# Photonic Science

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## COOLVIEW VHR CAMERA

## Ophtalmology Fluorescence Imaging.

Detecting fluorescence from retinal lipofuscin chromophores allows to indirectly quantify and spatially image the distribution of Macular Pigment (MP). The lipofuscin fluorescence intensity is reduced at all retinal locations containing Macular Pigment (MP), since MP has a competing absorption in the blue-green wavelength region.

By projecting a large diameter, 488 nm excitation spot onto the retina centred on the fovea, extending into the macular periphery, and comparing lipofuscin fluorescence intensities outside and inside the foveal area, it is possible to spatially map out the distribution of MP. A very high resolution camera is required in order to capture the fluorescence signal with the best possible spatial resolution.

The camera can be used with pulsed sources by gating the camera keeping temporal resolution down to few microseconds with good repetition rate so as to keep the signal to noise high and integrated power low. Two versions with 11 and 16 million pixels versions are available.

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