

UVA-NIR Imager

3D Hyperspectral Video Camera

FirefLEYE

496 blue



Advanced optical design

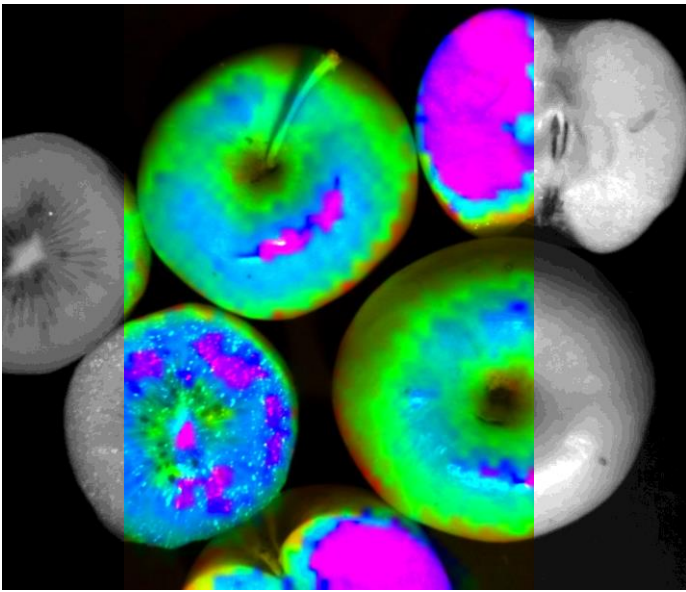
Need even more precision? The 496 blue is the consequent further development of our hyperspectral FirefLEYE technology.

It doubles the spatial resolution: the size of both the panchromatic and the spectral sensor grew to 4 Megapixel, enabling the camera to record a high resolution image taking 4,900 spectra simultaneously.

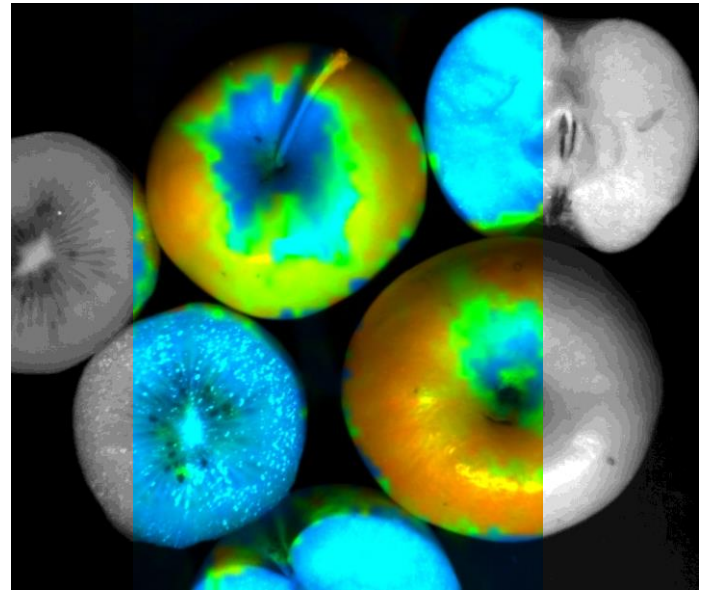
Blue Light Sensitivity & Double Resolution

Advantages

- 3D hyperspectral snapshot imager (x, y, λ)
- 370-870 nm
- 4,900 spectra / cube
- 4 MP sensor
- Full video functionality
- Classification engine
- >60 predefined hyperspectral indices



Detect specific absorption features through sophisticated image classification



Apply a chlorophyll index and visualize the differences

Spectral Properties

Wavelength range	370 – 870 nm
Number of bands	125
Spectral resolution / FWHM	10 nm @ 532 nm
Spectral sampling	4 nm

Spatial Properties

Resolution pan	1600 * 1600 px
Resolution spectral	70 * 70 px
Data cube	4,900 spectra / cube

Optical Properties

Field of View (FOV)	30°, 20°, 13°, 7°
Macroscopy possible	Yes (close-up lenses)
Microscopy possible	Yes (relay optics)

Sensor Properties

Detector	Silicon CCD
Sensor size	4 Megapixel
Radiometric resolution	12 bit
Integration time	0.5 – 1000 ms
Frame rate	Appx. 3 Hz (fps)
Data size	12 MB / data cube

Camera Properties

Connection	USB 3.0 & GigE
Operation temperature	0 – 40° C
Protection class	IP 40
Power consumption	DC 12 V / 8 W
Size	313 * 76 * 85 mm
Weight	Appx. 1200 g

Special Features

To enable time-saving analyses, a complete **hyperspectral index library** for agricultural applications is fully integrated.

Furthermore, a **classification engine** based on machine learning is also available. This easy-to-use software add-on allows online classification directly in the live data stream.

What you should know

The spectral range of the S496 blue is shifted towards smaller wavelengths covering **370-870 nm**, enabling analyses in the UVA and very short blue light.

In lab use the FirefLEYE can be equipped with **close-up lenses**, allowing a view in the **macroscopic scale** with a spot size of only a few mm to cm.

Attaching a **relay lens** to the FirefLEYE eventually provides full interchangeability for G-mount lenses. Mount the camera on your **microscope or endoscope** without the need of an additional calibration.

UAV

SPECIAL
OPTICS

UNDERWATER

cubert
REAL-TIME SPECTRAL IMAGING