

# Fibers Engineered for OCT Imaging and Spectroscopy

## **Sharpen Your Image**

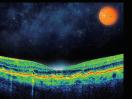
Nufern expands its broad range of interferometry fibers with the introduction of the NuVIEW family of fibers for OCT imaging and spectroscopy. These fibers are designed to exceed the demanding requirements of todays advanced imaging systems and meet those of tomorrow by offering tighter tolerance specifications, wide operating wavelength ranges and excellent small signal performance. NuVIEW fibers offer significant benefits for both the science and manufacturability of next generation instruments. NuVIEW fibers from Nufern have landed on Mars, are part of the US strategic defense program, provide key technology to enhance image capture and resolution in OCT systems and are now entering in vivo medical applications.



www.nufern.com

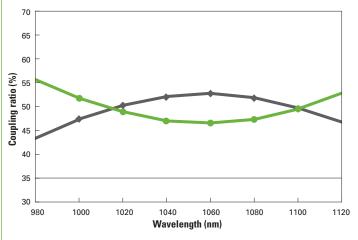


## Fibers Engineered for OCT Imaging and Spectroscopy



## **Optical Attributes**

- Precise dispersion control For sharp image resolution
- Very low loss For highest signal to noise ratio
- High bandwidth For greatest spectral accuracy
- Broad wavelength range For greatest breadth of applications

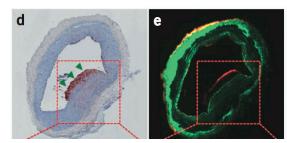


Typical fiber coupler used in OCT systems requires broadband response in the wavelength of interest (courtesy Gooch and Housego).

## **Typical Applications**

## **OCT** Imaging

Spectacular arterial diagnostic images obtained by Harvard University Wellman Center.



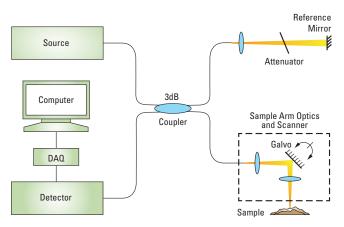
### Spectroscopy

Spectroscopy fibers feed signals from the sensor on the arm to the analyzer in the body of Curiosity rover on Mars



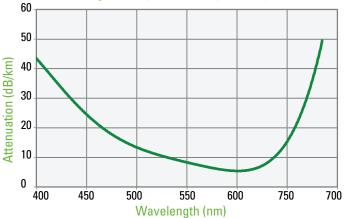
## **Mechanical Attributes**

- Very precise Core/Clad concentricity Lowest splice induced artifact generation
- Tight clad diameter tolerance Easiest splice-ability
- · High prooftest For longest application life
- Multiple coating choices For broadest environmental suitability



Schematic of a generalized OCT system. One of many modern interferometry based precision sensing systems.

#### PM-S405-XP Typical Spectral Attenuation over Operating Wavelength Range



Nufern offers a suite of select cutoff SM and PM fibers that cover the 350 to 850 nm wavelength range ideally suited for spectroscopic applications. Nufern's PM-S405-XP fiber covers the RGB wavelength range offering low attenuation necessary for many medical spectroscopic applications.

COHERENT. *NUFERN* 

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