

# OPTRAN® UVNS (UV NON-SOLARIZING)

Silica/Silica Fiber—0.22 NA or 0.28 NA—Exclusive Bundle and Assembly Fiber

# CeramOptec®

Innovative Fiber Optics...Every Step of the Way™



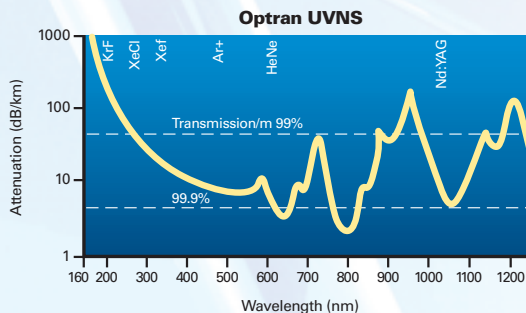
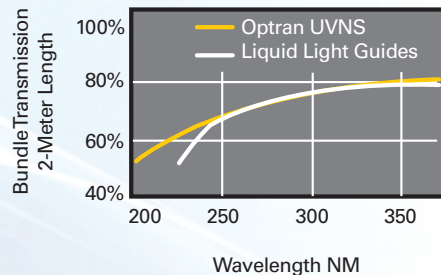
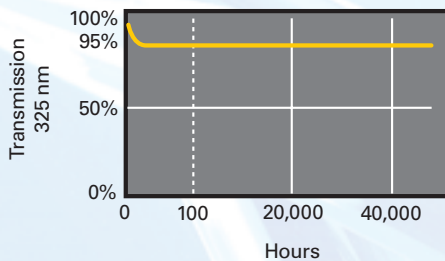
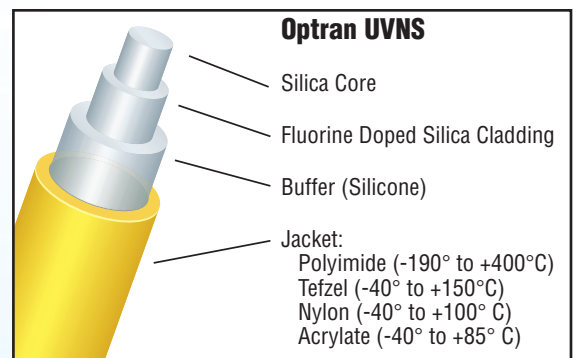
## Leading the Way in Long-Term Performance

Setting new standards through breakthrough research and development is at the heart of our business. As the manufacturer of the world's first UV Non-Solarizing (UVNS) optical fiber, CeramOptec continues to find ways to break down the barriers for simplifying UV spectroscopy and sensing applications.

For long-term performance, Optran UVNS fibers and PowerLightGuide bundles set the standard. Tested for well over 40,000 continuous, unfiltered hours, our Optran UVNS fibers exhibit level, steady transmission at 95% of the original input!

## Setting the Standards in Deep UV

Optran UVNS all silica optical fibers offer exceptional throughput in wavelengths ranging from 160 to 1200 nm—without solarization. When used in our PowerLightGuide™ Fused-End Bundles, our Optran UVNS fibers allow typical bundle transmission to be 50% higher than any other manufacturer of fused silica UV fiber products. CeramOptec's PowerLightGuide bundles are fused at the ends to eliminate inter-fiber spaces—while maintaining the fibers' NA. Please see our PowerLightGuide Bundle data sheet for more information about our non-solarizing bundles—a solid solution to UV Spectroscopy and Liquid Light Guides.



## Applications

### ■ Industrial/Scientific

Replacement for UV Liquid Light Guides  
Spectroscopy  
Sensors  
UV photolithography  
Laser welding/soldering/marking  
Laser delivery  
Nuclear plasma diagnostics  
Analytical instruments

Laser diode pigtailling  
Pyrometry  
Semiconductor capital equipment  
Thomson scattering  
UV illumination and monitoring  
UV Raman spectroscopy  
UV curing

### ■ Medical

Medical diagnostics  
Laser delivery

Photodynamic therapy  
Medical treatments such as UV psoriasis treatment

## Features

Broad UV/VIS/NIR spectral range: 160 – 1200 nm  
High laser damage resistance  
Broad temperature range  
High core to clad ratio  
Large core diameters to 1700  $\mu\text{m}$   
Biocompatible materials

Radiation resistance:  $10^9$  rad. total  
Sterilizable by ETO and other methods  
Manufactured at GMP and ISO 9001 compliant facility  
Specialty coatings available for high temperatures, high vacuum, and harsh chemicals  
All dielectric, non-magnetic construction

## Properties

Step index profile  
Pure silica core  
Available NAs:  
Low NA –  $0.12 \pm 0.02$   
Standard NA –  $0.22 \pm 0.02$   
Optran Plus™  $0.28 - 0.28 \pm 0.02$   
Optran Plus™  $0.30 - 0.30 \pm 0.02$   
Standard proof test: 70 kpsi  
Core/clad ratios available: 1:1.06, 1:1.1, 1:1.15, 1:1.2, 1:1.25, 1:1.4

Minimum bend radius:  
100 x clad radius (momentary)  
300 x clad radius (long term)  
Laser damage threshold:  
XeCl 18.0 mJ/mm<sup>2</sup> (200ns pulse) at 308 nm  
XeCl 8.0 mJ/mm<sup>2</sup> (20ns pulse) at 308 nm  
Nd:YAG 5.4 J/mm<sup>2</sup> (1 ms pulse) at 1060 nm  
Nd:YAG 1.3 kW/mm<sup>2</sup> (CW) at 1060 nm

## Optran UVNS (0.22 NA) Standard Core Sizes (0.28 and 0.30 NA Also Available)

50	200	400	600	1000	1500
100	300	500	800	1250	1700

## Notes:

Custom sizes are available upon request.

NA is measured at the 95% intensity angle.

CeramOptec strives to ensure the accuracy of all information provided; however, we imply no warranties and disclaim any liability in connection with the use of this information.

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## Innovative Fiber Optics...Every Step of the Way

CeramOptec was founded in 1986 and today is a global leader in the production of stock and custom silica / silica, plastic-clad silica, and hard polymer-clad silica optical fibers; fused capillary tubing; DPSS lasers; diode modules; and low loss bundles and assemblies for UV, VIS, and IR transmission, medical laser delivery, sensors, plasma fusion, and spectroscopy.

With several facilities worldwide, we are able to provide our customers with local, prompt, and reliable service and products. By maintaining complete control over the entire manufacturing process—from preform manufacturing to finished fiber product—we are able to provide the highest quality control, custom solutions, and competitive pricing to our customers.

Please visit <http://www.ceramoptec.com> for more information.

CeramOptec is a subsidiary of biolitec™ AG.

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