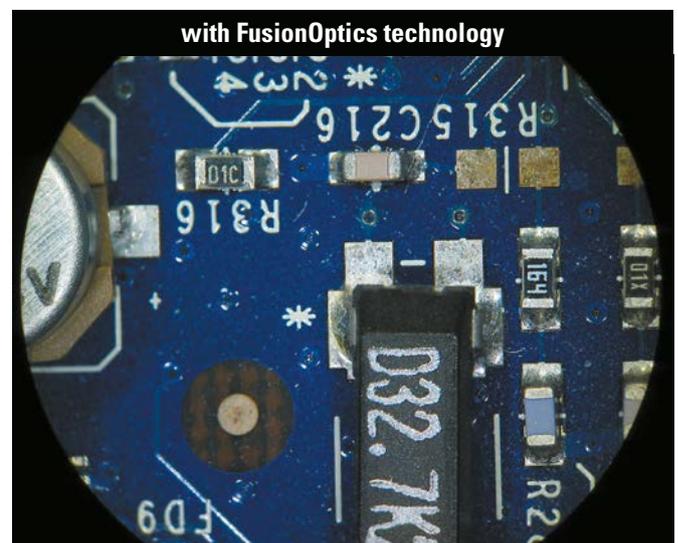
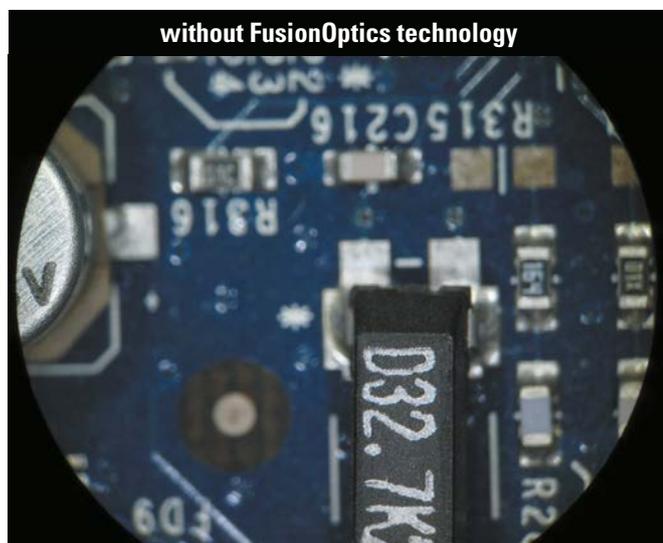
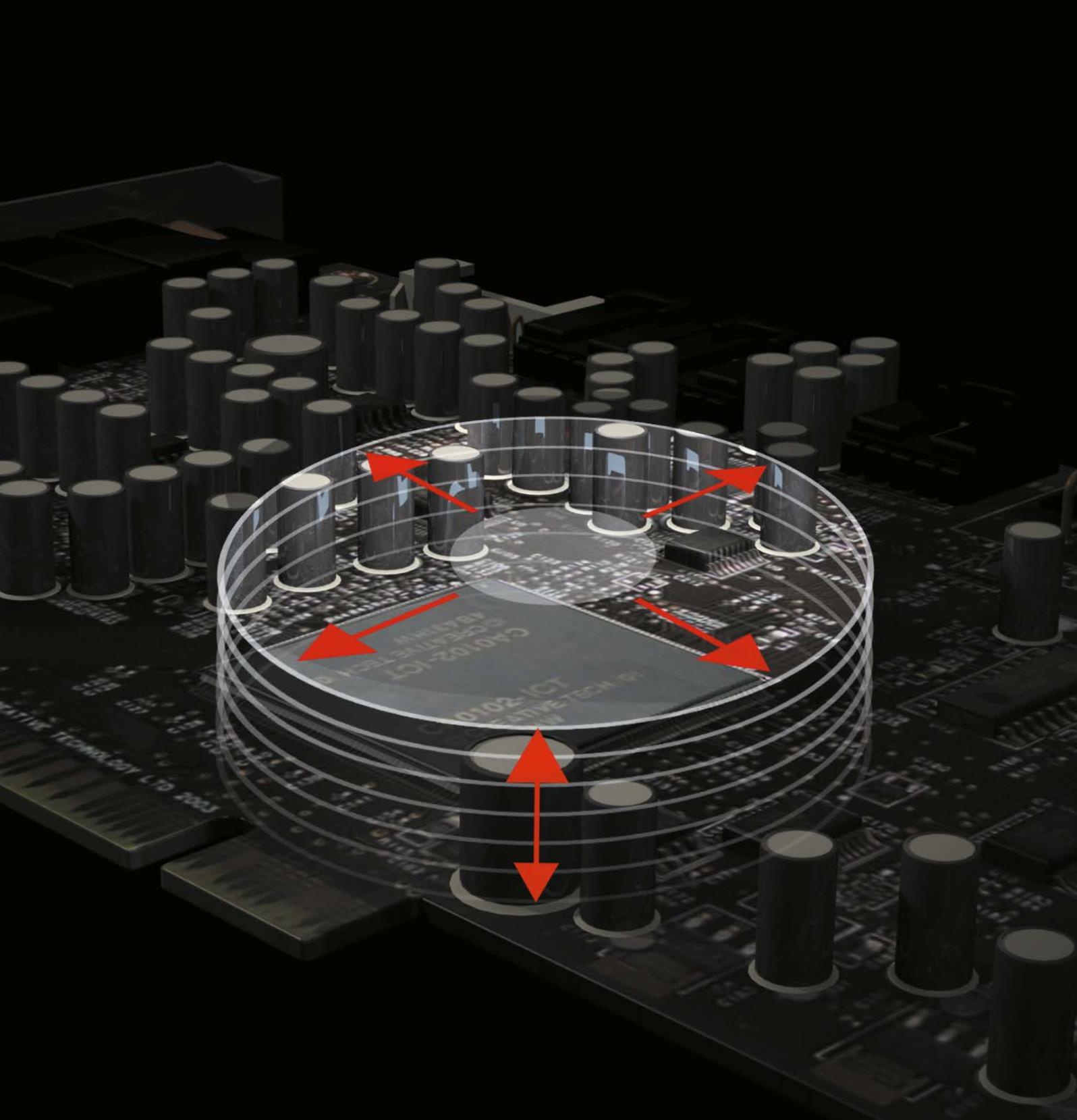


Image simulation, showing a printed circuit board sample without and with the FusionOptics effect, perceived when looking through the oculars.

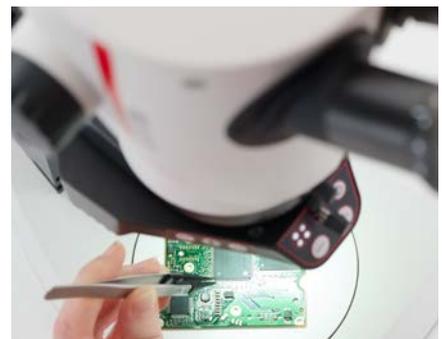


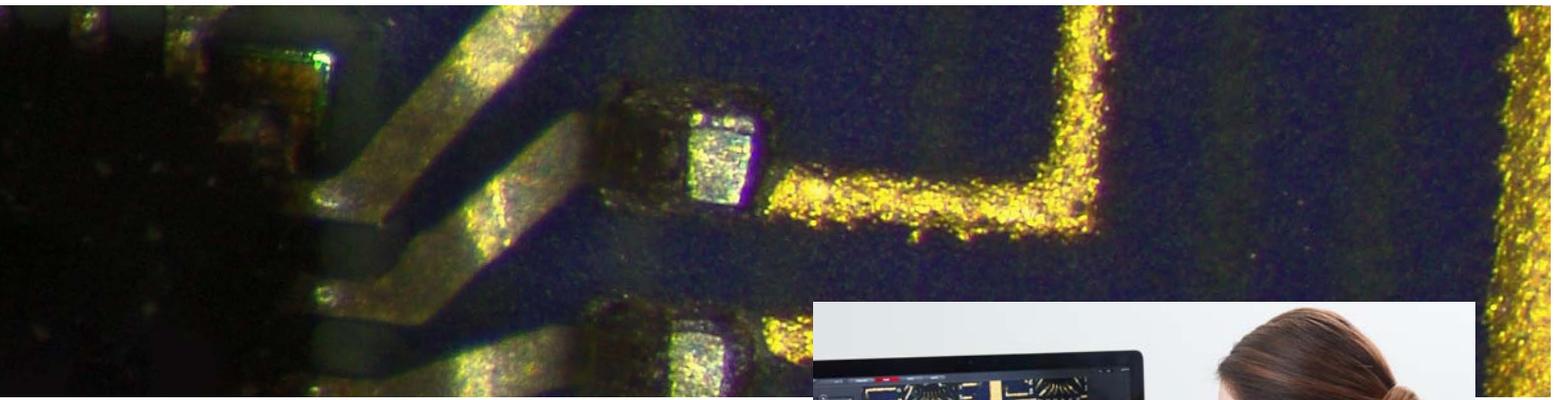
3D VIEW WITH  
12 MM DEPTH OF FIELD  
37.7 MM OBJECT FIELD

# SWIFTLY ACCESS YOUR SAMPLE

## Maximum working distance for maximum speed

Sample inspection and manipulation under the microscope can be conveniently performed thanks to the 122 mm working distance of all S9 stereo microscopes. Enjoy working with more space for your tools under the microscope lens – sometimes every mm counts. Operators can access the sample with ease when using standardized tweezers or other manipulation tools.





## Customize it and make it yours

In combination with different stands the S9 microscopes can be turned into customized workstations. This helps you to increase efficiency and the quality of your work results. The 35° viewing angle of the microscope allows a natural head posture and helps to prevent operator fatigue. For recurring tasks the switchable zoom click-stops assure reproducible and reliable results from operator to operator.



Swingarm stand for ergonomic working conditions

S9 stereo microscopes are ideally suited for production and inspection tasks for a variety of samples. The swingarm and flexarm offer even greater flexibility for different application areas, such as:

- > Electronic parts
- > Precision mechanics
- > Automotive engineering
- > Plastic parts
- > Forensic investigations
- > Medical device manufacturing
- > Specimen dissection & preparation in life sciences



Flexarm stand for large samples

# SAVE TIME: SHARE RESULTS DIGITALLY

## Instant sharing for instant feedback

The S9 i stereo microscope with integrated 10 MP camera enables you to view images digitally at up to 35 frames per second on a PC, HD-monitor, or mobile device. This allows you to quickly and easily react to queries, get a second opinion, and discuss problems with colleagues. To work with mobile devices download the AirLab App from iTunes or the Google Play Store. For Apple Mac download Acquire.

## Manage your images with ease

Inspect, analyze, and organize your images with the LAS X software from Leica. This latest software platform enables straightforward imaging and documentation, available for industrial and life science applications. It supports operators to deliver reliable results with confidence. LAS X also offers a range of additional software modules and expert solutions for specific applications.





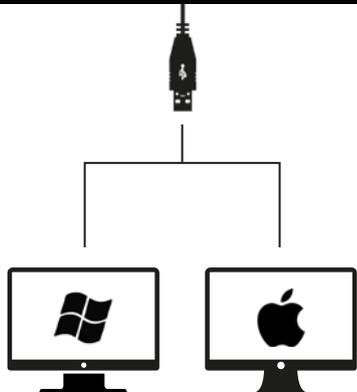
**Connectivity options of the S9 i with integrated camera**

Use **USB mode** to connect the camera directly with a **PC** or Mac **via USB2** cable.

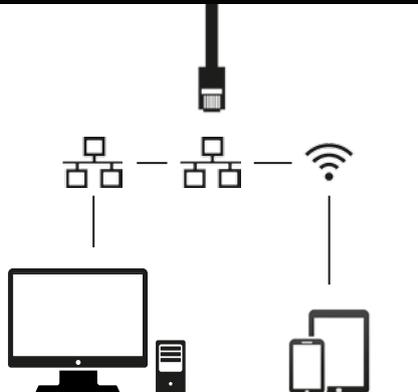
Use **Ethernet mode** to connect the camera **with your facility's network** via Ethernet (RJ45) cable.

Use **HDMI mode** to connect the camera to a large HD-monitor for a **standalone operation** without computer.

**USB mode**



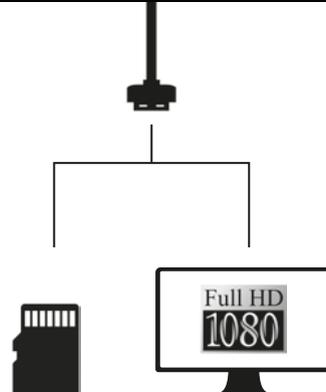
**Ethernet mode**



Capture images from any remote PC or Mac with access to your LAN network.

Mobile devices can also be used, if they have access to your network via Wi-Fi.

**HDMI mode**



# THE S9 SERIES

## Viewing only

Inspect, observe, or manipulate your sample exclusively through the eyepieces. The **S9E** provides a cost effective solution with fast return on investment if you don't need to document with your microscope.

## Sharing digitally

Share, document, and report results quickly and reliably. The integrated 10 MP CMOS camera of the **S9i** can live-stream images via USB, HDMI or Ethernet connection to your PC, HD-monitor, or mobile device.

## Documentation ready

Stay flexible – add a camera to the **S9D** for documentation and sharing at any time. Observe your sample through the eyepieces and capture images simultaneously.

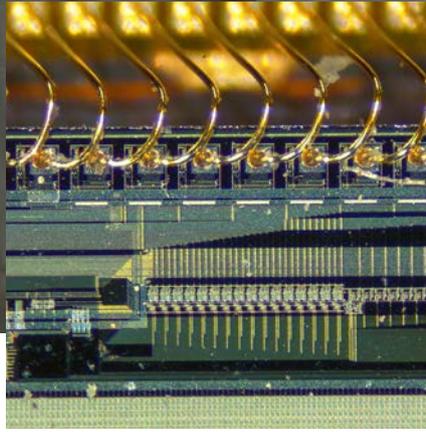
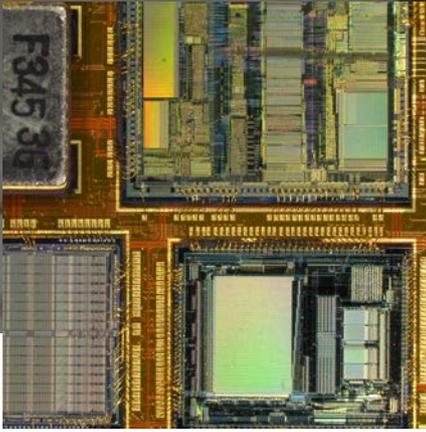


# FUSIONOPTICS

122 MM WORKING DISTANCE

**55x MAGNIFICATION**

37.7 MM OBJECT FIELD

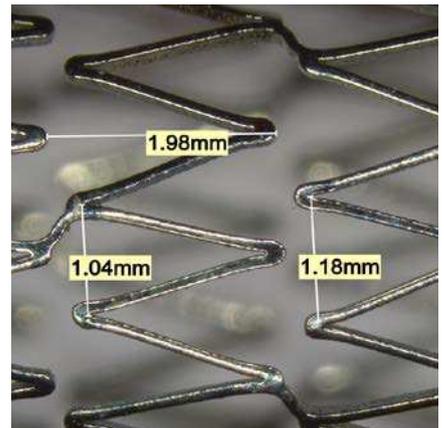


Prepare for the ongoing miniaturization trend in **Electronics** with 55x magnification and 9:1 zoom range to quickly change from overview to detail.

Put your **Automotive** sample in the right light with a wide range of illumination accessories to reveal defects.



Document results reliably in **Medical Device Manufacturing** with the integrated camera and software for annotations, measurements, and reports.



Sort and screen model organisms easily in **Life Science Applications** with the large working distance of 122 mm.

# SPECIFICATIONS

	S9 E	S9 D	S9 i
Optical system, lead-free	10° Greenough using best-corrected central part of the objective; complete apochromatically corrected microscope system		
Zoom	9:1, apochromatic		
Viewing angle	35°		
ESD protection	Antistatic		
Specific surface resistivity	2×10 <sup>11</sup> Ω/square, discharge time <2 seconds from 1,000 V to 100 V		
Magnification range (basic outfit)	6.1 x – 55 x		
Maximum resolution	500 lp/mm		
Maximum numerical aperture	0.167		
Working distance (basic outfit)	122 mm		
Object field diameter	37.7 mm		
Adjustable zoom limits	Click-stops 10x, 20x, 30x, 40x, and 50x		
Video/photo outlet, switchable	–	50 % video 50 % visual, permanent	–
Integrated camera	–	–	10 MP resolution Live image up to 35 fps (1,024 x 768 pixels) Sensor size 6.44 mm x 4.6 mm, 1/2.3" CMOS Pixel size 1.67 µm x 1.67 µm
Standard objectives, lead-free	Apochromats 0.5x, 0.63x, 0.75x, 1.6x, 2.0x		
Ergonomic eyepieces, fixed and adjustable, with cups	10x/23, 16x/16, 20x/12		
Ergonomic eyepieces for eyeglass wearers, adjustable, with eyecups	10x/23, 16x/15, 25x/9.5, 40x/6		
Interpupillary distance	50 – 76 mm		

CONNECT  
WITH US!



Leica Microsystems (Schweiz) AG · Max-Schmidheiny-Strasse 201 · 9435 Heerbrugg, Switzerland  
T +41 71 726 34 34 · F +41 71 726 34 44

[www.leica-microsystems.com](http://www.leica-microsystems.com)