FOR ALL YOUR PHOTONICS NEEDS

№6

Matrix

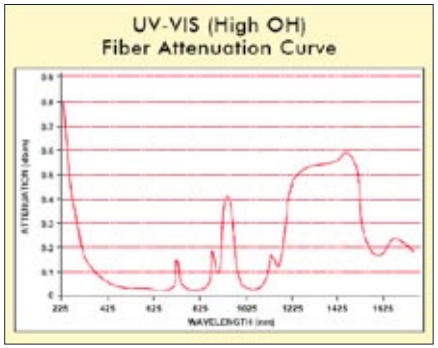
Fiber focus

Ocean Optics BV
First in Photonics™

A HALMA GROUP COMPANY

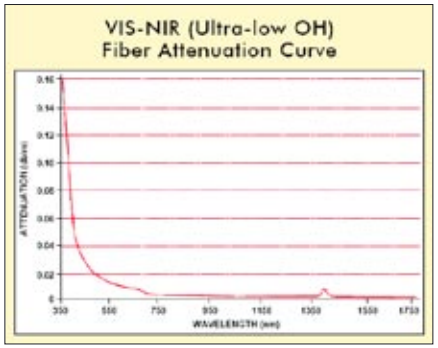
In this issue

FIBER FOCUS



Our Premium-grade "Best for Spectroscopy" Optical Fiber Assemblies are durable, high-quality assemblies that consistently deliver uniform results with minimal signal variance. These assemblies are available to you in a wide variety of off-the-shelf configurations or can be customized to meet your specifications.

Please check out this issue to learn all about our optical fibers, probes and accessories.



Dear customer,
This is the 6th edition of the Matrix newsletter. Looking at responses from previous issues most customers appreciate the digital format of the newsletter and the valuable information it contains. Our 2005/2006 catalog is coming soon and we'd like to know whether you'd like us to post you a free copy. If you'd like us to send a copy please send an email to matrix@oceanoptics.nl with your contact details so we can update our database records.

Ocean view

Fiber Focus

We are known as the "inventors" of the fiber optic miniature spectrometer. You will find our products around the world in various research establishments, universities, hospitals and also as part of end user products where it is not directly apparent that our components are built in. Less well known are our capabilities in the area of optical fiber.
This issue of Matrix highlights part of our fiber product line. In addition to the products mentioned we like to do specials. Ranging from just a few meters extra length to very complex vacuum feedthrough constructions, or special probes.
In need of any special fiber or probe?
Let us know. We like to be challenged.

Want to meet with one of us? Give us a call or look at the tradeshow schedule and visit our booth. See you soon.

Enjoy Reading.

Kees van de Steeg
Managing Director

Reflection/Backscattering Probes

Our R-series Fiber Optic Reflection Probes are used for measuring specular or diffuse reflectance from a surface, fluorescence from solid surfaces, or back-scattering and fluorescence in solutions and powders. These probes can be optimized for the UV-VIS (250-800 nm) or VIS-NIR (400-2100 nm), or a combination of both ranges.

From € 449,-

Specifications

Fiber core diameter:	400 µm or 200 µm
Fiber core/cladding:	Silica
Fiber bundle:	6 illumination fibers around 1 read fiber
Optimization:	- UV-VIS (250-800 nm)
	- VIS-NIR (400-2100 nm)
Ferrule:	Stainless steel or plastic
Ferrule dimensions:	3.0" x 0.25"
Numerical aperture:	0.22
Terminations for illumination and read legs:	SMA 905
Temperature range:	-20 °C to 80 °C
Probe assembly length:	2 meters (breakout is halfway)

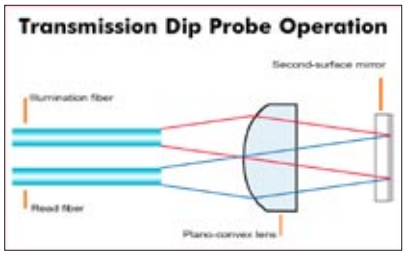
Different Connector Options

sma-fc-adp conn-fc sma-fc-adp conn-qsma conn-sma

Transmission Dip Probes

Theory of Operation

In transmission dip probes, light is transmitted from the illumination fiber through a plano-convex lens and through the sample compartment to a flat, second-surface mirror. The light reflects from this mirror and is focused by the lens onto the read fiber. The advantage of the transmission probe is its compact optical design, which fits into a 6.35-mm (1.4") OD stainless steel body, or ferrule.



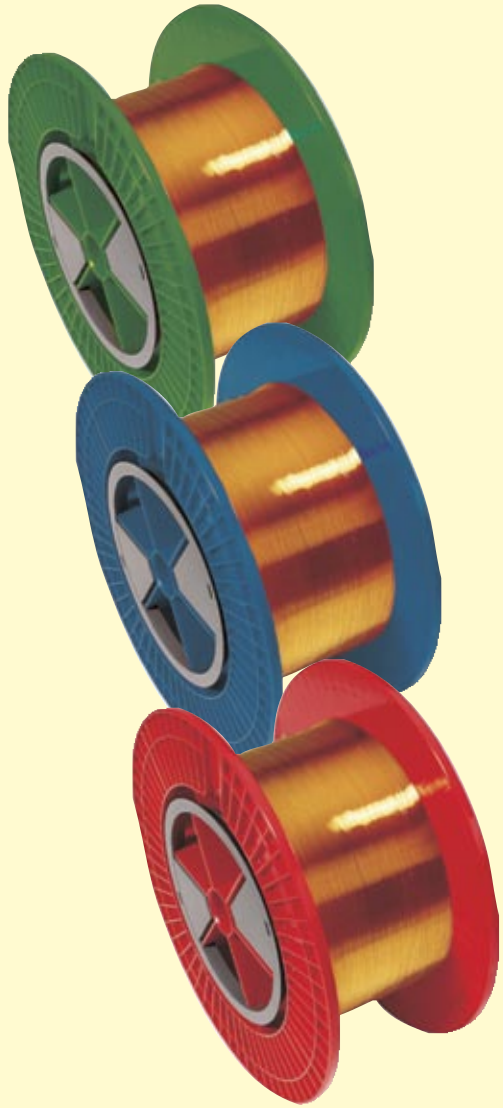
From € 799,-

Our T300-RT and T200-RT Transmission Dip Probes couple to our spectrometers and light sources to measure absorbance and transmission in solutions. These probes are especially useful for embedding into process streams for in situ, real-time sample monitoring.

Bare Fiber Adapter Kit

The Bare Fiber Adapter Kit is for the fiber tinkerer who wants to polish bare (unjacketed) optical fiber. The kit comes with fiber polishing holders for various sizes of optical fibers. You simply attach the appropriate holder to the BFA-KIT-CHUCK, then thread and fasten the fiber into the chuck and holder. The holder allows you to easily grip the fiber while polishing its surface or using it for other purposes.

€ 249,-



Unjacketed Bulk Fiber

- High OH (UV-VIS) 300-800nm
- Ultra-Low OH (VIS-NIR) 400-2200 nm
- Solarization-resistant option available
- Core size: 50 - 600 µm diameter

Prices on request

Flame Loop Fiber Probes

Heat-resistant Fiber Optic Probe

The FL-400 Flame Loop Fiber Optic Probe couples to our spectrometers to measure in situ emission spectra of samples such as dissolved metals and high-temperature plasmas.

From € 579,-

Use as a Heat-resistant Fiber Probe

To use the FL-400 as a heat-resistant emission probe, simply remove the flame loop. You can then insert the FL-400 into a high-temperature environment to monitor emission from a heat source.

Specifications of the FL-400

Fiber diameter:	400 mm core diameter
Fiber core/cladding:	Fused silica core and doped fused silica cladding
Fiber jacketing:	Gold
Fiber type:	1 single-strand, multi mode fiber
Wavelengths covered:	250-800 nm
Probe sleeve (ferrule):	Nickel; 200 mm length
Temperature range:	-269 °C to 700 °C
Numerical aperture:	0.22
Connector:	SMA 905

These specifications apply to the gold-jacketed fiber and nickel sleeve that compromise the probe assembly

Cosine-corrected Irradiance Probe

From € 89,-

CC-3 and CC-3-UV Cosine Correctors collect radiation from a 180° solid angle. When screwed onto the end of an optical fiber, the cosine corrector and optical fiber become an irradiance probe, measuring the intensity of light normal to the surface defined by the diffusing material.

The probe then couples to one of our spectrometers to make a complete spectroradiometer for applications such as measuring UV-A and UV-B in natural solar environments, and evaluating light sources such as LEDs and lasers.

Specifications of the CC-3 and CC-3-UV

Diffusing material:	Opaline glass (350-1000nm) PTFE (200-1100 nm)
Disc thickness:	7.9 mm
Barrel dimension:	6.35-mm OD
Sampling geometry:	Acceptlight from 180° field of view
Connector:	SMA 905

Vacuum Feedthroughs

These Vacuum Feedthroughs are welded into industry standard flanges for use in vacuum chambers. The flanges are machined from surgical-grade stainless steel. The seals for the flange allow the entire assembly to perform up to 300 °C. Every flange is tested upto 10^{-7} Torr. Several different fiber diameter types are available.

If you need a special custom made vacuum feedthrough, contact one of our application engineers, much is possible.

Our VFT-series Vacuum Feedthroughs channel light into or out of vacuum chambers for a variety of applications. The VFTs are designed as general-purpose penetrators for NEMA enclosures. Each VFT is tested to 10^{-9} Torr and operates to 140 °C.

New products at Laser 2005 in Munich at booth B2.560

HR2000+, 1 Scan Every Millisecond
New Electronics = Speed & Control

QE65000, New Scientific-grade Spectrometer
Quantum Efficiency to 90%

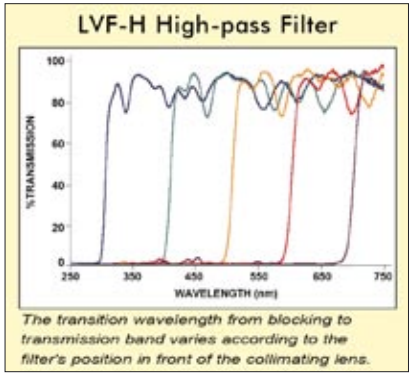
Polychromix DTS™ NIR Spectrometers
Low-cost NIR systems for multiple wavelengths

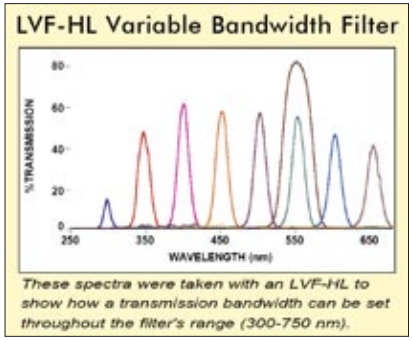
See us at booth B2.560 and ask for a product demonstration.

Linear Variable Filters

We've combined our patented high-pass and low-pass Linear Variable Filters to create the world's first bandpass filter with an adjustable center wavelength and adjustable bandpass. Each filter features an excellent transmission band (~90%) and blocking band (99.8%). These filters -- with interference coatings applied to 57 mm x 10 mm quartz substrates -- are especially useful for spectrally shaping the excitation energy from broadband sources used for fluorescence.

From € 224,-





Fiber Optic Variable Attenuator

The FVA-UV Fiber Optic Variable Attenuator is an opto-mechanical device that helps control the amount of light transmitted between two fibers. The width of the slit varies as a function of radial position, which is adjusted manually. Rotating the disc varies the attenuation from 0-100% uniformly across a 200-2000 nm wavelength range.

€ 449,-

Special Offer!

Do you want a Dell™ Digital Jukebox?

Order now and pay only € 150,-!
Already placed an order with us in 2005? Than the price is just € 75,-.

15 Gigabites for storing spectral data

(limited availability)

Flow Cells for Flow Injection Analysis

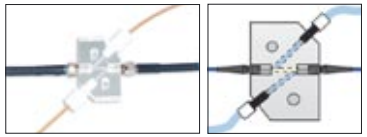
CUV-CCE

The CUV-CCe Electrophoresis Sample Cell is an optical fixture for measuring the absorbance of solutions in chromatography or capillary electrophoresis system. Light projects through the sides of silica tubing to maintain tube integrity; as a result, there are no presure limits associated with the device.

€ 539,-

FIA-Z-SMA

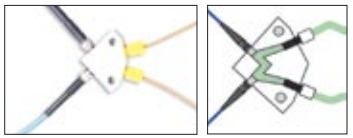
Use optical flow cells with a "Z" configuration, to measure the optical absorbance of fluids moving through flow injection systems. Couple flow cells to our spectrometers to monitor wastewater, chemical or biological processes, and immunoassays.



€ 476,-

Fluorescence Flow Cells

With the FIA-SMA-FL Fluorescence Flow Cell, a fiber sends excitation energy through a window into a sample compartment. A second fiber, oriented at 90° and connected to a spectrometer, collects the emitted energy. Each cell includes the flow cell with two optical windows and SMA 905 Connectors (which do not contact the fluids).



€ 392,-

In need of information?

Please refer to our website for detailed information about all our products.

- Operating Instructions
http://www.oceanoptics.com/technical/operatinginstructions.asp

- Software downloads
http://www.oceanoptics.com/technical/softwaredownloads.asp

- Engineering documents
http://www.oceanoptics.com/technical/engineeringdocs.asp

Click on the url to visit the specific section.

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New Address!