



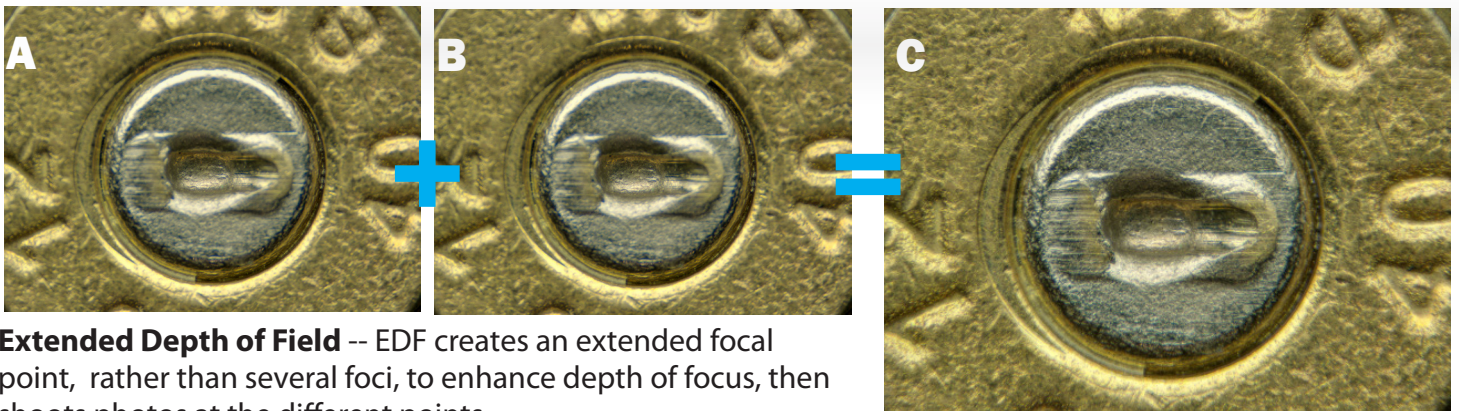
CMOS5 Camera with HDR & EDF

*A Solution for Lighting
Bullets & Cartridge Cases*



PROBLEM: The cylindrical shape of bullets and cartridge cases creates a challenge for illumination under the microscope. **SOLUTION:** Leeds CMOS5 Camera Package, available on new orders or as an upgrade to your current Leeds microscope.

High Dynamic Range (shown above) HDR algorithms compensate for the lighting differences by imaging *each area* of the sample with different camera exposures – then combining the best exposures for each region into a *single image*.



Extended Depth of Field -- EDF creates an extended focal point, rather than several foci, to enhance depth of focus, then shoots photos at the different points.

Photo A shows one of the images with the primer area in focus.

Photo B shows one of the images with the firing pin impression in focus.

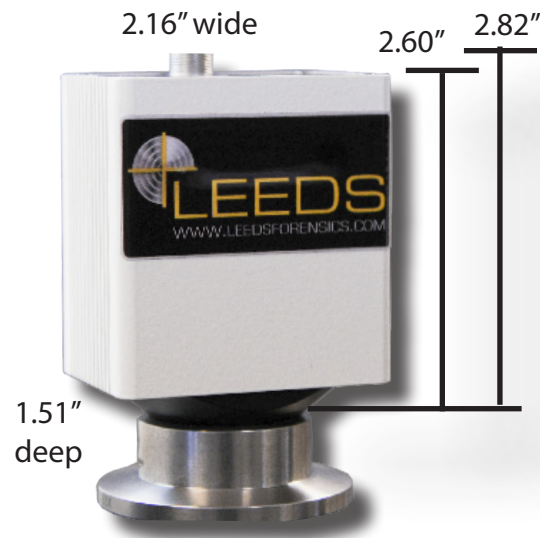
Photo C shows the final compilation of all of the images in one image -- sharp and complete.

LEEDS CMOS5 SPECIFICATIONS

| Camera Model | CMOS5 | CMOS12 |
|--|--------------------|-------------------|
| Captured Image Resolution | 5.0 Mp | 12.3 Mp |
| Sensor Type | Color Mosaic | |
| Live Image Resolution | 1080p HD (2 MP) | 4K UHD (8 MP) |
| Live Image Frame Rate ** | 60+ fps | 30+ fps |
| Live Full Image Resolution | 5.0 MP | 12.4 MP |
| Live Image Full Resolution Frame Rate ** | 45+ fps | 29+ fps |
| Sensor P/N | Sony IMX250 | Sony IMX253 |
| H x V, Pixels | 2448 x 2048 | 4096 x 3000 |
| H x V, mm | 8.47mm x 7.07mm | 14.13mm x 10.35mm |
| Pixel Size | 3.45 μ m | 3.45 μ m |
| Sensor Diagonal | 11.0mm | 17.5mm |
| Optical Format | 2/3" | 1.1" |
| Standard Adapter Magnification | 0.63x (17.4mm) FOV | 1.0x (17.5mm) FOV |
| Lens Mount | C-mount | |
| Computer Interface | USB 3.0 | USB 3.0 |

** Requires a PC with a CPU that has a 4+ physical cores and a GPU with 4 00+ GFLOPS to provide full frame rate

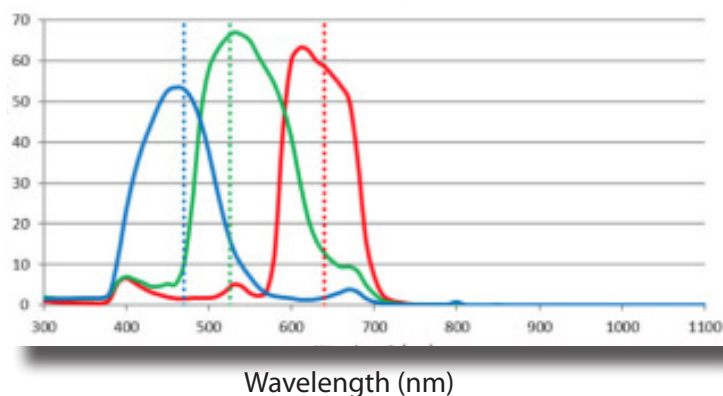
DIMENSIONS



CAMERA FEATURES

- **High Dynamic Range and Extended Depth of Field:** HDR & EDF imaging fast & easy -- at the click of a button.
- **Speed/High Resolution:** 5.0Mp or 12.3Mp captured image resolution with over 60 frames per second (fps).
- **Measurements:** The software offers a menu of different measurement tools, all of which are supported by an ISO/IEC 17025:2017 accredited Certificate of Accuracy.
- **Annotations:** On-screen annotations for details such as case number, image capture date, etc. Software includes a notepad feature that is linked directly to the image for additional documentation.

COLOR MOSAIC + IR FILTER QE



Spot 5.6 HDR software is exclusive to Leeds CMOS5 and Leeds CMOS12 cameras



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