

# Multispectral Camera for Biomedical Research

Our biomedical research multispectral camera incorporates a high performance CMOS sensor that is modified with Spectral Devices proprietary pixelated filter array technology. This versatile camera simultaneously captures images at 4 distinct bands at full frame rate. No need for additional filters, filter wheels, or tunable filters. All spectral information is captured simultaneously by the multispectral sensor. The first camera band (735 nm) is sensitive to deoxyhemoglobin (deoxygenated blood). The second band (800 nm) is sensitive to total hemoglobin (total blood). The third band (865 nm) is sensitive to oxyhemoglobin (oxygenated blood). The fourth band (930 nm) is sensitive to lipid. With the images at each band a number of analysis can be performed including estimation of oxygen saturation and total hemoglobin, which are important for monitoring tissue health. The camera is USB3 Vision-compliant offering many software choices including GUI, command-line, Matlab, and LabView applications. SDKs are available for Windows and Linux operating systems. Power is supplied through the USB3 interface. Compact, lightweight, and designed for demanding biomedical imaging applications\*.

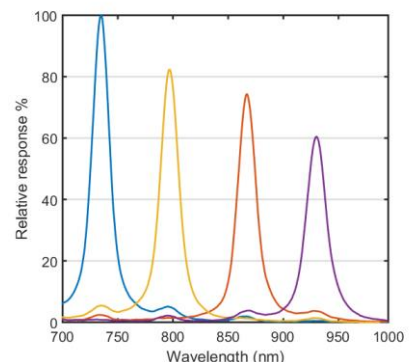


## FEATURES:

- Snapshot Operation
- High Frame Rate
- Compact and Lightweight
- Capture Bands Simultaneously
- High Performance CMOS Sensor
- Low Power Requirement
- 735 nm, 800 nm, 865 nm & 930 nm
- USB3 Vision & GenICam Compliant
- 28 mounting points

## SPECIFICATIONS:

- Lens Mount: C-mount
- Interface: USB3 Vision
- Maximum Bit Depth: 12 bit
- Shutter: Global Shutter
- Sensor Type: CMOS
- Capture Method: Area
- Sensor Model: CMV4000
- Sensor Format: 1-inch
- Number of Channels: 4 bands
- Pixels Per Channel: 512 x 512
- Pixel Size (H x V): 5.5 x 5.5 (µm)
- Dynamic Range: 60 dB
- Dark Noise: 13 e<sup>-</sup> (RMS)
- Dark Current: 125 e<sup>-</sup>/s (25 ° C)
- Power Requirement: USB 3.0 interface
- Size: 56 mm x 50 mm x 52 mm (WxHxD)
- Weight: 200 g
- Case: 6061 Aluminium
- 12 x ¼-20 mounting points
- 12 x M3 mounting points
- 4 x 4-40 mounting points
- Compatible with 30 mm cage optics



\*Note: the multispectral camera for biomedical research is to be used for investigational purposes only